

Appendix F

**Laboratory Analytical Reports
(Volume 2 of 2)**

**Former Gulf States Creosoting Site
Hattiesburg, Mississippi**



LLI Sample No. SW 2943338

Collected: 6/ 9/98 at 10:35 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-20/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2056- SDG#: HMS04-01

Account No: 07802
Kerr-McGee Corporation
P.O. 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
4688	TCL Semivolatiles			See Page	2	
4689	TCL Semivolatiles cont'd			See Page	3	
0111	Moisture	12.7	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: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
19:35:32 D 0003 22 129915 618556
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
2425 New Holland Pkwy
PO Box 12425
Conover, PA 17008-2425
717 656-2300 FAX 717 656-2681

See reverse side for explanation of units and abbreviations.

2011-01-01





LLI Sample No. SW 2943338

Collected: 6/ 9/98 at 10:35 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-20/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2056- SDG#: HMS04-01

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	330.	ug/kg	N.D.	380.
3753	bis (2-chloroethyl) ether	N.D.	170.	ug/kg	N.D.	190.
1186	2-chlorophenol	N.D.	170.	ug/kg	N.D.	190.
3754	1,3-dichlorobenzene	N.D.	170.	ug/kg	N.D.	190.
1187	1,4-dichlorobenzene	N.D.	170.	ug/kg	N.D.	190.
3755	1,2-dichlorobenzene	N.D.	170.	ug/kg	N.D.	190.
4690	2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
4691	2,2'-oxybis (1-chloropropane)	N.D.	170.	ug/kg	N.D.	190.
4692	3- and 4-methylphenol	N.D.	330.	ug/kg	N.D.	380.
1188	N-nitrosodi-n-propylamine	N.D.	170.	ug/kg	N.D.	190.
3757	hexachloroethane	N.D.	170.	ug/kg	N.D.	190.
3758	nitrobenzene	N.D.	170.	ug/kg	N.D.	190.
3759	isophorone	N.D.	170.	ug/kg	N.D.	190.
3746	2-nitrophenol	N.D.	330.	ug/kg	N.D.	380.
3747	2,4-dimethylphenol	N.D.	330.	ug/kg	N.D.	380.
3760	bis (2-chloroethoxy) methane	N.D.	330.	ug/kg	N.D.	380.
3748	2,4-dichlorophenol	N.D.	330.	ug/kg	N.D.	380.
1189	1,2,4-trichlorobenzene	N.D.	170.	ug/kg	N.D.	190.
3761	naphthalene	210,000.	1,700.	ug/kg	240,000.	1,900.
4693	4-chloroaniline	N.D.	170.	ug/kg	N.D.	190.
3762	hexachlorobutadiene	N.D.	330.	ug/kg	N.D.	380.
1190	4-chloro-3-methylphenol	N.D.	330.	ug/kg	N.D.	380.
4694	2-methylnaphthalene	100,000.	1,700.	ug/kg	120,000.	1,900.
3763	hexachlorocyclopentadiene	N.D.	830.	ug/kg	N.D.	950.
3749	2,4,6-trichlorophenol	N.D.	330.	ug/kg	N.D.	380.
4695	2,4,5-trichlorophenol	N.D.	330.	ug/kg	N.D.	380.
3764	2-chloronaphthalene	N.D.	170.	ug/kg	N.D.	190.
4696	2-nitroaniline	N.D.	170.	ug/kg	N.D.	190.
3766	dimethyl phthalate	N.D.	330.	ug/kg	N.D.	380.
3765	acenaphthylene	2,600.	170.	ug/kg	2,900.	190.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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Lawrence, KS 66044-02425
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943338

Collected: 6/ 9/98 at 10:35 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-20/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2056- SDG#: HMS04-01

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	METHOD LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	330.	ug/kg	N.D.	380.
1191	acenaphthene	89,000.	1,700.	ug/kg	100,000.	1,900.
3750	2,4-dinitrophenol	N.D.	970.	ug/kg	N.D.	1,100.
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	950.
4698	dibenzofuran	80,000.	1,700.	ug/kg	92,000.	1,900.
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	380.
3767	2,6-dinitrotoluene	N.D.	170.	ug/kg	N.D.	190.
3770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	380.
3769	4-chlorophenyl phenyl ether	N.D.	170.	ug/kg	N.D.	190.
3768	fluorene	93,000.	1,700.	ug/kg	110,000.	1,900.
4700	4-nitroaniline	N.D.	330.	ug/kg	N.D.	380.
3751	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	950.
3772	N-nitrosodiphenylamine	N.D.	170.	ug/kg	N.D.	190.
3773	4-bromophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	380.
3774	hexachlorobenzene	N.D.	170.	ug/kg	N.D.	190.
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	950.
3775	phenanthrene	260,000.	1,700.	ug/kg	300,000.	1,900.
3776	anthracene	38,000.	1,700.	ug/kg	43,000.	1,900.
4702	carbazole	21,000.	170.	ug/kg	24,000.	190.
3777	di-n-butyl phthalate	N.D.	330.	ug/kg	N.D.	380.
3778	fluoranthene	130,000.	1,700.	ug/kg	150,000.	1,900.
1195	pyrene	82,000.	1,700.	ug/kg	93,000.	1,900.
3780	butyl benzyl phthalate	N.D.	330.	ug/kg	N.D.	380.
3783	3,3'-dichlorobenzidine	N.D.	330.	ug/kg	N.D.	380.
3781	benzo (a) anthracene	26,000.	170.	ug/kg	30,000.	190.
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	380.
3782	chrysene	20,000.	170.	ug/kg	23,000.	190.
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	380.
3786	benzo (b) fluoranthene	14,000.	170.	ug/kg	17,000.	190.
3787	benzo (k) fluoranthene	5,300.	170.	ug/kg	6,000.	190.
3788	benzo (a) pyrene	9,200.	170.	ug/kg	11,000.	190.
3789	indeno (1,2,3-cd) pyrene	3,000.	170.	ug/kg	3,500.	190.
3790	dibenz (a,h) anthracene	670.	J 170.	ug/kg	760.	J 190.
3791	benzo (ghi) perylene	2,200.	170.	ug/kg	2,500.	190.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943338
Collected: 6/ 9/98 at 10:35 by DCU

Submitted: 6/10/98 Reported: 7/14/98
Discard: 8/14/98

GEO-20/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2056- SDG#: HMS04-01

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943338

Collected: 06/09/98 at 10:35 by DCU

Submitted: 06/10/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-20/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2056- SDG#: HMS04-01

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	06/29/98 2300	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/29/98 2300	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



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PO Box 10425
Oklahoma City, OK 73105-2425
Tel: (405) 742-2425 Fax: (405) 742-2681

See reverse side for explanation of symbols and abbreviations

2011-06-10 10:17





LLI Sample No. 2943338
 GEO-20/5-6' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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 Semivolatiles		Batch: 98162SLE026									

1185 phenol											
330. ug/kg		N.D.		74	62	18	79			49	105
3753 bis (2-chloroethyl) ether											
170. ug/kg		N.D.		66	47	32	72			53	109
1186 2-chlorophenol											
170. ug/kg		N.D.		77	59	28	82			55	107
3754 1,3-dichlorobenzene											
170. ug/kg		N.D.		66	30	77	88			53	103
1187 1,4-dichlorobenzene											
170. ug/kg		N.D.		68	32	73	88			52	103
3755 1,2-dichlorobenzene											
170. ug/kg		N.D.		74	38	64	92			56	107
4690 2-methylphenol											
170. ug/kg		N.D.		73	59	22	77			57	101
4691 2,2'-oxybis (1-chloropropane)											
170. ug/kg		N.D.		68	46	39	76			38	117
4692 3- and 4-methylphenol											
330. ug/kg		N.D.		74	62	19	80			48	116
1188 N-nitrosodi-n-propylamine											
170. ug/kg		N.D.		75	59	24	81			50	124
3757 hexachloroethane											
170. ug/kg		N.D.		66	29	77	87			52	108
3758 nitrobenzene											
170. ug/kg		N.D.		79	59	29	86			56	110
3759 isophorone											
170. ug/kg		N.D.		79	65	20	86			57	114
3746 2-nitrophenol											
330. ug/kg		N.D.		79	60	27	86			59	107
3747 2,4-dimethylphenol											
330. ug/kg		N.D.		70	59	16	82			39	108
3760 bis (2-chloroethoxy) methane											
330. ug/kg		N.D.		72	57	22	77			56	103
3748 2,4-dichlorophenol											
330. ug/kg		N.D.		84	68	21	90			59	100
1189 1,2,4-trichlorobenzene											
170. ug/kg		N.D.		86	55	43	97			57	104
3761 naphthalene											
1,700. ug/kg		N.D.		78	54	36	87			58	99
4693 4-chloroaniline											
170. ug/kg		N.D.		54	46	16	71			1	102
3762 hexachlorobutadiene											
330. ug/kg		N.D.		90	52	54	110			56	115
1190 4-chloro-3-methylphenol											
330. ug/kg		N.D.		78	69	11	85			56	108
4694 2-methylnaphthalene											
1,700. ug/kg		N.D.		83	65	24	89			60	102



Lancaster Laboratories
 2125 New Holland Pike
 PO Box 12425
 Lancaster, PA 17605-1425
 TEL: 610-330-1100 FAX: 610-330-2481

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943338
 GEO-20/5-6' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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										
830.	ug/kg	N.D.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
330.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
330.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
170.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
170.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
330.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
170.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
330.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
1,700.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
970.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
830.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
1,700.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
330.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
170.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
330.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
170.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
1,700.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
330.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
830.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
170.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
330.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
170.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
830.	ug/kg	N.D.		88	83	6	93			42	108



Lancaster Laboratories
 1400 Westwood Drive
 Houston, TX 77063-1425
 Telephone: 281-250-2200 Fax: 281-250-2201

See reverse side for orientation of symbols and abbreviations





LLI Sample No. 2943338

GEO-20/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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										
1,700.	ug/kg	N.D.		94	84	10	96			62	107
3776	anthracene										
1,700.	ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
170.	ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
330.	ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
1,700.	ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
1,700.	ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
330.	ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
330.	ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
170.	ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
330.	ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
170.	ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
330.	ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
170.	ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
170.	ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
170.	ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
170.	ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
170.	ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
170.	ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981650199820001A	12				100	100	0	99	101



Thermo Analytical Inc.
2425 Hawthorne Pike
PO Box 12425
Lancaster, PA 17305-2425
717-656-2310 Fax: 717-656-2387

See reverse side for explanation of symbols and abbreviations

2014 07/04/14





LLI Sample No. 2943338

GEO-20/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	62	39	108
	2-FIphenol	53	35	108
	2,4,6-TBP	93	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	58	31	126
	2-Fbiphenyl	70	45	113
	Tphenyl14	60	37	130



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Way, Suite 100
Lancaster, PA 17605-1405
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943339

Collected: 6/ 9/98 at 10:55 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-20/9-10' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
20910 SDG#: HMS04-02

Account No: 07802
Kerr-McGee Corporation
P.O. 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	11.1	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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
19:37:35 D 0003 22 129915 618556
863 0.00 00033420 ASR000

Respectfully Submitted
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Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2943339

Collected: 6/ 9/98 at 10:55 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-20/9-10' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
20910 SDG#: HMS04-02

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

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Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL Semivolatiles							
1185	phenol	89.	J	67.	ug/kg	100.	J 75.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	37.
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.		33.	ug/kg	N.D.	37.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	37.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	75.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	37.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	37.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	37.
3759	isophorone	N.D.		33.	ug/kg	N.D.	37.
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.		67.	ug/kg	N.D.	75.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	75.
1189	1,2,4-trichlorobenzene	N.D.		33.	ug/kg	N.D.	37.
3761	naphthalene	130,000.		1,700.	ug/kg	150,000.	1,900.
4693	4-chloroaniline	N.D.		33.	ug/kg	N.D.	37.
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	56,000.		1,700.	ug/kg	63,000.	1,900.
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.	37.
4696	2-nitroaniline	N.D.		33.	ug/kg	N.D.	37.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	75.
3765	acenaphthylene	1,400.		33.	ug/kg	1,600.	37.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

ACIL 10/1/98





LLI Sample No. SW 2943339

Collected: 6/ 9/98 at 10:55 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-20/9-10' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
20910 SDG#: HMS04-02

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
1191	acenaphthene	47,000.	1,700.	ug/kg	53,000.	1,900.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	220.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	190.
4698	dibenzofuran	41,000.	1,700.	ug/kg	46,000.	1,900.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	75.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	37.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	37.
3768	fluorene	48,000.	1,700.	ug/kg	54,000.	1,900.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	37.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	75.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	37.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	150,000.	1,700.	ug/kg	170,000.	1,900.
3776	anthracene	19,000.	1,700.	ug/kg	22,000.	1,900.
4702	carbazole	8,500.	J 1,700.	ug/kg	9,500.	J1,900.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3778	fluoranthene	69,000.	1,700.	ug/kg	78,000.	1,900.
1195	pyrene	39,000.	1,700.	ug/kg	44,000.	1,900.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	75.
3781	benzo (a) anthracene	13,000.	J 1,700.	ug/kg	15,000.	J1,900.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	75.
3782	chrysene	11,000.	J 1,700.	ug/kg	12,000.	J1,900.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3786	benzo (b) fluoranthene	6,900.	J 1,700.	ug/kg	7,800.	J1,900.
3787	benzo (k) fluoranthene	3,300.	33.	ug/kg	3,700.	37.
3788	benzo (a) pyrene	4,700.	J 1,700.	ug/kg	5,200.	J1,900.
3789	indeno (1,2,3-cd) pyrene	1,800.	33.	ug/kg	2,000.	37.
3790	dibenz (a,h) anthracene	450.	33.	ug/kg	500.	37.
3791	benzo (ghi) perylene	1,300.	33.	ug/kg	1,500.	37.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943339

Collected: 6/ 9/98 at 10:55 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-20/9-10' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
20910 SDG#: HMS04-02

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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LABORATORY CHRONICLE

Page: 5 of 9

LLI Sample No. SW 2943339

Collected: 06/09/98 at 10:55 by DCU

Submitted: 06/10/98

GEO-20/9-10' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
20910 SDG#: HMS04-02

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	06/29/98 1821	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/29/98 1821	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



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LLI Sample No. 2943339

GEO-20/9-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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 Semivolatiles	Batch: 98162SLE026									

1185	phenol										
67.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
1,700.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
1,700.	ug/kg	N.D.		83	65	24	89			60	102



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see reference for explanation of symbols and abbreviations

2015-11-10 14:45





LLI Sample No. 2943339

GEO-20/9-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
1,700.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
1,700.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
1,700.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



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See reverse side for explanation of symbols and abbreviations

2010-01-01 10:00 AM





LLI Sample No. 2943339

GEO-20/9-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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	1,700. ug/kg	N.D.		94	84	10	96			62	107
3776 anthracene	1,700. ug/kg	N.D.		99	89	10	96			62	105
4702 carbazole	1,700. ug/kg	N.D.		90	84	6	92			57	112
3777 di-n-butyl phthalate	67. ug/kg	N.D.		85	86	1	92			59	114
3778 fluoranthene	1,700. ug/kg	N.D.		98	90	8	100			58	110
1195 pyrene	1,700. ug/kg	N.D.		81	76	5	82			52	115
3780 butyl benzyl phthalate	67. ug/kg	N.D.		72	75	4	76			58	119
3783 3,3'-dichlorobenzidine	67. ug/kg	N.D.		57	60	5	56			15	94
3781 benzo (a) anthracene	1,700. ug/kg	N.D.		88	89	1	93			63	106
3784 bis (2-ethylhexyl) phthalate	67. ug/kg	N.D.		72	75	3	75			8	158
3782 chrysene	1,700. ug/kg	N.D.		85	83	2	88			60	107
3785 di-n-octyl phthalate	67. ug/kg	N.D.		83	87	6	85			54	127
3786 benzo (b) fluoranthene	1,700. ug/kg	N.D.		88	89	2	89			59	105
3787 benzo (k) fluoranthene	33. ug/kg	N.D.		88	92	5	97			63	108
3788 benzo (a) pyrene	1,700. ug/kg	N.D.		88	92	4	95			61	107
3789 indeno (1,2,3-cd) pyrene	33. ug/kg	N.D.		86	88	2	94			55	111
3790 dibenz (a,h) anthracene	33. ug/kg	N.D.		89	92	3	95			60	117
3791 benzo (ghi) perylene	33. ug/kg	N.D.		84	87	3	94			52	113
0111 Moisture	0.080 % by wt.	Batch: 981650199820001A	12				100	100	0	99	101



Lancaster Laboratories
2425 New Holland Pike
PO Box 12427
Lancaster, PA 17605-2425
TEL: 717-396-2100 FAX: 717-396-2606

See reverse side for explanation of symbols and abbreviations.

2216





LLI Sample No. 2943339

GEO-20/9-10¹ Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	73	39	108
	2-Flphenol	69	35	108
	2,4,6-TBP	118	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	67	31	126
	2-Fbiphenyl	86	45	113
	Tphenyl d14	76	37	130



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See reverse side for explanation of symbols and abbreviations

2017-11-01 09:11





LLI Sample No. SW 2943340

Collected: 6/ 9/98 at 11:08 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2101- SDG#: HMS04-03

Account No: 07802
Kerr-McGee Corporation
P.O. 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	16.0	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 ATTN: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 19:39:25 D 0003 22 129915 618556
 863 0.00 00033420 ASR000

Respectfully Submitted
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 Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

Q211 11/11/97





LLI Sample No. SW 2943340

Collected: 6/9/98 at 11:08 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2101- SDG#: HMS04-03

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION LIMIT	METHOD UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	phenol	N.D.	8,300.	ug/kg	N.D.	9,900.
3753	bis (2-chloroethyl) ether	N.D.	4,200.	ug/kg	N.D.	5,000.
1186	2-chlorophenol	N.D.	4,200.	ug/kg	N.D.	5,000.
3754	1,3-dichlorobenzene	N.D.	4,200.	ug/kg	N.D.	5,000.
1187	1,4-dichlorobenzene	N.D.	4,200.	ug/kg	N.D.	5,000.
3755	1,2-dichlorobenzene	N.D.	4,200.	ug/kg	N.D.	5,000.
4690	2-methylphenol	N.D.	4,200.	ug/kg	N.D.	5,000.
4691	2,2'-oxybis (1-chloropropane)	N.D.	4,200.	ug/kg	N.D.	5,000.
4692	3- and 4-methylphenol	N.D.	8,300.	ug/kg	N.D.	9,900.
1188	N-nitrosodi-n-propylamine	N.D.	4,200.	ug/kg	N.D.	5,000.
3757	hexachloroethane	N.D.	4,200.	ug/kg	N.D.	5,000.
3758	nitrobenzene	N.D.	4,200.	ug/kg	N.D.	5,000.
3759	isophorone	N.D.	4,200.	ug/kg	N.D.	5,000.
3746	2-nitrophenol	N.D.	8,300.	ug/kg	N.D.	9,900.
3747	2,4-dimethylphenol	N.D.	8,300.	ug/kg	N.D.	9,900.
3760	bis (2-chloroethoxy) methane	N.D.	8,300.	ug/kg	N.D.	9,900.
3748	2,4-dichlorophenol	N.D.	8,300.	ug/kg	N.D.	9,900.
1189	1,2,4-trichlorobenzene	N.D.	4,200.	ug/kg	N.D.	5,000.
3761	naphthalene	420,000.	4,200.	ug/kg	490,000.	5,000.
4693	4-chloroaniline	N.D.	4,200.	ug/kg	N.D.	5,000.
3762	hexachlorobutadiene	N.D.	8,300.	ug/kg	N.D.	9,900.
1190	4-chloro-3-methylphenol	N.D.	8,300.	ug/kg	N.D.	9,900.
4694	2-methylnaphthalene	230,000.	4,200.	ug/kg	280,000.	5,000.
3763	hexachlorocyclopentadiene	N.D.	21,000.	ug/kg	N.D.	25,000.
3749	2,4,6-trichlorophenol	N.D.	8,300.	ug/kg	N.D.	9,900.
4695	2,4,5-trichlorophenol	N.D.	8,300.	ug/kg	N.D.	9,900.
3764	2-chloronaphthalene	N.D.	4,200.	ug/kg	N.D.	5,000.
4696	2-nitroaniline	N.D.	4,200.	ug/kg	N.D.	5,000.
3766	dimethyl phthalate	N.D.	8,300.	ug/kg	N.D.	9,900.
3765	acenaphthylene	39,000.	J 4,200.	ug/kg	47,000.	J5,000.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

3210 7/14/98 11:01





LLI Sample No. SW 2943340

Collected: 6/ 9/98 at 11:08 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2101- SDG#: HMS04-03

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	8,300.	ug/kg	N.D.	9,900.
1191	acenaphthene	160,000.	4,200.	ug/kg	190,000.	5,000.
3750	2,4-dinitrophenol	N.D.	24,000.	ug/kg	N.D.	29,000.
1192	4-nitrophenol	N.D.	21,000.	ug/kg	N.D.	25,000.
4698	dibenzofuran	160,000.	4,200.	ug/kg	190,000.	5,000.
1193	2,4-dinitrotoluene	N.D.	8,300.	ug/kg	N.D.	9,900.
3767	2,6-dinitrotoluene	N.D.	4,200.	ug/kg	N.D.	5,000.
3770	diethyl phthalate	N.D.	8,300.	ug/kg	N.D.	9,900.
3769	4-chlorophenyl phenyl ether	N.D.	4,200.	ug/kg	N.D.	5,000.
3768	fluorene	220,000.	4,200.	ug/kg	260,000.	5,000.
4700	4-nitroaniline	N.D.	8,300.	ug/kg	N.D.	9,900.
3751	4,6-dinitro-2-methylphenol	N.D.	21,000.	ug/kg	N.D.	25,000.
3772	N-nitrosodiphenylamine	N.D.	4,200.	ug/kg	N.D.	5,000.
3773	4-bromophenyl phenyl ether	N.D.	8,300.	ug/kg	N.D.	9,900.
3774	hexachlorobenzene	N.D.	4,200.	ug/kg	N.D.	5,000.
1194	pentachlorophenol	N.D.	21,000.	ug/kg	N.D.	25,000.
3775	phenanthrene	630,000.	4,200.	ug/kg	750,000.	5,000.
3776	anthracene	640,000.	8,300.	ug/kg	760,000.	9,900.
4702	carbazole	190,000.	4,200.	ug/kg	230,000.	5,000.
3777	di-n-butyl phthalate	N.D.	8,300.	ug/kg	N.D.	9,900.
3778	fluoranthene	560,000.	4,200.	ug/kg	670,000.	5,000.
1195	pyrene	540,000.	4,200.	ug/kg	650,000.	5,000.
3780	butyl benzyl phthalate	N.D.	8,300.	ug/kg	N.D.	9,900.
3783	3,3'-dichlorobenzidine	N.D.	8,300.	ug/kg	N.D.	9,900.
3781	benzo (a) anthracene	240,000.	4,200.	ug/kg	280,000.	5,000.
3784	bis (2-ethylhexyl) phthalate	N.D.	8,300.	ug/kg	N.D.	9,900.
3782	chrysene	240,000.	4,200.	ug/kg	290,000.	5,000.
3785	di-n-octyl phthalate	N.D.	8,300.	ug/kg	N.D.	9,900.
3786	benzo (b) fluoranthene	390,000.	4,200.	ug/kg	460,000.	5,000.
3787	benzo (k) fluoranthene	130,000.	4,200.	ug/kg	160,000.	5,000.
3788	benzo (a) pyrene	190,000.	4,200.	ug/kg	230,000.	5,000.
3789	indeno (1,2,3-cd) pyrene	100,000.	4,200.	ug/kg	120,000.	5,000.
3790	dibenz (a,h) anthracene	28,000.	J 4,200.	ug/kg	34,000.	J5,000.
3791	benzo (ghi) perylene	76,000.	4,200.	ug/kg	90,000.	5,000.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

01/95 11/11/97





LLI Sample No. SW 2943340

Collected: 6/ 9/98 at 11:08 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2101- SDG#: HMS04-03

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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

The usual quantitation limits could not be attained due to the matrix of the sample or interferences observed in the GC/MS semivolatile analysis.

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS SVOA



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(See reverse side for explanation of symbols and abbreviations)

LLO-000004-01





LLI Sample No. SW 2943340

Collected: 06/09/98 at 11:08 by DCU

Submitted: 06/10/98

GEO-21/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2101- SDG#: HMS04-03

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	06/29/98 1921	Phillip R. Esbshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/29/98 1921	Phillip R. Esbshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



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2275-001-0000





LLI Sample No. 2943340

GEO-21/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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 Semivolatiles	Batch: 98162SLE026									

1185	phenol										
8,300.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
4,200.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
4,200.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
4,200.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
4,200.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
4,200.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
4,200.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
4,200.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
8,300.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
4,200.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
4,200.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
4,200.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
4,200.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
8,300.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
8,300.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
8,300.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
8,300.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
4,200.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
4,200.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
4,200.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
8,300.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
8,300.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
4,200.	ug/kg	N.D.		83	65	24	89			60	102



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943340
 GEO-21/0-1' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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										
21,000.	ug/kg	N.D.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
8,300.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
8,300.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
4,200.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
4,200.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
8,300.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
4,200.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									
4697	3-nitroaniline										
8,300.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
4,200.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
24,000.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
21,000.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
4,200.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
8,300.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
4,200.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
8,300.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
4,200.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
4,200.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
8,300.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
21,000.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
4,200.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
8,300.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
4,200.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
21,000.	ug/kg	N.D.		88	83	6	93			42	108



Lancaster Laboratories
 2425 New Holland Pike
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See reverse side for explanation of symbols and abbreviations

2015 Rev. 10.17





LLI Sample No. 2943340

GEO-21/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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	4,200. ug/kg	N.D.		94	84	10	96			62	107
3776 anthracene	8,300. ug/kg	N.D.		99	89	10	96			62	105
4702 carbazole	4,200. ug/kg	N.D.		90	84	6	92			57	112
3777 di-n-butyl phthalate	8,300. ug/kg	N.D.		85	86	1	92			59	114
3778 fluoranthene	4,200. ug/kg	N.D.		98	90	8	100			58	110
1195 pyrene	4,200. ug/kg	N.D.		81	76	5	82			52	115
3780 butyl benzyl phthalate	8,300. ug/kg	N.D.		72	75	4	76			58	119
3783 3,3'-dichlorobenzidine	8,300. ug/kg	N.D.		57	60	5	56			15	94
3781 benzo (a) anthracene	4,200. ug/kg	N.D.		88	89	1	93			63	106
3784 bis (2-ethylhexyl) phthalate	8,300. ug/kg	N.D.		72	75	3	75			8	158
3782 chrysene	4,200. ug/kg	N.D.		85	83	2	88			60	107
3785 di-n-octyl phthalate	8,300. ug/kg	N.D.		83	87	6	85			54	127
3786 benzo (b) fluoranthene	4,200. ug/kg	N.D.		88	89	2	89			59	105
3787 benzo (k) fluoranthene	4,200. ug/kg	N.D.		88	92	5	97			63	108
3788 benzo (a) pyrene	4,200. ug/kg	N.D.		88	92	4	95			61	107
3789 indeno (1,2,3-cd) pyrene	4,200. ug/kg	N.D.		86	88	2	94			55	111
3790 dibenz (a,h) anthracene	4,200. ug/kg	N.D.		89	92	3	95			60	117
3791 benzo (ghi) perylene	4,200. ug/kg	N.D.		84	87	3	94			52	113
0111 Moisture	0.080 % by wt.		12				100	100	0	99	101

* Batch: 981650199820001A



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2125 New Holland Pike
PO Box 13125
Lancaster, PA 17605-2425
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See reverse side for explanation of symbols and abbreviations.

02/5/00 10:11:11





LLI Sample No. 2943340

GEO-21/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

SURROGATE SUMMARY

	TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
				LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	76	39	108
		2-Flphenol	67	35	108
		2,4,6-TBP	81	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	76	31	126
		2-Fbiphenyl	90	45	113
		Tphenyl14	80	37	130



Lancaster Laboratories
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Tel: 717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2943341

Collected: 6/ 9/98 at 11:11 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2123- SDG#: HMS04-04

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	LIMIT	RESULTS	DETECTION LIMIT
			METHOD	UNITS		METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	35.1		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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
19:41:28 D 0003 22 129915 618556
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

10/12/98 13:41:17





LLI Sample No. SW 2943341

Collected: 6/9/98 at 11:11 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2123- SDG#: HMS04-04

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	3,300.	ug/kg	N.D.	5,100.
3753	bis (2-chloroethyl) ether	N.D.	1,700.	ug/kg	N.D.	2,600.
1186	2-chlorophenol	N.D.	1,700.	ug/kg	N.D.	2,600.
3754	1,3-dichlorobenzene	N.D.	1,700.	ug/kg	N.D.	2,600.
1187	1,4-dichlorobenzene	N.D.	1,700.	ug/kg	N.D.	2,600.
3755	1,2-dichlorobenzene	N.D.	1,700.	ug/kg	N.D.	2,600.
4690	2-methylphenol	N.D.	1,700.	ug/kg	N.D.	2,600.
4691	2,2'-oxybis (1-chloropropane)	N.D.	1,700.	ug/kg	N.D.	2,600.
4692	3- and 4-methylphenol	N.D.	3,300.	ug/kg	N.D.	5,100.
1188	N-nitrosodi-n-propylamine	N.D.	1,700.	ug/kg	N.D.	2,600.
3757	hexachloroethane	N.D.	1,700.	ug/kg	N.D.	2,600.
3758	nitrobenzene	N.D.	1,700.	ug/kg	N.D.	2,600.
3759	isophorone	N.D.	1,700.	ug/kg	N.D.	2,600.
3746	2-nitrophenol	N.D.	3,300.	ug/kg	N.D.	5,100.
3747	2,4-dimethylphenol	5,800.	J 3,300.	ug/kg	8,900.	J5,100.
3760	bis (2-chloroethoxy) methane	N.D.	3,300.	ug/kg	N.D.	5,100.
3748	2,4-dichlorophenol	N.D.	3,300.	ug/kg	N.D.	5,100.
1189	1,2,4-trichlorobenzene	N.D.	1,700.	ug/kg	N.D.	2,600.
3761	naphthalene	2,300,000.	17,000.	ug/kg	3,500,000.	26,000.
4693	4-chloroaniline	N.D.	1,700.	ug/kg	N.D.	2,600.
3762	hexachlorobutadiene	N.D.	3,300.	ug/kg	N.D.	5,100.
1190	4-chloro-3-methylphenol	N.D.	3,300.	ug/kg	N.D.	5,100.
4694	2-methylnaphthalene	990,000.	17,000.	ug/kg	1,500,000.	26,000.
3763	hexachlorocyclopentadiene	N.D.	8,300.	ug/kg	N.D.	13,000.
3749	2,4,6-trichlorophenol	N.D.	3,300.	ug/kg	N.D.	5,100.
4695	2,4,5-trichlorophenol	N.D.	3,300.	ug/kg	N.D.	5,100.
3764	2-chloronaphthalene	N.D.	1,700.	ug/kg	N.D.	2,600.
4696	2-nitroaniline	N.D.	1,700.	ug/kg	N.D.	2,600.
3766	dimethyl phthalate	N.D.	3,300.	ug/kg	N.D.	5,100.
3765	acernaphthylene	32,000.	1,700.	ug/kg	50,000.	2,600.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

Q230 06/14/98





LLI Sample No. SW 2943341

Collected: 6/ 9/98 at 11:11 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2123- SDG#: HMS04-04

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	3,300.	ug/kg	N.D.	5,100.
1191	acenaphthene	810,000.	17,000.	ug/kg	1,200,000.	26,000.
3750	2,4-dinitrophenol	N.D.	9,700.	ug/kg	N.D.	15,000.
1192	4-nitrophenol	N.D.	8,300.	ug/kg	N.D.	13,000.
4698	dibenzofuran	700,000.	17,000.	ug/kg	1,100,000.	26,000.
1193	2,4-dinitrotoluene	N.D.	3,300.	ug/kg	N.D.	5,100.
3767	2,6-dinitrotoluene	N.D.	1,700.	ug/kg	N.D.	2,600.
3770	diethyl phthalate	N.D.	3,300.	ug/kg	N.D.	5,100.
3769	4-chlorophenyl phenyl ether	N.D.	1,700.	ug/kg	N.D.	2,600.
3768	fluorene	960,000.	17,000.	ug/kg	1,500,000.	26,000.
4700	4-nitroaniline	N.D.	3,300.	ug/kg	N.D.	5,100.
3751	4,6-dinitro-2-methylphenol	N.D.	8,300.	ug/kg	N.D.	13,000.
3772	N-nitrosodiphenylamine	N.D.	1,700.	ug/kg	N.D.	2,600.
3773	4-bromophenyl phenyl ether	N.D.	3,300.	ug/kg	N.D.	5,100.
3774	hexachlorobenzene	N.D.	1,700.	ug/kg	N.D.	2,600.
1194	pentachlorophenol	N.D.	8,300.	ug/kg	N.D.	13,000.
3775	phenanthrene	2,600,000.	17,000.	ug/kg	4,000,000.	26,000.
3776	anthracene	1,200,000.	17,000.	ug/kg	1,800,000.	26,000.
4702	carbazole	400,000.	17,000.	ug/kg	620,000.	26,000.
3777	di-n-butyl phthalate	N.D.	3,300.	ug/kg	N.D.	5,100.
3778	fluoranthene	1,300,000.	17,000.	ug/kg	2,000,000.	26,000.
1195	pyrene	830,000.	17,000.	ug/kg	1,300,000.	26,000.
3780	butyl benzyl phthalate	N.D.	3,300.	ug/kg	N.D.	5,100.
3783	3,3'-dichlorobenzidine	N.D.	3,300.	ug/kg	N.D.	5,100.
3781	benzo (a) anthracene	250,000.	1,700.	ug/kg	390,000.	2,600.
3784	bis (2-ethylhexyl) phthalate	N.D.	3,300.	ug/kg	N.D.	5,100.
3782	chrysene	260,000.	1,700.	ug/kg	410,000.	2,600.
3785	di-n-octyl phthalate	N.D.	3,300.	ug/kg	N.D.	5,100.
3786	benzo (b) fluoranthene	170,000.	1,700.	ug/kg	270,000.	2,600.
3787	benzo (k) fluoranthene	49,000.	1,700.	ug/kg	76,000.	2,600.
3788	benzo (a) pyrene	120,000.	1,700.	ug/kg	190,000.	2,600.
3789	indeno (1,2,3-cd) pyrene	53,000.	1,700.	ug/kg	81,000.	2,600.
3790	dibenz (a,h) anthracene	14,000.	J 1,700.	ug/kg	22,000.	J2,600.
3791	benzo (ghi) perylene	46,000.	1,700.	ug/kg	71,000.	2,600.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
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See release 3.0 for explanation of symbols and abbreviations

10/14/98 11:17





LLI Sample No. SW 2943342

Collected: 6/ 9/98 at 11:16 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/5-6' Grab Soil Sample

Gulf States Creosoting Site; Hattiesburg, MS
2156- SDG#: HMS04-05

Account No: 07802
Kerr-McGee Corporation
P.O. 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	13.2		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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
19:43:25 D 0003 22 129915 618556
863 0.00 00033420 ASR000



Lancaster Laboratories
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PO Box 12425
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Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2943342

Collected: 6/ 9/98 at 11:16 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2156- SDG#: HMS04-05

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.		67. ug/kg	N.D.	77.
3753	bis (2-chloroethyl) ether	N.D.		33. ug/kg	N.D.	38.
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.		33. ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33. ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.		67. ug/kg	N.D.	77.
1188	N-nitrosodi-n-propylamine	N.D.		33. ug/kg	N.D.	38.
3757	hexachloroethane	N.D.		33. ug/kg	N.D.	38.
3758	nitrobenzene	N.D.		33. ug/kg	N.D.	38.
3759	isophorone	N.D.		33. ug/kg	N.D.	38.
3746	2-nitrophenol	N.D.		67. ug/kg	N.D.	77.
3747	2,4-dimethylphenol	69.	J	67. ug/kg	79.	J 77.
3760	bis (2-chloroethoxy) methane	N.D.		67. ug/kg	N.D.	77.
3748	2,4-dichlorophenol	N.D.		67. ug/kg	N.D.	77.
1189	1,2,4-trichlorobenzene	N.D.		33. ug/kg	N.D.	38.
3761	naphthalene	130.	J	33. ug/kg	150.	J 38.
4693	4-chloroaniline	N.D.		33. ug/kg	N.D.	38.
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	89.	J	33. ug/kg	100.	J 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.		33. ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.		67. ug/kg	N.D.	77.
3765	acenaphthylene	N.D.		33. ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA

MEMBER
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943342

Collected: 6/ 9/98 at 11:16 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2156- SDG#: HMS04-05

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.		67. ug/kg	N.D.	77.
1191	acenaphthene	170.	J	33. ug/kg	200.	J 38.
3750	2,4-dinitrophenol	N.D.		190. ug/kg	N.D.	220.
1192	4-nitrophenol	N.D.		170. ug/kg	N.D.	190.
4698	dibenzofuran	210.	J	33. ug/kg	240.	J 38.
1193	2,4-dinitrotoluene	N.D.		67. ug/kg	N.D.	77.
3767	2,6-dinitrotoluene	N.D.		33. ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.		67. ug/kg	N.D.	77.
3769	4-chlorophenyl phenyl ether	N.D.		33. ug/kg	N.D.	38.
3768	fluorene	300.	J	33. ug/kg	350.	J 38.
4700	4-nitroaniline	N.D.		67. ug/kg	N.D.	77.
3751	4,6-dinitro-2-methylphenol	N.D.		170. ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.		33. ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.		67. ug/kg	N.D.	77.
3774	hexachlorobenzene	N.D.		33. ug/kg	N.D.	38.
1194	pentachlorophenol	N.D.		170. ug/kg	N.D.	190.
3775	phenanthrene	1,200.		33. ug/kg	1,400.	38.
3776	anthracene	250.	J	33. ug/kg	290.	J 38.
4702	carbazole	180.	J	33. ug/kg	210.	J 38.
3777	di-n-butyl phthalate	N.D.		67. ug/kg	N.D.	77.
3778	fluoranthene	640.		33. ug/kg	730.	38.
1195	pyrene	390.		33. ug/kg	450.	38.
3780	butyl benzyl phthalate	N.D.		67. ug/kg	N.D.	77.
3783	3,3'-dichlorobenzidine	N.D.		67. ug/kg	N.D.	77.
3781	benzo (a) anthracene	140.	J	33. ug/kg	160.	J 38.
3784	bis (2-ethylhexyl) phthalate	N.D.		67. ug/kg	N.D.	77.
3782	chrysene	120.	J	33. ug/kg	140.	J 38.
3785	di-n-octyl phthalate	N.D.		67. ug/kg	N.D.	77.
3786	benzo (b) fluoranthene	94.	J	33. ug/kg	110.	J 38.
3787	benzo (k) fluoranthene	N.D.		33. ug/kg	N.D.	38.
3788	benzo (a) pyrene	68.	J	33. ug/kg	79.	J 38.
3789	indeno (1,2,3-cd) pyrene	35.	J	33. ug/kg	40.	J 38.
3790	dibenz (a,h) anthracene	N.D.		33. ug/kg	N.D.	38.
3791	benzo (ghi) perylene	N.D.		33. ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943342

Collected: 6/ 9/98 at 11:16 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2156- SDG#: HMS04-05

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

2216 11/11/98 11:11





LLI Sample No. SW 2943342

Collected: 06/09/98 at 11:16 by DCU

Submitted: 06/10/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-21/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2156- SDG#: HMS04-05

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS		ANALYST
				ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1		06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1		06/30/98 0329	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		06/30/98 0329	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1		06/14/98 1808	Patrick N. Ward



Lancaster Laboratories
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LLI Sample No. **2943342**
 GEO-21/5-6' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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 Semivolatiles		Batch: 98162SLE026									
1185	phenol										
67.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
33.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		83	65	24	89			60	102



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 717-656-2397 Fax 717-656-2581

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2943342

GEO-21/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									
4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



Lancaster Laboratories
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334-765-2425 Fax: 334-765-2587

See reverse side for explanation of symbols and abbreviations.

2025 06/18/2025





LLI Sample No. 2943342

GEO-21/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
	33. ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
	33. ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
	33. ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
	33. ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
	33. ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
	33. ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
	33. ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
	33. ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
	33. ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
	33. ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
	33. ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
	0.080 % by wt.	* Batch: 981650199820001A	12				100	100	0	99	101



Lancaster Laboratories
2145 New Holland Pike
PO Box 10425
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TEL: 610-339-3300 FAX: 717-656-2651

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943342

GEO-21/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Phenol-d6	62	39 108
		2-Flpheno1	57	35 108
		2,4,6-TBP	102	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	53	31 126
		2-Fbiphenyl	52	45 113
		Tphenyl14	77	37 130



Thermo Analytical Inc.
2425 New Holland Pike
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See reverse side for explanation of symbols and abbreviations

2013-04-11-10:57





LLI Sample No. SW 2943343

Collected: 6/ 9/98 at 11:22 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/9-10' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
21910 SDG#: HMS04-06

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

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	16.4	0.080	% by wt.		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
19:45:11 D 0003 22 129915 618556
863 0.00 00033420 ASR000



Lancaster Laboratories
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2943343

Collected: 6/ 9/98 at 11:22 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/9-10' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
21910 SDG#: HMS04-06

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	80.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	40.
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	43.	J 33.	ug/kg	51.	J 40.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	40.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	80.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	40.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	40.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	40.
3759	isophorone	N.D.	33.	ug/kg	N.D.	40.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	80.
3747	2,4-dimethylphenol	190.	J 67.	ug/kg	220.	J 80.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	80.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	80.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3761	naphthalene	720.	33.	ug/kg	860.	40.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	40.
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	370.	33.	ug/kg	440.	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.	33.	ug/kg	N.D.	40.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	40.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER
ACIL
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See reverse side for explanation of symbols and abbreviations

2110 Rev. 9/1/97





LLI Sample No. SW 2943343
 Collected: 6/ 9/98 at 11:22 by DCU

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O.
 Ref.

Submitted: 6/10/98 Reported: 7/14/98
 Discard: 8/14/98

GEO-21/9-10' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 21910 SDG#: HMS04-06

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	METHOD LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	80.
1191	acenaphthene	390.	33.	ug/kg	470.	40.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	230.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	410.	33.	ug/kg	490.	40.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	80.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	40.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	40.
3768	fluorene	510.	33.	ug/kg	620.	40.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	80.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	40.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	80.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	40.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.
3775	phenanthrene	1,900.	33.	ug/kg	2,200.	40.
3776	anthracene	330.	J 33.	ug/kg	390.	J 40.
4702	carbazole	200.	J 33.	ug/kg	240.	J 40.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3778	fluoranthene	950.	33.	ug/kg	1,100.	40.
1195	pyrene	580.	33.	ug/kg	700.	40.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	80.
3781	benzo (a) anthracene	200.	J 33.	ug/kg	240.	J 40.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	80.
3782	chrysene	160.	J 33.	ug/kg	190.	J 40.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3786	benzo (b) fluoranthene	130.	J 33.	ug/kg	150.	J 40.
3787	benzo (k) fluoranthene	43.	J 33.	ug/kg	51.	J 40.
3788	benzo (a) pyrene	91.	J 33.	ug/kg	110.	J 40.
3789	indeno (1,2,3-cd) pyrene	39.	J 33.	ug/kg	47.	J 40.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	40.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	40.

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300

Respectfully Submitted
 Charles J. Nestlund, B.S.
 Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943343

Collected: 6/ 9/98 at 11:22 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/9-10' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
21910 SDG#: HMS04-06

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ret.

CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD
DETECTION LIMIT UNITS

DRY WEIGHT
RESULTS METHOD
DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Nesiund, B.S.
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See reverse side for explanation of symbols and abbreviations

1215 11 1998





LLI Sample No. SW 2943343

Collected: 06/09/98 at 11:22 by DCU

Submitted: 06/10/98

GEO-21/9-10' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
21910 SDG#: HMS04-06

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	06/30/98 0420	Phillip R. Esbshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/30/98 0420	Phillip R. Esbshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



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LLI Sample No. 2943343

GEO-21/9-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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 Semivolatiles		Batch: 98162SLE026									
1185	phenol										
67.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
33.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		83	65	24	89			60	102



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See reverse side for explanation of symbols and abbreviations

12/15 11:11:17





LLI Sample No. 2943343

GEO-21/9-10⁺ Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



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2015 10/15/15 01:41



**LLI Sample No. SW 2943341**

Collected: 6/ 9/98 at 11:11 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-21/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2123- SDG#: HMS04-04

Account No: 07802 Kerr-McGee Corporation P.O. 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 Semivolatiles cont'd

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

The usual quantitation limits could not be attained due to the matrix of the sample or interferences observed in the GC/MS semivolatiles analysis.

The quantitation limits for the GC/MS semivolatiles compounds were raised due to the high concentration of target compounds.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

0215 11/14/98 4:41





LLI Sample No. SW 2943341

Collected: 06/09/98 at 11:11 by DCU

Submitted: 06/10/98

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

GEO-21/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 2123- SDG#: HMS04-04

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	06/30/98 0238	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/30/98 0238	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



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LLI Sample No. 2943341

GEO-21/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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 Semivolatiles		Batch: 98162SLE026									

1185	phenol										
3,300.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
1,700.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
1,700.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
1,700.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
1,700.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
1,700.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
1,700.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
1,700.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
3,300.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
1,700.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
1,700.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
1,700.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
1,700.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
3,300.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
3,300.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
3,300.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
3,300.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
1,700.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
17,000.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
1,700.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
3,300.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
3,300.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
17,000.	ug/kg	N.D.		83	65	24	89			60	102



Lancaster Laboratories
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717-654-2300 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations

2015-01-01 10:17





LLI Sample No. 2943341

GEO-21/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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										
8,300.	ug/kg	N.D.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
3,300.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
3,300.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
1,700.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
1,700.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
3,300.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
1,700.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
3,300.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
17,000.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
9,700.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
8,300.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
17,000.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
3,300.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
1,700.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
3,300.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
1,700.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
17,000.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
3,300.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
8,300.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
1,700.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
3,300.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
1,700.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
8,300.	ug/kg	N.D.		88	83	6	93			42	108



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943341

GEO-21/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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										
17,000.	ug/kg	N.D.		94	84	10	96			62	107
3776	anthracene										
17,000.	ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
17,000.	ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
3,300.	ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
17,000.	ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
17,000.	ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
3,300.	ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
3,300.	ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
1,700.	ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
3,300.	ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
1,700.	ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
3,300.	ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
1,700.	ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
1,700.	ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
1,700.	ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
1,700.	ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
1,700.	ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
1,700.	ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
0.080	% by wt.		12				100	100	0	99	101

* Batch: 981650199820001A



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See reverse side for explanation of symbols and abbreviations

2012-11-13 11:47





LLI Sample No. 2943341

GEO-21/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	45	39	108
	2-Flphenol	41	35	108
	2,4,6-TBP	53	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	55	31	126
	2-Fbiphenyl	54	45	113
	Tphenyl14	58	37	130



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11/27/06 11:41 AM





LLI Sample No. 2943343

GEO-21/9-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
	33. ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
	33. ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
	33. ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
	33. ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
	33. ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
	33. ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
	33. ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
	33. ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
	33. ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
	33. ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
	33. ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
	0.080 % by wt.	Batch: 981650199820001A	12				100	100	0	99	101



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2015 01/13/17





LLI Sample No. 2943343

GEO-21/9-10th Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	64	39	108
	2-Flphenol	60	35	108
	2,4,6-TBP	101	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	57	31	126
	2-Fbiphenyl	51	45	113
	Tphenylid14	84	37	130



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LLI Sample No. SW 2943344

Collected: 6/ 9/98 at 14:05 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-22/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2201- SDG#: HMS04-07

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ret.

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	3.35	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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
19:46:55 D 0003 22 129915 618556
863 0.00 00033420 ASR000



Lancaster Laboratories
21251 Lev. Holland Pike
PO Box 12425
Lancaster PA 17605-1425
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2943344

Collected: 6/ 9/98 at 14:05 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-22/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2201- SDG#: HMS04-07

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	69.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	34.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	34.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	34.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	34.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	34.
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	34.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	34.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	69.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	34.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	34.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	34.
3759	isophorone	N.D.	33.	ug/kg	N.D.	34.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	69.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	69.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	69.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	69.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	34.
3761	naphthalene	92.	J 33.	ug/kg	95.	J 34.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	34.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	69.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	69.
4694	2-methylnaphthalene	34.	J 33.	ug/kg	36.	J 34.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	170.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	69.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	69.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	34.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	34.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	69.
3765	acenaphthylene	95.	J 33.	ug/kg	98.	J 34.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

11/14/98 10:11 AM





LLI Sample No. SW 2943344

Collected: 6/ 9/98 at 14:05 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-22/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2201- SDG#: HMS04-07

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
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	69.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	34.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	200.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	170.
4698	dibenzofuran	35.	J 33.	ug/kg	37.	J 34.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	69.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	34.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	69.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	34.
3768	fluorene	36.	J 33.	ug/kg	38.	J 34.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	69.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	170.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	34.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	69.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	34.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	170.
3775	phenanthrene	370.	J 33.	ug/kg	390.	J 34.
3776	anthracene	210.	J 33.	ug/kg	210.	J 34.
4702	carbazole	93.	J 33.	ug/kg	96.	J 34.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	69.
3778	fluoranthene	690.	J 33.	ug/kg	710.	J 34.
1195	pyrene	590.	J 33.	ug/kg	610.	J 34.
3780	butyl benzyl phthalate	150.	J 67.	ug/kg	150.	J 69.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	69.
3781	benzo (a) anthracene	370.	J 33.	ug/kg	390.	J 34.
3784	bis (2-ethylhexyl) phthalate	630.	J 67.	ug/kg	650.	J 69.
3782	chrysene	420.	J 33.	ug/kg	440.	J 34.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	69.
3786	benzo (b) fluoranthene	690.	J 33.	ug/kg	720.	J 34.
3787	benzo (k) fluoranthene	200.	J 33.	ug/kg	210.	J 34.
3788	benzo (a) pyrene	370.	J 33.	ug/kg	390.	J 34.
3789	indeno (1,2,3-cd) pyrene	290.	J 33.	ug/kg	300.	J 34.
3790	dibenz (a,h) anthracene	82.	J 33.	ug/kg	84.	J 34.
3791	benzo (ghi) perylene	270.	J 33.	ug/kg	280.	J 34.

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





LLI Sample No. SW 2943344

Collected: 6/ 9/98 at 14:05 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-22/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2201- SDG#: HMS04-07

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ret.

CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD
DETECTION LIMIT UNITS

.DRY WEIGHT
RESULTS METHOD
DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-0425
TEL: 717-656-2300 FAX: 717-656-2661

See reverse side for explanation of symbols and abbreviations

02/14/98 11:11:11





LLI Sample No. SW 2943344

Collected: 06/09/98 at 14:05 by DCU

Submitted: 06/10/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-22/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2201- SDG#: HMS04-07

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	06/30/98 0510	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/30/98 0510	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



Lancaster Laboratories
1425 New Holland Pike
PO Box 12425
Lancaster PA 17605-2425
Tel: 717-399-3300 Fax: 717-399-3681

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943344

GE0-22/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
-----		Batch: 98162SLE026										
4688	TCL Semivolatiles	-----										
1185	phenol											
67.	ug/kg	N.D.		74	62	18	79			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		66	47	32	72			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		77	59	28	82			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		66	30	77	88			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		68	32	73	88			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		74	38	64	92			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		73	59	22	77			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		68	46	39	76			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		74	62	19	80			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		75	59	24	81			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		66	29	77	87			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		79	59	29	86			56	110	
3759	isophorone											
33.	ug/kg	N.D.		79	65	20	86			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		79	60	27	86			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		70	59	16	82			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		72	57	22	77			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		84	68	21	90			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		86	55	43	97			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		78	54	36	87			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		54	46	16	71			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		90	52	54	110			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		78	69	11	85			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		83	65	24	89			60	102	



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Lancaster, PA 17615-2425
717-656-2370 Fax: 717-656-2581

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943344

GEO-22/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



Lancaster Laboratories
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TEL: 717-652-1300 FAX: 717-652-2681

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943344

GEO-22/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
33.	ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
33.	ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
33.	ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
0.080	% by wt.		12				100	100	0	99	101

* Batch: 981650199820001A



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see reverse side for explanation of symbols and abbreviations

2015-11-11 11:11





LLI Sample No. 2943344

GEO-22/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	63	39	108
	2-F1phenol	64	35	108
	2,4,6-TBP	91	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	67	31	126
	2-Fbiphenyl	74	45	113
	Tphenyl14	68	37	130



Lancaster Laboratories
2175 New Hope Pike
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Berwyn, PA 17605-2425
Tel: 717-656-2310 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations

July 1, 2002





LLI Sample No. SW 2943345

Collected: 6/ 9/98 at 14:08 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-22/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2223- SDG#: HMS04-08

Account No: 07802
Kerr-McGee Corporation
P.O. 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	18.3	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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
19:48:44 D 0003 22 129915 618556
863 0.00 00033420 ASR000



Lancaster Laboratories
2425 New Holland Pike
PO Box 13425
Lancaster, PA 17605-2425
TEL: 610-650-1900 Fax: 717-650-2681

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2943345

Collected: 6/ 9/98 at 14:08 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-22/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2223- SDG#: HMS04-08

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	pheno1	N.D.	67.	ug/kg	N.D.	82.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	41.
1186	2-chloropheno1	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-methylpheno1	N.D.	33.	ug/kg	N.D.	41.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	41.
4692	3- and 4-methylpheno1	N.D.	67.	ug/kg	N.D.	82.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	41.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	41.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	41.
3759	isophorone	N.D.	33.	ug/kg	N.D.	41.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	82.
3747	2,4-dimethylpheno1	N.D.	67.	ug/kg	N.D.	82.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	82.
3748	2,4-dichloropheno1	N.D.	67.	ug/kg	N.D.	82.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	41.
3761	naphthalene	3,000.	33.	ug/kg	3,700.	41.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	41.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	82.
1190	4-chloro-3-methylpheno1	N.D.	67.	ug/kg	N.D.	82.
4694	2-methylnaphthalene	890.	33.	ug/kg	1,100.	41.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichloropheno1	N.D.	67.	ug/kg	N.D.	82.
4695	2,4,5-trichloropheno1	N.D.	67.	ug/kg	N.D.	82.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	41.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	41.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	82.
3765	acenaphthylene	1,600.	33.	ug/kg	2,000.	41.

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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVQA



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See reverse side for explanation of symbols and abbreviations

01/15/98 11:11 AM





LLI Sample No. SW 2943345

Collected: 6/ 9/98 at 14:08 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-22/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2223- SDG#: HMS04-08

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd							
4697	3-nitroaniline	N.D.		67.	ug/kg	N.D.	82.
1191	acenaphthene	280.	J	33.	ug/kg	350.	J 41.
3750	2,4-dinitrophenol	N.D.		190.	ug/kg	N.D.	240.
1192	4-nitrophenol	N.D.		170.	ug/kg	N.D.	200.
4698	dibenzofuran	920.		33.	ug/kg	1,100.	41.
1193	2,4-dinitrotoluene	N.D.		67.	ug/kg	N.D.	82.
3767	2,6-dinitrotoluene	N.D.		33.	ug/kg	N.D.	41.
3770	diethyl phthalate	N.D.		67.	ug/kg	N.D.	82.
3769	4-chlorophenyl phenyl ether	N.D.		33.	ug/kg	N.D.	41.
3768	fluorene	540.		33.	ug/kg	660.	41.
4700	4-nitroaniline	N.D.		67.	ug/kg	N.D.	82.
3751	4,6-dinitro-2-methylphenol	N.D.		170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.		33.	ug/kg	N.D.	41.
3773	4-bromophenyl phenyl ether	N.D.		67.	ug/kg	N.D.	82.
3774	hexachlorobenzene	N.D.		33.	ug/kg	N.D.	41.
1194	pentachlorophenol	N.D.		170.	ug/kg	N.D.	200.
3775	phenanthrene	2,000.		33.	ug/kg	2,500.	41.
3776	anthracene	2,800.		33.	ug/kg	3,400.	41.
4702	carbazole	320.	J	33.	ug/kg	390.	J 41.
3777	di-n-butyl phthalate	N.D.		67.	ug/kg	N.D.	82.
3778	fluoranthene	4,500.		170.	ug/kg	5,600.	200.
1195	pyrene	6,800.		170.	ug/kg	8,400.	200.
3780	butyl benzyl phthalate	N.D.		67.	ug/kg	N.D.	82.
3783	3,3'-dichlorobenzidine	N.D.		67.	ug/kg	N.D.	82.
3781	benzo (a) anthracene	3,600.		33.	ug/kg	4,500.	41.
3784	bis (2-ethylhexyl) phthalate	N.D.		67.	ug/kg	N.D.	82.
3782	chrysene	5,600.		170.	ug/kg	6,900.	200.
3785	di-n-octyl phthalate	N.D.		67.	ug/kg	N.D.	82.
3786	benzo (b) fluoranthene	13,000.		170.	ug/kg	16,000.	200.
3787	benzo (k) fluoranthene	N.D.		33.	ug/kg	N.D.	41.
3788	benzo (a) pyrene	5,000.		170.	ug/kg	6,100.	200.
3789	indeno (1,2,3-cd) pyrene	4,300.		33.	ug/kg	5,300.	41.
3790	dibenz (a,h) anthracene	1,200.		33.	ug/kg	1,500.	41.
3791	benzo (ghi) perylene	3,100.		33.	ug/kg	3,800.	41.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300



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Lynchburg, VA 27805-2425
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2943345

Collected: 6/ 9/98 at 14:08 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-22/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2223- SDG#: HMS04-08

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.
Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the
sample analysis conditions. The result reported for benzo(b)fluoranthene
represents the combined total of both isomers.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300



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Lancaster PA 17605-2425
717-656-2300 Fax 717-656-2331

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2943345

Collected: 06/09/98 at 14:08 by DCU

Submitted: 06/10/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-22/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2223- SDG#: HMS04-08

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS		ANALYST
				ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1		06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1		06/30/98 0603	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		06/30/98 0603	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1		06/14/98 1808	Patrick N. Ward



Lancaster Laboratories
2425 New Holland Pike
PO Box 12125
Oklahoma City, Oklahoma 73112-0125
Tel: 405-768-4400 Fax: 405-768-4401





LLI Sample No. 2943345

GEO-22/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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 Semivolatiles		Batch: 98162SLE026									

1185 phenol	67. ug/kg	N.D.		74	62	18	79			49	105
3753 bis (2-chloroethyl) ether	33. ug/kg	N.D.		66	47	32	72			53	109
1186 2-chlorophenol	33. ug/kg	N.D.		77	59	28	82			55	107
3754 1,3-dichlorobenzene	33. ug/kg	N.D.		66	30	77	88			53	103
1187 1,4-dichlorobenzene	33. ug/kg	N.D.		68	32	73	88			52	103
3755 1,2-dichlorobenzene	33. ug/kg	N.D.		74	38	64	92			56	107
4690 2-methylphenol	33. ug/kg	N.D.		73	59	22	77			57	101
4691 2,2'-oxybis (1-chloropropane)	33. ug/kg	N.D.		68	46	39	76			38	117
4692 3- and 4-methylphenol	67. ug/kg	N.D.		74	62	19	80			48	116
1188 N-nitrosodi-n-propylamine	33. ug/kg	N.D.		75	59	24	81			50	124
3757 hexachloroethane	33. ug/kg	N.D.		66	29	77	87			52	108
3758 nitrobenzene	33. ug/kg	N.D.		79	59	29	86			56	110
3759 isophorone	33. ug/kg	N.D.		79	65	20	86			57	114
3746 2-nitrophenol	67. ug/kg	N.D.		79	60	27	86			59	107
3747 2,4-dimethylphenol	67. ug/kg	N.D.		70	59	16	82			39	108
3760 bis (2-chloroethoxy) methane	67. ug/kg	N.D.		72	57	22	77			56	103
3748 2,4-dichlorophenol	67. ug/kg	N.D.		84	68	21	90			59	100
1189 1,2,4-trichlorobenzene	33. ug/kg	N.D.		86	55	43	97			57	104
3761 naphthalene	33. ug/kg	N.D.		78	54	36	87			58	99
4693 4-chloroaniline	33. ug/kg	N.D.		54	46	16	71			1	102
3762 hexachlorobutadiene	67. ug/kg	N.D.		90	52	54	110			56	115
1190 4-chloro-3-methylphenol	67. ug/kg	N.D.		78	69	11	85			56	108
4694 2-methylnaphthalene	33. ug/kg	N.D.		83	65	24	89			60	102

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See reference for explanation of symbols and abbreviations

12/14/00 11:10





LLI Sample No. 2943345

GEO-22/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2943345

GEO-22/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
33.	ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
170.	ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
170.	ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
170.	ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
170.	ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
170.	ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981650199820001A	12				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations

11/10/01 8:37





LLI Sample No. 2943345

GEO-22/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	64	39	108
		2-Flphenol	59	35	108
		2,4,6-TBP	102	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	57	31	126
		2-Fbiphenyl	71	45	113
		Tphenylid14	67	37	130



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Lancaster, PA 17605-1425
717-656-1111 Fax: 717-656-2681

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2016-07-11 11:11





LLI Sample No. SW 2943346

Collected: 6/ 9/98 at 14:12 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-22/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2256- SDG#: HMS04-09

Account No: 07802
Kerr-McGee Corporation
P.O. 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	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 Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
19:50:32 D 0003 22 129915 618556
863 0.00 00033420 ASR000



Lancaster Laboratories
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2943346

Collected: 6/ 9/98 at 14:12 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-22/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2256- SDG#: HMS04-09

Account No: 07802
Kerr-McGee Corporation
P. O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	78.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	39.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	78.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	78.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	78.
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.	33.	ug/kg	N.D.	39.
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.	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.	33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA



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The reverse side for explanation of symbols and abbreviations

1216 04/19/98





LLI Sample No. SW 2943346

Collected: 6/ 9/98 at 14:12 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-22/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2256- SDG#: HMS04-09

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.		190. ug/kg	N.D.	230.
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.
3767	2,6-dinitrotoluene	N.D.		33. ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.		67. ug/kg	N.D.	78.
3769	4-chlorophenyl phenyl ether	N.D.		33. ug/kg	N.D.	39.
3768	fluorene	36.	J	33. ug/kg	42.	J 39.
4700	4-nitroaniline	N.D.		67. ug/kg	N.D.	78.
3751	4,6-dinitro-2-methylphenol	N.D.		170. ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.		33. ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.		67. ug/kg	N.D.	78.
3774	hexachlorobenzene	N.D.		33. ug/kg	N.D.	39.
1194	pentachlorophenol	N.D.		170. ug/kg	N.D.	200.
3775	phenanthrene	55.	J	33. ug/kg	64.	J 39.
3776	anthracene	66.	J	33. ug/kg	78.	J 39.
4702	carbazole	N.D.		33. ug/kg	N.D.	39.
3777	di-n-butyl phthalate	N.D.		67. ug/kg	N.D.	78.
3778	fluoranthene	55.	J	33. ug/kg	65.	J 39.
1195	pyrene	78.	J	33. ug/kg	92.	J 39.
3780	butyl benzyl phthalate	N.D.		67. ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.		67. ug/kg	N.D.	78.
3781	benzo (a) anthracene	N.D.		33. ug/kg	N.D.	39.
3784	bis (2-ethylhexyl) phthalate	N.D.		67. ug/kg	N.D.	78.
3782	chrysene	41.	J	33. ug/kg	49.	J 39.
3785	di-n-octyl phthalate	N.D.		67. ug/kg	N.D.	78.
3786	benzo (b) fluoranthene	64.	J	33. ug/kg	76.	J 39.
3787	benzo (k) fluoranthene	N.D.		33. ug/kg	N.D.	39.
3788	benzo (a) pyrene	41.	J	33. ug/kg	48.	J 39.
3789	indeno (1,2,3-cd) pyrene	47.	J	33. ug/kg	56.	J 39.
3790	dibenz (a,h) anthracene	N.D.		33. ug/kg	N.D.	39.
3791	benzo (ghi) perylene	38.	J	33. ug/kg	45.	J 39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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22 1 1 1 1 1





LLI Sample No. SW 2943346

Collected: 6/ 9/98 at 14:12 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-22/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2256- SDG#: HMS04-09

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ret.

CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD
DETECTION LIMIT UNITS

DRY WEIGHT
RESULTS METHOD
DETECTION LIMIT

TCL Semivolatiles cont'd

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

Poor surrogate recoveries were observed for the GC/MS semivolatile compounds. The analysis was repeated outside of the required hold time and surrogate recoveries met requirements. The data reported is from the initial extraction of the sample. Both sets of data are being submitted in the data package. Please refer to the case narrative for further details.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2943346

Collected: 06/09/98 at 14:12 by DCU

Submitted: 06/10/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-22/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2256- SDG#: HMS04-09

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	06/30/98 0710	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/30/98 0710	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



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 Charlotte, NC 27615-2423
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 Telex: 745600000 Fax: 704-858-2681

See reverse side for explanation of symbols and abbreviations

2075 001 10 01





LLI Sample No. 2943346

GEO-22/5-6' Grab Soil Sample

Gulf States Creosoting Site; Hattiesburg, MS

Group No. 618556
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 Semivolatiles	Batch: 98162SLE026									

1185	phenol										
67.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
33.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		83	65	24	89			60	102



Lancaster Laboratories
200 New Holland Pike
PO Box 10000
Cincinnati, OH 45210-2125
Tel: 513-251-1300 Fax: 513-251-2421

See reverse side for Explanation of Symbols and Abbreviations





LLI Sample No. 2943346

GEO-22/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



Lancaster Laboratories
2425 New Holland Pike
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717-656-3300 Fax 717-656-1081

See reverse side for explanation of symbols and abbreviations

31 5 11 11 11 11





LLI Sample No. 2943346

GEO-22/5-6 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
33.	ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
33.	ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
33.	ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
0.080	% by wt.		12				100	100	0	99	101

* Batch: 981650199820001A



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3111 West Holladay Drive
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Cape Charles, VA 23042-1425
757-226-7800 Fax: 757-226-7250

See website for explanation of symbols and abbreviations.





LLI Sample No. 2943346

GEO-22/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	31	39	108
	2-F1phenol	30	35	108
	2,4,6-TBP	47	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	29	31	126
	2-Fbiphenyl	26	45	113
	Tphenyl14	37	37	130



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
TEL: 717-399-5100 Fax: 717-399-5281

See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943347
Collected: 6/ 9/98 at 13:47 by DCU

Submitted: 6/10/98 Reported: 7/14/98
Discard: 8/14/98

GEO-23/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2301- SDG#: HMS04-10

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	LIMIT	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	7.36	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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
19:52:23 D 0003 22 129915 618556
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
6001 West Howard Pkwy
Oklahoma City, OK 73125
Tel: (405) 760-2425
Fax: (405) 760-2651

See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943347

Collected: 6/ 9/98 at 13:47 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-23/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2301- SDG#: HMS04-10

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	72.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	36.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	36.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	36.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	36.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	36.
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	36.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	36.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	72.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	36.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	36.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	36.
3759	isophorone	N.D.	33.	ug/kg	N.D.	36.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	72.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	72.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	72.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	72.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	36.
3761	naphthalene	79.	J	33.	86.	J
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	36.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	72.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	72.
4694	2-methylnaphthalene	69.	J	33.	74.	J
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	180.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	72.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	72.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	36.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	36.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	72.
3765	acenaphthylene	100.	J	33.	110.	J

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2425 New Holland Pike
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943347

Collected: 6/ 9/98 at 13:47 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-23/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2301- SDG#: HMS04-10

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	DETECTION	METHOD LIMIT UNITS	RESULTS	DETECTION	METHOD LIMIT
TCL Semivolatiles cont'd							
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	72.	
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	36.	
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	210.	
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	180.	
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	36.	
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	72.	
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	36.	
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	72.	
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	36.	
3768	fluorene	N.D.	33.	ug/kg	N.D.	36.	
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	72.	
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	180.	
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	36.	
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	72.	
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	36.	
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	180.	
3775	phenanthrene	160.	J 33.	ug/kg	180.	J 36.	
3776	anthracene	100.	J 33.	ug/kg	110.	J 36.	
4702	carbazole	N.D.	33.	ug/kg	N.D.	36.	
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	72.	
3778	fluoranthene	470.	33.	ug/kg	510.	36.	
1195	pyrene	460.	33.	ug/kg	500.	36.	
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	72.	
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	72.	
3781	benzo (a) anthracene	330.	J 33.	ug/kg	350.	J 36.	
3784	bis (2-ethylhexyl) phthalate	110.	J 67.	ug/kg	110.	J 72.	
3782	chrysene	410.	33.	ug/kg	440.	36.	
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	72.	
3786	benzo (b) fluoranthene	760.	33.	ug/kg	820.	36.	
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	36.	
3788	benzo (a) pyrene	340.	33.	ug/kg	370.	36.	
3789	indeno (1,2,3-cd) pyrene	330.	J 33.	ug/kg	350.	J 36.	
3790	dibenz (a,h) anthracene	89.	J 33.	ug/kg	96.	J 36.	
3791	benzo (ghi) perylene	300.	J 33.	ug/kg	320.	J 36.	

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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Oklahoma City, OK 73112
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See reverse side for explanation of symbols and abbreviations

12/10/98 11:07 AM





LLI Sample No. SW 2943347

Collected: 6/ 9/98 at 13:47 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-23/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2301- SDG#: HMS04-10

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.
Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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Lancaster, PA 17605-2425
TEL: (717) 656-2300 FAX: (717) 656-2681

See reverse side for explanation of symbols and abbreviations

01/15/98 10:11 AM





LLI Sample No. SW 2943347

Collected: 06/09/98 at 13:47 by DCU

Submitted: 06/10/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-23/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2301- SDG#: HMS04-10

CAT NO	ANALYSIS NAME	METHOD	TRIAL ID	ANALYSIS		ANALYST
				DATE	AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98	1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	07/02/98	0521	Phillip R. Esbshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/02/98	0521	Phillip R. Esbshade
0111	Moisture	EPA 160.3 modified	1	06/14/98	1808	Patrick N. Ward



Lancaster Laboratories
 2125 New Holland Pk
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 Lancaster, PA 17605-7425
 Tel: 717-656-2031





LLI Sample No. 2943347
 GEO-23/0-1' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
-----		Batch: 98162SLE026										
-----		-----										
4688	TCL Semivolatiles											
1185	phenol											
67.	ug/kg	N.D.		74	62	18	79			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		66	47	32	72			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		77	59	28	82			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		66	30	77	88			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		68	32	73	88			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		74	38	64	92			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		73	59	22	77			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		68	46	39	76			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		74	62	19	80			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		75	59	24	81			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		66	29	77	87			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		79	59	29	86			56	110	
3759	isophorone											
33.	ug/kg	N.D.		79	65	20	86			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		79	60	27	86			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		70	59	16	82			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		72	57	22	77			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		84	68	21	90			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		86	55	43	97			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		78	54	36	87			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		54	46	16	71			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		90	52	54	110			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		78	69	11	85			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		83	65	24	89			60	102	

MEMBER
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 Houston, TX 77055-0426
 713-666-1200 Fax 713-666-2641

See reverse side for explanation of symbols and abbreviations

22 1/2" x 34 1/2" x 1 1/4"





LLI Sample No. 2943347

GEO-23/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



Lancaster Laboratories
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Lancaster, PA 17604-2425
Tel: 717-397-2100 Fax: 717-398-2501

Please refer to the explanation of symbols and abbreviations





LLI Sample No. 2943347

GEO-23/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
	33. ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
	33. ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
	33. ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
	33. ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
	33. ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
	33. ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
	33. ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
	33. ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
	33. ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
	33. ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
	33. ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
	0.080 % by wt.	* Batch: 981650199820001A	12				100	100	0	99	101



Lancaster Laboratories
2425 New Holland Pike
PO Box 10125
Lancaster, PA 17605-2415
717-650-1100 Fax 717-650-1021

See reverse side for explanation of symbols and abbreviations

11/16/01 11:07





LLI Sample No. 2943347

GEO-23/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Phenol-d6	69	39 108
		2-Flphenol	60	35 108
		2,4,6-TBP	79	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	62	31 126
		2-Fbiphenyl	71	45 113
		Tphenyl14	81	37 130



Lancaster Laboratories
2025 New Holland Place
P.O. Box 12125
Little Rock, AR 72212-0125
Phone: (501) 767-8500

See reverse side for explanation of symbols and abbreviations

2025 Form 5.00





LLI Sample No. SW 2943348

Collected: 6/ 9/98 at 13:51 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-23/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2323- SDG#: HMS04-11

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ref.

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	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 Kerr-McGee Corporation ATTN: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 19:53:58 D 0003 22 129915 618556
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Nesiund, B.S.
 Group Leader, GC/MS SVOA



Lancaster Laboratories
 2125 New Found PA
 PO Box 12425
 Lancaster PA 17605-2425
 (717) 656-2300 Fax (717) 656-2651

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2943348

Collected: 6/ 9/98 at 13:51 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-23/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2323- SDG#: HMS04-11

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	80.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	40.
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.	33.	ug/kg	N.D.	40.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	40.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	80.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	40.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	40.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	40.
3759	isophorone	N.D.	33.	ug/kg	N.D.	40.
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.	67.	ug/kg	N.D.	80.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	80.
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.	33.	ug/kg	N.D.	40.
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.	33.	ug/kg	N.D.	40.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	40.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA



MEMBER
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See reverse side for explanation of symbols and abbreviations.

12/15/98 11:17 AM





LLI Sample No. SW 2943348

Collected: 6/9/98 at 13:51 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-23/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2323- SDG#: HMS04-11

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd							
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.	190.	ug/kg	N.D.	230.	
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.	
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	40.	
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	80.	
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	40.	
3768	fluorene	45.	J	33.	54.	J	40.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	80.	
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.	
3772	N-nitrosodiphenylamine	51.	J	33.	61.	J	40.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	80.	
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	40.	
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.	
3775	phenanthrene	230.	J	33.	270.	J	40.
3776	anthracene	130.	J	33.	150.	J	40.
4702	carbazole	N.D.	33.	ug/kg	N.D.	40.	
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	80.	
3778	fluoranthene	170.	J	33.	200.	J	40.
1195	pyrene	140.	J	33.	160.	J	40.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	80.	
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	80.	
3781	benzo (a) anthracene	70.	J	33.	84.	J	40.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	80.	
3782	chrysene	77.	J	33.	92.	J	40.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	80.	
3786	benzo (b) fluoranthene	130.	J	33.	150.	J	40.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	40.	
3788	benzo (a) pyrene	61.	J	33.	73.	J	40.
3789	indeno (1,2,3-cd) pyrene	48.	J	33.	57.	J	40.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	40.	
3791	benzo (ghi) perylene	46.	J	33.	55.	J	40.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER
ACIL
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2405 New Holland Pike
PO Box 12125
Oklahoma City, OK 73105-2125
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943348

Collected: 6/ 9/98 at 13:51 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-23/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2323- SDG#: HMS04-11

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.
Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See Reverse Side for explanation of symbols and abbreviations

02/11/98 11:41 AM





LLI Sample No. SW 2943348

Collected: 06/09/98 at 13:51 by DCU

Submitted: 06/10/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-23/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2323- SDG#: HMS04-11

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	07/02/98 0610	Phillip R. Esbshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/02/98 0610	Phillip R. Esbshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



Lancaster Laboratories
 3105 New Holland Pike
 PO Box 12110
 Lancaster, PA 17605-2105
 Phone: 717-399-1100 Fax: 717-399-2081

See reverse side for explanation of symbols and abbreviations

01/15/99 11:15





LLI Sample No. 2943348

GEO-23/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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 Semivolatiles		Batch: 98162SLE026									

1185 phenol											
67. ug/kg		N.D.		74	62	18	79			49	105
3753 bis (2-chloroethyl) ether											
33. ug/kg		N.D.		66	47	32	72			53	109
1186 2-chlorophenol											
33. ug/kg		N.D.		77	59	28	82			55	107
3754 1,3-dichlorobenzene											
33. ug/kg		N.D.		66	30	77	88			53	103
1187 1,4-dichlorobenzene											
33. ug/kg		N.D.		68	32	73	88			52	103
3755 1,2-dichlorobenzene											
33. ug/kg		N.D.		74	38	64	92			56	107
4690 2-methylphenol											
33. ug/kg		N.D.		73	59	22	77			57	101
4691 2,2'-oxybis (1-chloropropane)											
33. ug/kg		N.D.		68	46	39	76			38	117
4692 3- and 4-methylphenol											
67. ug/kg		N.D.		74	62	19	80			48	116
1188 N-nitrosodi-n-propylamine											
33. ug/kg		N.D.		75	59	24	81			50	124
3757 hexachloroethane											
33. ug/kg		N.D.		66	29	77	87			52	108
3758 nitrobenzene											
33. ug/kg		N.D.		79	59	29	86			56	110
3759 isophorone											
33. ug/kg		N.D.		79	65	20	86			57	114
3746 2-nitrophenol											
67. ug/kg		N.D.		79	60	27	86			59	107
3747 2,4-dimethylphenol											
67. ug/kg		N.D.		70	59	16	82			39	108
3760 bis (2-chloroethoxy) methane											
67. ug/kg		N.D.		72	57	22	77			56	103
3748 2,4-dichlorophenol											
67. ug/kg		N.D.		84	68	21	90			59	100
1189 1,2,4-trichlorobenzene											
33. ug/kg		N.D.		86	55	43	97			57	104
3761 naphthalene											
33. ug/kg		N.D.		78	54	36	87			58	99
4693 4-chloroaniline											
33. ug/kg		N.D.		54	46	16	71			1	102
3762 hexachlorobutadiene											
67. ug/kg		N.D.		90	52	54	110			56	115
1190 4-chloro-3-methylphenol											
67. ug/kg		N.D.		78	69	11	85			56	108
4694 2-methylnaphthalene											
33. ug/kg		N.D.		83	65	24	89			60	102



Lancaster Laboratories
2125 New Richmond Pike
PO Box 12425
Lancaster, PA 17605-2425
TEL: 717-397-1100 FAX: 717-397-2651

Please refer to the explanation of symbols and abbreviations

2015-11-11 11:11:11





LLI Sample No. 2943348

GEO-23/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108





LLI Sample No. 2943348

GEO-23/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
33.	ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
33.	ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
33.	ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
0.080	% by wt.	* Batch: 981650199820001A	12				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations

2015-11-11 10:14





LLI Sample No. 2943348

GEO-23/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	72	39	108
	2-Flphenol	67	35	108
	2,4,6-TBP	80	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	65	31	126
	2-Fbiphenyl	65	45	113
	Tphenyl14	80	37	130



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See reverse side for explanation of symbols and abbreviations

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LLI Sample No. SW 2943349

Collected: 6/ 9/98 at 13:57 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-23/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2356- SDG#: HMS04-12

Account No: 07802
Kerr-McGee Corporation
P.O. 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	17.1	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 ATTN: Garet Van de Steeg, PhD
- 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
- 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 19:55:32 D 0003 22 129915 618556
 863 0.00 00033420 ASR000

MEMBER

 Lancaster Laboratories
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 Harrisburg, PA 17105-2425
 (717) 656-2300 Fax: (717) 656-2581

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA





LLI Sample No. SW 2943349

Collected: 6/9/98 at 13:57 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-23/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2356- SDG#: HMS04-12

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	80.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	40.
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.	33.	ug/kg	N.D.	40.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	40.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	40.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	40.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	40.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	40.
3759	isophorone	N.D.	33.	ug/kg	N.D.	40.
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.	67.	ug/kg	N.D.	80.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	80.
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.	33.	ug/kg	N.D.	40.
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.	33.	ug/kg	N.D.	40.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3765	acernaphthylene	N.D.	33.	ug/kg	N.D.	40.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943349

Collected: 6/ 9/98 at 13:57 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-23/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2356- SDG#: HMS04-12

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	230.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	40.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	40.
3768	fluorene	N.D.	33.	ug/kg	N.D.	40.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	80.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	40.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	80.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	40.
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.	67.	ug/kg	N.D.	80.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	40.
1195	pyrene	N.D.	33.	ug/kg	N.D.	40.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	80.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	40.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	80.
3782	chrysene	N.D.	33.	ug/kg	N.D.	40.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	40.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	40.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	40.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	40.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	40.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	40.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See release for the definition of symbols and abbreviations





LLI Sample No. SW 2943349

Collected: 6/ 9/98 at 13:57 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-23/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2356- SDG#: HMS04-12

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Re1.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2943349

Collected: 06/09/98 at 13:57 by DCU

Submitted: 06/10/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-23/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2356- SDG#: HMS04-12

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	07/02/98 0659	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/02/98 0659	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



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LLI Sample No. 2943349

GEO-23/5-6 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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 Semivolatiles	Batch: 98162SLE026									

1185	phenol										
67.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
33.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		83	65	24	89			60	102



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See technical site for explanation of symbols and abbreviations.

2015-03-11 11:13





LLI Sample No. 2943349

GEO-23/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



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See reverse side for explanation of symbols and abbreviations.

QC15 11/11/01





LLI Sample No. 2943349
 GEO-23/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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.		94	84	10	96			62	107
3776	anthracene										
33.	ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
33.	ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
33.	ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
0.080	% by wt.	* Batch: 981650199820001A	12				100	100	0	99	101



Lancaster Laboratories
 2425 New Holland Pike
 PO Box 12425
 Lancaster, PA 17605-2425
 Tel: 650-7300 Fax: 717-658-2681

See reverse side for explanation of symbols and abbreviations

2015 11 10 01





LLI Sample No. 2943349

GEO-23/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	78	39	108
	2-Flphenol	69	35	108
	2,4,6-TBP	88	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	62	31	126
	2-Fbiphenyl	54	45	113
	Tphenylid14	93	37	130



Lancaster Laboratories
1125 Newland Road Pike
PO Box 12125
Lancaster, PA 17605-4425
TEL: 654-2310 FAX: 654-2101

See reverse side for explanation of symbols and abbreviations

10/11/01 11:11:11





LLI Sample No. SW 2943350

Collected: 6/ 9/98 at 15:15 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-24/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2401- SDG#: HMS04-13

Account No: 07802
Kerr-McGee Corporation
P.O. 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	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 Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
19:57:01 D 0003 22 129915 618556
863 0.00 00033420 ASR000



Lancaster Laboratories
2425 West Holland Pike
PO Box 2420
Lancaster, PA 17605-2425
(717) 656-2300 Fax: (717) 656-2681

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2943350

Collected: 6/ 9/98 at 15:15 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-24/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2401- SDG#: HMS04-13

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	77.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	38.
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.	33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	77.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	77.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	77.
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.	33.	ug/kg	N.D.	38.
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.	33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER
ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster PA 17605-2425
717-656-2300 Fax 717-656-2631

See reverse side for explanation of symbols and abbreviations

(216) 444-8444





LLI Sample No. SW 2943350

Collected: 6/ 9/98 at 15:15 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-24/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2401- SOG#: HMS04-13

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION LIMIT	METHOD UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	77.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	77.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	77.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	77.
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.	33.	ug/kg	N.D.	38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA



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2105 New Holland Pike
PO Box 17428
Cummins, PA 17615-1425
717-656-2300 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations

0016 10/1/98





LLI Sample No. SW 2943350

Collected: 6/ 9/98 at 15:15 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-24/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2401- SDG#: HMS04-13

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. Poor surrogate recoveries were observed for the GC/MS semivolatile compounds. The analysis was repeated outside of the required hold time and surrogate recoveries met requirements. The data reported is from the initial extraction of the sample. Both sets of data are being submitted in the data package. Please refer to the case narrative for further details.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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

LLI Form 100-1 (Rev. 12/97)





LLI Sample No. SW 2943350

Collected: 06/09/98 at 15:15 by DCU

Submitted: 06/10/98

GEO-24/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2401- SDG#: HMS04-13

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL ID	ANALYSIS		ANALYST
				DATE	TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98	1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	07/02/98	1038	Phillip R. Esbshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/02/98	1038	Phillip R. Esbshade
0111	Moisture	EPA 160.3 modified	1	06/14/98	1808	Patrick N. Ward



Lancaster Laboratories
2415 New Holland Pike
PO Box 12425
Lehigh, PA 17036-1425
717-653-3300 Fax 717-653-2981





LLI Sample No. 2943350

GEO-24/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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 Semivolatiles-----		Batch: 98162SLE026										
1185 phenol	67. ug/kg	N.D.		74	62	18	79			49	105	
3753 bis (2-chloroethyl) ether	33. ug/kg	N.D.		66	47	32	72			53	109	
1186 2-chlorophenol	33. ug/kg	N.D.		77	59	28	82			55	107	
3754 1,3-dichlorobenzene	33. ug/kg	N.D.		66	30	77	88			53	103	
1187 1,4-dichlorobenzene	33. ug/kg	N.D.		68	32	73	88			52	103	
3755 1,2-dichlorobenzene	33. ug/kg	N.D.		74	38	64	92			56	107	
4690 2-methylphenol	33. ug/kg	N.D.		73	59	22	77			57	101	
4691 2,2'-oxybis (1-chloropropane)	33. ug/kg	N.D.		68	46	39	76			38	117	
4692 3- and 4-methylphenol	67. ug/kg	N.D.		74	62	19	80			48	116	
1188 N-nitrosodi-n-propylamine	33. ug/kg	N.D.		75	59	24	81			50	124	
3757 hexachloroethane	33. ug/kg	N.D.		66	29	77	87			52	108	
3758 nitrobenzene	33. ug/kg	N.D.		79	59	29	86			56	110	
3759 isophorone	33. ug/kg	N.D.		79	65	20	86			57	114	
3746 2-nitrophenol	67. ug/kg	N.D.		79	60	27	86			59	107	
3747 2,4-dimethylphenol	67. ug/kg	N.D.		70	59	16	82			39	108	
3760 bis (2-chloroethoxy) methane	67. ug/kg	N.D.		72	57	22	77			56	103	
3748 2,4-dichlorophenol	67. ug/kg	N.D.		84	68	21	90			59	100	
1189 1,2,4-trichlorobenzene	33. ug/kg	N.D.		86	55	43	97			57	104	
3761 naphthalene	33. ug/kg	N.D.		78	54	36	87			58	99	
4693 4-chloroaniline	33. ug/kg	N.D.		54	46	16	71			1	102	
3762 hexachlorobutadiene	67. ug/kg	N.D.		90	52	54	110			56	115	
1190 4-chloro-3-methylphenol	67. ug/kg	N.D.		78	69	11	85			56	108	
4694 2-methylnaphthalene	33. ug/kg	N.D.		83	65	24	89			60	102	



Lancaster Laboratories
2425 Hwy. Holland Pkwy
PO Box 12425
Lancaster, PA 17609-2425
Tel: 717-399-1100 Fax: 717-652-2587

See reverse side for explanation of symbols and abbreviations

Lab No. 98162SLE026





LLI Sample No. 2943350

GEO-24/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



Lancaster Laboratories
3125 New Holland Pkwy
PO Box 13425
Wilmington, PA 19085-2425
TEL: 610-221-2100 FAX: 610-656-2501

See reverse side for explanation of symbols and abbreviations

02/14/01 11:01:11





LLI Sample No. 2943350

GEO-24/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
33.	ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
33.	ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
33.	ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
0.080	% by wt.		12				100	100	0	99	101

* Batch: 981650199820001A



Lancaster Laboratories
2125 New Holland Pike
PO Box 11425
Lancaster, PA 17605-1425
717-656-1300 FAX 717-656-1681

See reverse side for explanation of symbols and abbreviations

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LLI Sample No. 2943350

GEO-24/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	0	39	108
		2-Flphenol	0	35	108
		2,4,6-TBP	0	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	0	31	126
		2-Fbiphenyl	0	45	113
		Tphenylid14	0	37	130



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
TEL: 717-259-2800 Fax: 717-650-2491

See reverse side for explanation of symbols and abbreviations

2011-01-11 11:41





LLI Sample No. SW 2943351

Collected: 6/ 9/98 at 15:19 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-24/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2423- SDG#: HMS04-14

Account No: 07802
Kerr-McGee Corporation
P.O. 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	12.9	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: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates	ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group	

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 19:58:40 D 0003 22 129915 618556
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Nestlund, B.S.
 Group Leader, GC/MS SVOA

MEMBER
ACIL
 Lancaster Laboratories
 1225 New Holland Pike
 P.O. Box 12423
 Lancaster, PA 17605-2425
 (717) 656-2300 FAX (717) 656-2301

See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943351

Collected: 6/ 9/98 at 15:19 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-24/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2423- SDG#: HMS04-14

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	77.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	38.
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.	33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	77.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	77.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	77.
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.	33.	ug/kg	N.D.	38.
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.	33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

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



Lancaster Laboratories
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Lancaster PA 17609-2425
717-656-2300 Fax 717-656-2661

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2943351

Collected: 6/ 9/98 at 15:19 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-24/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2423- SDG#: HMS04-14

Account No: 07802
Kerr-McGee Corporation
P.O. 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
TCL Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	77.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	77.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	42.	J 33.	ug/kg	49.	J 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.	67.	ug/kg	N.D.	77.
3778	fluoranthene	50.	J 33.	ug/kg	58.	J 38.
1195	pyrene	35.	J 33.	ug/kg	41.	J 38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	77.
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.	33.	ug/kg	N.D.	38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943351

Collected: 6/ 9/98 at 15:19 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-24/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2423- SDG#: HMS04-14

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

2216 11/11/98





LLI Sample No. SW 2943351

Collected: 06/09/98 at 15:19 by DCU

Submitted: 06/10/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-24/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2423- SDG#: HMS04-14

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	07/02/98 1127	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/02/98 1127	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



Lancaster Laboratories
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LLI Sample No. 2943351
 GEO-24/2-3' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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 Semivolatiles	Batch: 98162SLE026									

1185	phenol										
67.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
33.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		83	65	24	89			60	102



Lancaster Laboratories
 2425 New Island Pike
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 Lancaster, PA 17605-2425
 717-650-3300 Fax: 717-650-2931

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943351

GEO-24/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



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2125 West Houston Pkwy
PO Box 11425
Tomball, TX 77375-1425
714-200-2100 Fax: 714-659-0691

See reverse side for Explanation of symbols and abbreviations





LLI Sample No. 2943351
 GEO-24/2-3' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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.		94	84	10	96			62	107
3776	anthracene										
33.	ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
33.	ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
33.	ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
0.080	% by wt.		12				100	100	0	99	101

* Batch: 981650199820001A



Lancaster Laboratories
 2425 New Holland Pike
 P.O. Box 12425
 Lancaster, PA 17605-2425
 TEL: 717-399-1000 FAX: 717-399-2001

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2943351

GEO-24/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Phenol-d6	71	39 108
		2-Flphenol	64	35 108
		2,4,6-TBP	85	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	61	31 126
		2-Fbiphenyl	59	45 113
		Tphenylid14	89	37 130



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See inside cover for explanation of symbols and abbreviations

2000 01 01 01





LLI Sample No. SW 2943352

Collected: 6/ 9/98 at 15:25 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-24/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2456- SDG#: HMS04-15

Account No: 07802
Kerr-McGee Corporation
P.O. 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	11.0	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 ATTN: Garet Van de Steeg, PhD
- 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
- 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 20:01:00 D 0003 22 129915 618556
 863 0.00 00033420 ASR000



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Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA





LLI Sample No. SW 2943352

Collected: 6/ 9/98 at 15:25 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-24/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2456- SDG#: HMS04-15

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	pheno1	N.D.	67.	ug/kg	N.D.	75.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	37.
1186	2-chloropheno1	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-methylpheno1	N.D.	33.	ug/kg	N.D.	37.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	37.
4692	3- and 4-methylpheno1	N.D.	67.	ug/kg	N.D.	75.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	37.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	37.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	37.
3759	isophorone	N.D.	33.	ug/kg	N.D.	37.
3746	2-nitropheno1	N.D.	67.	ug/kg	N.D.	75.
3747	2,4-dimethylpheno1	N.D.	67.	ug/kg	N.D.	75.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	75.
3748	2,4-dichloropheno1	N.D.	67.	ug/kg	N.D.	75.
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.	33.	ug/kg	N.D.	37.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	75.
1190	4-chloro-3-methylpheno1	N.D.	67.	ug/kg	N.D.	75.
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-trichloropheno1	N.D.	67.	ug/kg	N.D.	75.
4695	2,4,5-trichloropheno1	N.D.	67.	ug/kg	N.D.	75.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	37.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	37.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	37.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-676-1300 Fax 717-656-2631

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2943352

Collected: 6/ 9/98 at 15:25 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-24/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2456- SDG#: HMS04-15

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	37.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	220.
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.	75.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	37.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	37.
3768	fluorene	N.D.	33.	ug/kg	N.D.	37.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	37.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	75.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	37.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	37.
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	N.D.	67.	ug/kg	N.D.	75.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	37.
1195	pyrene	N.D.	33.	ug/kg	N.D.	37.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	75.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	37.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	75.
3782	chrysene	N.D.	33.	ug/kg	N.D.	37.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	37.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	37.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	37.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	37.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	37.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	37.

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



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2943352

Collected: 6/ 9/98 at 15:25 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-24/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2456- SDG#: HMS04-15

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. Poor surrogate recoveries were observed for the GC/MS semivolatile compounds. The analysis was repeated outside of the required hold time and surrogate recoveries met requirements. The data reported is from the initial extraction of the sample. Both sets of data are being submitted in the data package. Please refer to the case narrative for further details.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943352

Collected: 06/09/98 at 15:25 by DCU

Submitted: 06/10/98

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

GEO-24/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2456- SDG#: HMS04-15

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	07/02/98 1216	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/02/98 1216	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



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2016-07-16 10:47





LLI Sample No. 2943352

GEO-24/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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 Semivolatiles		Batch: 98162SLE026									

1185	phenol										
67.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
33.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		83	65	24	89			60	102



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11/12/98 10:21





LLI Sample No. 2943352

GEO-24/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



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3215-100-1-11





LLI Sample No. 2943352

GEO-24/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
33.	ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
33.	ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
33.	ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
0.080	% by wt.	* Batch: 981650199820001A	12				100	100	0	99	101



Lancaster Laboratories
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TEL: 656-2500 FAX: 717-956-2691

See reverse side for explanation of symbols and abbreviations.

QC 5 11 11 11





LLI Sample No. 2943352

GEO-24/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	149	39	108
		2-Flpheno1	145	35	108
		2,4,6-TBP	192	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	149	31	126
		2-Fbiphenyl	160	45	113
		Tphenyl14	183	37	130



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See reverse line for explanation of symbols and abbreviations

2015-04-14 11:27





LLI Sample No. SW 2943353

Collected: 6/ 9/98 at 14:19 by DCU

Submitted: 6/10/98 Reported: 7/14/98
Discard: 8/14/98

GEO-25/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2501- SDG#: HMS04-16

Account No: 07802
Kerr-McGee Corporation
P.O. 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	12.8		0.080	% by wt.	

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

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:02:49 D 0003 22 129915 618556
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2943353

Collected: 6/ 9/98 at 14:19 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-25/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2501- SDG#: HMS04-16

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	76.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	38.
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.	33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	38.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	76.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	76.
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.	33.	ug/kg	N.D.	38.
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.	33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See release vda for explanation of symbols and abbreviations

11/11/98 11:42:03





LLI Sample No. SW 2943353

Collected: 6/ 9/98 at 14:19 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-25/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2501- SDG#: HMS04-16

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	38.
3776	anthracene	47.	J 33.	ug/kg	54.	J 38.
4702	carbazole	N.D.	33.	ug/kg	N.D.	38.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3778	fluoranthene	91.	J 33.	ug/kg	100.	J 38.
1195	pyrene	150.	J 33.	ug/kg	170.	J 38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	76.
3781	benzo (a) anthracene	110.	J 33.	ug/kg	130.	J 38.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	76.
3782	chrysene	160.	J 33.	ug/kg	180.	J 38.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3786	benzo (b) fluoranthene	410.	33.	ug/kg	470.	38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	180.	J 33.	ug/kg	200.	J 38.
3789	indeno (1,2,3-cd) pyrene	130.	J 33.	ug/kg	150.	J 38.
3790	dibenz (a,h) anthracene *	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene	100.	J 33.	ug/kg	120.	J 38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
2120 New Holland Pike
PO Box 12425
Lancaster, PA 17609-2425
717-656-2300 Fax 717-656-2631

See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943353

Collected: 6/ 9/98 at 14:19 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-25/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2501- SDG#: HMS04-16

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT		AS RECEIVED		DRY WEIGHT
NO.	ANALYSIS NAME	RESULTS	METHOD DETECTION LIMIT UNITS	RESULTS METHOD DETECTION LIMIT

TCL Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.
Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2425 New Holland Pike
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Tel: 717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations

CL-101 Rev. 9-1-97





LLI Sample No. SW 2943353

Collected: 06/09/98 at 14:19 by DCU

Submitted: 06/10/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-25/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2501- SDG#: HMS04-16

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS		ANALYST
				ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1		06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1		07/02/98 1306	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		07/02/98 1306	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1		06/14/98 1808	Patrick N. Ward



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2475 New Holland Pike
PO Box 14125
Oklahoma, PA 15125-14125
Tel: 412-731-1141 Fax: 412-850-2681

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943353

GEO-25/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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 Semivolatiles		Batch: 98162SLE026									
1185	phenol										
67.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
33.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		83	65	24	89			60	102



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See reverse side for explanation of symbols and abbreviations

2015 10/14/15





LLI Sample No. 2943353

GEO-25/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



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See website for explanation of units and abbreviations.

3210 4/15/01





LLI Sample No. 2943353

GEO-25/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
33.	ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
33.	ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
33.	ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
0.080	% by wt.	* Batch: 981650199820001A	12				100	100	0	99	101



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2435 New Holland Pike
PO Box 12425
Lebanon, TN 37039-2425
Tel: 615-892-3300 Fax: 615-898-0681

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943353
GEO-25/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	76	39	108
	2-Flphenol	73	35	108
	2,4,6-TBP	86	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	74	31	126
	2-Fbiphenyl	74	45	113
	Tphenyl14	88	37	130

MEMBER
ACIL

Lancaster Laboratories
2120 New Holland Ave
PO Box 2425
Lancaster, PA 17605-0425
Tel: 717-399-7631

See reverse side for explanation of symbols and abbreviations

2010-04-14 11:27





LLI Sample No. SW 2943354

Collected: 6/ 9/98 at 14:23 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-25/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2523- SDG#: HMS04-17

Account No: 07802
Kerr-McGee Corporation
P.O. 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	12.1	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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:04:30 D 0003 22 129915 618556
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943354

Collected: 6/ 9/98 at 14:23 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-25/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2523- SDG#: HMS04-17

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	76.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	38.
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.	33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	76.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	76.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	76.
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.	33.	ug/kg	N.D.	38.
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.	33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
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2076 11/99





LLI Sample No. SW 2943354

Collected: 6/ 9/98 at 14:23 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-25/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2523- SDG#: HMS04-17

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	76.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	76.
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	35.	J 33.	ug/kg	39.	J 38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene *	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
2425 New Hope Pike
PO Box 12425
Lancaster, PA 17605-2425
TEL: 717-656-2300 FAX: 717-656-2301

See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943354

Collected: 6/ 9/98 at 14:23 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-25/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2523- SDG#: HMS04-17

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.
Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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

See reverse for explanation of symbols and abbreviations.

Date: 7/15/98





LLI Sample No. SW 2943354

Collected: 06/09/98 at 14:23 by DCU

Submitted: 06/10/98

GEO-25/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2523- SDG#: HMS04-17

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	07/02/98 1355	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/02/98 1355	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



Lancaster Laboratories
2015 New Holland Pike
PO Box 10425
Lancaster, PA 17606-0425
Tel: 717-396-1000 Fax: 717-396-2081





LLI Sample No. 2943354
 GEO-25/2-3' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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 Semivolatiles		Batch: 98162SLE026									
1185 phenol	67. ug/kg	N.D.		74	62	18	79			49	105
3753 bis (2-chloroethyl) ether	33. ug/kg	N.D.		66	47	32	72			53	109
1186 2-chlorophenol	33. ug/kg	N.D.		77	59	28	82			55	107
3754 1,3-dichlorobenzene	33. ug/kg	N.D.		66	30	77	88			53	103
1187 1,4-dichlorobenzene	33. ug/kg	N.D.		68	32	73	88			52	103
3755 1,2-dichlorobenzene	33. ug/kg	N.D.		74	38	64	92			56	107
4690 2-methylphenol	33. ug/kg	N.D.		73	59	22	77			57	101
4691 2,2'-oxybis (1-chloropropane)	33. ug/kg	N.D.		68	46	39	76			38	117
4692 3- and 4-methylphenol	67. ug/kg	N.D.		74	62	19	80			48	116
1188 N-nitrosodi-n-propylamine	33. ug/kg	N.D.		75	59	24	81			50	124
3757 hexachloroethane	33. ug/kg	N.D.		66	29	77	87			52	108
3758 nitrobenzene	33. ug/kg	N.D.		79	59	29	86			56	110
3759 isophorone	33. ug/kg	N.D.		79	65	20	86			57	114
3746 2-nitrophenol	67. ug/kg	N.D.		79	60	27	86			59	107
3747 2,4-dimethylphenol	67. ug/kg	N.D.		70	59	16	82			39	108
3760 bis (2-chloroethoxy) methane	67. ug/kg	N.D.		72	57	22	77			56	103
3748 2,4-dichlorophenol	67. ug/kg	N.D.		84	68	21	90			59	100
1189 1,2,4-trichlorobenzene	33. ug/kg	N.D.		86	55	43	97			57	104
3761 naphthalene	33. ug/kg	N.D.		78	54	36	87			58	99
4693 4-chloroaniline	33. ug/kg	N.D.		54	46	16	71			1	102
3762 hexachlorobutadiene	67. ug/kg	N.D.		90	52	54	110			56	115
1190 4-chloro-3-methylphenol	67. ug/kg	N.D.		78	69	11	85			56	108
4694 2-methylnaphthalene	33. ug/kg	N.D.		83	65	24	89			60	102



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 (717)551-1100 FAX (717)658-1681

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2943354
 GEO-25/2-3' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									
4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



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 717-656-2800 Fax 717-656-7931

See reverse side for explanation of symbols and abbreviations.

12/11/00 10:00 AM





LLI Sample No. 2943354

GEO-25/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
	33. ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
	33. ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
	33. ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
	33. ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
	33. ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
	33. ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
	33. ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
	33. ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
	33. ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
	33. ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
	33. ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
	0.080 % by wt.	* Batch: 981650199820001A	12				100	100	0	99	101



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2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-651-2900 Fax 717-655-2651

See reverse side for explanation of symbols and abbreviations

02 10 11 11





LLI Sample No. 2943354

GEO-25/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Phenol-d6	78	39 108
		2-Flphenol	75	35 108
		2,4,6-TBP	92	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	75	31 126
		2-Fbiphenyl	77	45 113
		Tphenyl14	91	37 130



Lancaster Laboratories
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Lancaster PA 17605-2415
Tel: 717-399-3377 Fax: 717-556-2641

See reverse side for explanation of symbols and abbreviations.

02/15/97 Rev. 8.1.97





LLI Sample No. SW 2943355

Collected: 6/ 9/98 at 14:28 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-25/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2556- SDG#: HMS04-18

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Re1.

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	14.4	0.080	% by wt.		

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

1 COPY TO Kerr-McGee Corporation ATTN: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:06:14 D 0003 22 129915 618556
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

L1711 001 11/94





LLI Sample No. SW 2943355

Collected: 6/ 9/98 at 14:28 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-25/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2556- SDG#: HMS04-18

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	78.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	39.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	78.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	78.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	78.
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.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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02/10/98 11:30 AM





LLI Sample No. SW 2943355

Collected: 6/ 9/98 at 14:28 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-25/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2556- SDG#: HMS04-18

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	230.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	78.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	78.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	39.
1195	pyrene	N.D.	33.	ug/kg	N.D.	39.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	78.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	39.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	39.
3790	dibenz (a,h) anthracene *	N.D.	33.	ug/kg	N.D.	39.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS SVOA

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

L1111-1-98 (11/97)





LLI Sample No. SW 2943355
Collected: 6/ 9/98 at 14:28 by DCU
Submitted: 6/10/98 Reported: 7/14/98
Discard: 8/14/98
GEO-25/5-6' Grab Soil Sample
Gulf States Creosoting Site: Hattiesburg, MS
2556- SDG#: HMS04-18

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2661

See reverse side for explanation of symbols and abbreviations

2011-01-11 11:11





LLI Sample No. SW 2943355

Collected: 06/09/98 at 14:28 by DCU

Submitted: 06/10/98

GEO-25/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2556- SDG#: HMS04-18

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	07/02/98 1624	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/02/98 1624	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



Lancaster Laboratories
2125 New Hope and Pike
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Lancaster, PA 17605-2425
Tel: 717-655-7333 Fax: 717-655-2691

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LLI Sample No. 2943355

GEO-25/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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 Semivolatiles		Batch: 98162SLE026									
1185	phenol										
67.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
33.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		83	65	24	89			60	102



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LLI Sample No. 2943355

GEO-25/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



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02/14/01 11:17





LLI Sample No. 2943355

GEO-25/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
	33. ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
	33. ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
	33. ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
	33. ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
	33. ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
	33. ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
	33. ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
	33. ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
	33. ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
	33. ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
	33. ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
	0.080 % by wt.	* Batch: 981650199820001A	12				100	100	0	99	101



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Lancaster, PA 17605-2425
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2015 11/11/17





LLI Sample No. 2943355

GEO-25/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	81	39	108
		2-F1phenol	79	35	108
		2,4,6-TBP	77	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	79	31	126
		2-Fbiphenyl	78	45	113
		Tphenyl d14	94	37	130



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

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2010-01-14 10:11:11





LLI Sample No. SW 2943356

Collected: 6/ 9/98 at 15:50 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-26/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2601- SDG#: HMS04-19

Account No: 07802
Kerr-McGee Corporation
P.O. 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	14.1	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 ATTN: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 20:07:48 D 0003 22 129915 618556
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



Lancaster Laboratories
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 Lancaster, PA 17605-2425
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12/15/98 10:07





LLI Sample No. SW 2943356

Collected: 6/ 9/98 at 15:50 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-26/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2601- SDG#: HMS04-19

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	78.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	39.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	78.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	78.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	78.
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.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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L-119a (1/94) 1/1/97





LLI Sample No. SW 2943356

Collected: 6/ 9/98 at 15:50 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-26/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2601- SDG#: HMS04-19

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	230.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	78.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	78.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	39.
1195	pyrene	N.D.	33.	ug/kg	N.D.	39.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	78.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	39.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	39.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	39.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

01/10/98 11:11 AM





LLI Sample No. SW 2943356

Collected: 6/ 9/98 at 15:50 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-26/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2601- SDG#: HMS04-19

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
					DETECTION LIMIT	

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

12/14/98 10:10:01





LLI Sample No. SW 2943356

Collected: 06/09/98 at 15:50 by DCU

Submitted: 06/10/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-26/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2601- SDG#: HMS04-19

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	07/02/98 1535	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/02/98 1535	Phillip R. Esbenshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



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2425 New Holland Pike
PO Box 12125
Lancaster PA 17605-2425
717-656-2100 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2943356

GEO-26/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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 Semivolatiles		Batch: 98162SLE026									
1185	phenol										
67.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
33.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		83	65	24	89			60	102



Lancaster Laboratories
2425 Westland Pike
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Lancaster, PA 17605-2425
717-356-2310 Fax 717-356-2881

See reference side for explanation of symbols and abbreviations

Q176 10/17/07





LLI Sample No. 2943356

GEO-26/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



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See reverse side for explanation of symbols and abbreviations.

2025-01-01





LLI Sample No. 2943356

GEO-26/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
33.	ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
33.	ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
33.	ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981650199820001A	12				100	100	0	99	101



Lancaster Laboratories
2475 New Holland Pike
PO Box 12025
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TEL: 717-399-2300 FAX: 717-399-2621

See reverse side for explanation of symbols and abbreviations

2010 11/11/10





LLI Sample No. 2943356

GEO-26/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	76	39	108
		2-F1phenol	74	35	108
		2,4,6-TBP	88	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	74	31	126
		2-Fbiphenyl	75	45	113
		Tphenylid14	90	37	130



Lancaster Laboratories
2405 New Hill and Pike
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215-111-9111





LLI Sample No. SW 2943358

Collected: 6/ 9/98 at 13:09 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-33/5-6' Matrix Spike Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20MS

Account No: 07802
Kerr-McGee Corporation
P.O. 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
0118	Moisture	19.3		0.080	% by wt.	

1 COPY TO Kerr-McGee Corporation ATTN: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 20:11:14 D 0003 22 129915 618556
 863 0.00 00032700 ASR000.

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



Lancaster Laboratories
 3425 New Holland Pike
 PO Box 12425
 Lancaster PA 17605-2425
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943358

Collected: 6/ 9/98 at 13:09 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-33/5-6' Matrix Spike Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20MS

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	2,500.	67.	ug/kg	3,100.	83.
3753	bis (2-chloroethyl) ether	2,200.	33.	ug/kg	2,700.	41.
1186	2-chlorophenol	2,600.	33.	ug/kg	3,200.	41.
3754	1,3-dichlorobenzene	2,200.	33.	ug/kg	2,700.	41.
1187	1,4-dichlorobenzene	2,300.	33.	ug/kg	2,800.	41.
3755	1,2-dichlorobenzene	2,500.	33.	ug/kg	3,100.	41.
4690	2-methylphenol	2,400.	33.	ug/kg	3,000.	41.
4691	2,2'-oxybis (1-chloropropane)	2,300.	33.	ug/kg	2,800.	41.
4692	3- and 4-methylphenol	2,500.	67.	ug/kg	3,100.	83.
1188	N-nitrosodi-n-propylamine	2,500.	33.	ug/kg	3,100.	41.
3757	hexachloroethane	2,200.	33.	ug/kg	2,700.	41.
3758	nitrobenzene	2,600.	33.	ug/kg	3,300.	41.
3759	isophorone	2,600.	33.	ug/kg	3,300.	41.
3746	2-nitrophenol	2,600.	67.	ug/kg	3,300.	83.
3747	2,4-dimethylphenol	2,300.	67.	ug/kg	2,900.	83.
3760	bis (2-chloroethoxy) methane	2,400.	67.	ug/kg	3,000.	83.
3748	2,4-dichlorophenol	2,800.	67.	ug/kg	3,500.	83.
1189	1,2,4-trichlorobenzene	2,900.	33.	ug/kg	3,500.	41.
3761	naphthalene	2,600.	33.	ug/kg	3,200.	41.
4693	4-chloroaniline	1,800.	33.	ug/kg	2,200.	41.
3762	hexachlorobutadiene	3,000.	67.	ug/kg	3,700.	83.
1190	4-chloro-3-methylphenol	2,600.	67.	ug/kg	3,200.	83.
4694	2-methylnaphthalene	2,800.	33.	ug/kg	3,400.	41.
3763	hexachlorocyclopentadiene	4,700.	170.	ug/kg	5,800.	210.
3749	2,4,6-trichlorophenol	3,100.	67.	ug/kg	3,800.	83.
4695	2,4,5-trichlorophenol	2,900.	67.	ug/kg	3,600.	83.
3764	2-chloronaphthalene	3,000.	33.	ug/kg	3,700.	41.
4696	2-nitroaniline	2,600.	33.	ug/kg	3,200.	41.
3766	dimethyl phthalate	2,800.	67.	ug/kg	3,500.	83.
3765	acenaphthylene	2,800.	33.	ug/kg	3,500.	41.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2425 New England Pike
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2015-07-14 11:07





LLI Sample No. SW 2943358

Collected: 6/ 9/98 at 13:09 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-33/5-6' Matrix Spike Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20MS

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Re'l.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
4697	3-nitroaniline	2,000.	67.	ug/kg	2,500.	83.
1191	acenaphthene	2,900.	33.	ug/kg	3,600.	41.
3750	2,4-dinitrophenol	2,500.	190.	ug/kg	3,100.	240.
1192	4-nitrophenol	3,000.	170.	ug/kg	3,700.	210.
4698	dibenzofuran	3,100.	33.	ug/kg	3,800.	41.
1193	2,4-dinitrotoluene	3,100.	67.	ug/kg	3,800.	83.
3767	2,6-dinitrotoluene	3,000.	33.	ug/kg	3,700.	41.
3770	diethyl phthalate	2,800.	67.	ug/kg	3,500.	83.
3769	4-chlorophenyl phenyl ether	2,900.	33.	ug/kg	3,700.	41.
3768	fluorene	3,100.	33.	ug/kg	3,800.	41.
4700	4-nitroaniline	2,400.	67.	ug/kg	3,000.	83.
3751	4,6-dinitro-2-methylphenol	2,800.	170.	ug/kg	3,500.	210.
3772	N-nitrosodiphenylamine	2,700.	33.	ug/kg	3,400.	41.
3773	4-bromophenyl phenyl ether	3,100.	67.	ug/kg	3,800.	83.
3774	hexachlorobenzene	3,400.	33.	ug/kg	4,300.	41.
1194	pentachlorophenol	2,900.	170.	ug/kg	3,600.	210.
3775	phenanthrene	3,700.	33.	ug/kg	4,600.	41.
3776	anthracene	3,500.	33.	ug/kg	4,300.	41.
4702	carbazole	3,000.	33.	ug/kg	3,700.	41.
3777	di-n-butyl phthalate	2,800.	67.	ug/kg	3,500.	83.
3778	fluoranthene	3,800.	33.	ug/kg	4,800.	41.
1195	pyrene	3,000.	33.	ug/kg	3,800.	41.
3780	butyl benzyl phthalate	2,400.	67.	ug/kg	3,000.	83.
3783	3,3'-dichlorobenzidine	1,900.	67.	ug/kg	2,400.	83.
3781	benzo (a) anthracene	3,100.	33.	ug/kg	3,800.	41.
3784	bis (2-ethylhexyl) phthalate	2,400.	67.	ug/kg	3,000.	83.
3782	chrysene	3,000.	33.	ug/kg	3,700.	41.
3785	di-n-octyl phthalate	2,800.	67.	ug/kg	3,400.	83.
3786	benzo (b) fluoranthene	3,000.	33.	ug/kg	3,800.	41.
3787	benzo (k) fluoranthene	3,000.	33.	ug/kg	3,700.	41.
3788	benzo (a) pyrene	3,000.	33.	ug/kg	3,700.	41.
3789	indeno (1,2,3-cd) pyrene	2,900.	33.	ug/kg	3,600.	41.
3790	dibenz (a,h) anthracene	3,000.	33.	ug/kg	3,700.	41.
3791	benzo (ghi) perylene	2,800.	33.	ug/kg	3,500.	41.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2415 New Holland Pike
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Tel: 717-656-2300 Fax: 717-656-2581

See reverse side for explanation of symbols and abbreviations

2011-07-14 10:11:11





LLI Sample No. SW 2943358

Collected: 6/ 9/98 at 13:09 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-33/5-6' Matrix Spike Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20MS

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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Lancaster, PA 17605-1425
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See reverse side for explanation of symbols and abbreviations.

2246 (Rev. 1/94)





LLI Sample No. SW 2943358

Collected: 06/09/98 at 13:09 by DCU

Submitted: 06/10/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-33/5-6' Matrix Spike Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20MS

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	06/29/98 1443	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/29/98 1443	Phillip R. Esbenshade
0118	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



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2425 New Holland Pike
PO Box 10425
Lancaster, PA 17605-2425
717-656-2000 Fax: 717-656-2631





LLI Sample No. **2943358**
 GEO-33/5-6' Matrix Spike Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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 Semivolatiles		Batch: 98162SLE026									
1185	phenol										
67.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
33.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		83	65	24	89			60	102



Lancaster Laboratories
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 Lancaster, PA 17605-2425
 Tel: 635-7300 Fax: 717-655-2557

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943358
 GEO-33/5-6' Matrix Spike Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									
4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943358
 GEO-33/5-6' Matrix Spike Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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.		94	84	10	96			62	107
3776	anthracene										
33.	ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
33.	ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
33.	ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	87	3	94			52	113
0118	Moisture										
0.080	% by wt.	* Batch: 981650199820001A									



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943358
GEO-33/5-6' Matrix Spike Grab Soil Sample
Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	69	39	108
	2-Flpheno	74	35	108
	2,4,6-TBP	111	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	78	31	126
	2-Fbiphenyl	88	45	113
	Tphenyl d14	77	37	130



Lancaster Laboratories
2425 New Holland Pike
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See reverse side for explanation of jumbos and abbreviations

2015-04-16 11:47





LLI Sample No. SW 2943357

Collected: 6/ 9/98 at 13:09 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-33/5-6' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20BKG

Account No: 07802
Kerr-McGee Corporation
P.O. 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
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	19.3	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 ATTN: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:09:27 D 0003 22 129915 618556
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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Lancaster, PA 17605-2425
(717) 656-2300 Fax: (717) 656-2551

See reverse side for explanation of symbols and abbreviations

L2711 (Rev. 12/97)





LLI Sample No. SW 2943357

Collected: 6/ 9/98 at 13:09 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-33/5-6' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20BKG

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	83.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	41.
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.	33.	ug/kg	N.D.	41.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	41.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	83.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	41.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	41.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	41.
3759	isophorone	N.D.	33.	ug/kg	N.D.	41.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	83.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	83.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	83.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	83.
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.	33.	ug/kg	N.D.	41.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	83.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	83.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	41.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	210.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	83.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	83.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	41.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	41.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	83.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	41.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVDA



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2425 New Holland Pike
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11/15/98 11:11 AM





LLI Sample No. SW 2943357

Collected: 6/ 9/98 at 13:09 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-33/5-6' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20BKG

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	83.
1191	acenaphthene	92.	J 33.	ug/kg	110.	J 41.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	240.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	210.
4698	dibenzofuran	80.	J 33.	ug/kg	99.	J 41.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	83.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	41.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	83.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	41.
3768	fluorene	130.	J 33.	ug/kg	170.	J 41.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	83.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	210.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	41.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	83.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	41.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	210.
3775	phenanthrene	620.	33.	ug/kg	760.	41.
3776	anthracene	180.	J 33.	ug/kg	220.	J 41.
4702	carbazole	N.D.	33.	ug/kg	N.D.	41.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	83.
3778	fluoranthene	570.	33.	ug/kg	700.	41.
1195	pyrene	360.	33.	ug/kg	440.	41.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	83.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	83.
3781	benzo (a) anthracene	130.	J 33.	ug/kg	160.	J 41.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	83.
3782	chrysene	130.	J 33.	ug/kg	170.	J 41.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	83.
3786	benzo (b) fluoranthene	110.	J 33.	ug/kg	140.	J 41.
3787	benzo (k) fluoranthene	40.	J 33.	ug/kg	50.	J 41.
3788	benzo (a) pyrene	72.	J 33.	ug/kg	89.	J 41.
3789	indeno (1,2,3-cd) pyrene	42.	J 33.	ug/kg	52.	J 41.
3790	dibenz (a,h) anthracene *	N.D.	33.	ug/kg	N.D.	41.
3791	benzo (ghi) perylene	34.	J 33.	ug/kg	42.	J 41.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVQA



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See reverse side for explanation of symbols and abbreviations

2015 11/11/01





LLI Sample No. SW 2943357

Collected: 6/ 9/98 at 13:09 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-33/5-6' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20BKG

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

2019 11/14/98





LLI Sample No. SW 2943357

Collected: 06/09/98 at 13:09 by DCU

Submitted: 06/10/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-33/5-6' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20BKG

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	06/29/98 1353	Phillip R. Esbshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/29/98 1353	Phillip R. Esbshade
0111	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



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LLI Sample No. 2943357

GEO-33/5-6' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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 Semivolatiles		Batch: 98162SLE026									
1185	phenol										
67.	ug/kg	N.D.		74	62	18	79			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		66	47	32	72			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		77	59	28	82			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		66	30	77	88			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		68	32	73	88			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		74	38	64	92			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		73	59	22	77			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		68	46	39	76			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		74	62	19	80			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		75	59	24	81			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		66	29	77	87			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		79	59	29	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		79	65	20	86			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	60	27	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		70	59	16	82			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		72	57	22	77			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		84	68	21	90			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		86	55	43	97			57	104
3761	naphthalene										
33.	ug/kg	N.D.		78	54	36	87			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	46	16	71			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	52	54	110			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		78	69	11	85			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		83	65	24	89			60	102



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717-695-7300 Fax 717-695-2521

See reverse side for explanation of symbols and abbreviations

7276 T-11-02





LLI Sample No. 2943357

GEO-33/5-6' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									
4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



Lancaster Laboratories
2125 New Holland Pike
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943357

GEO-33/5-6' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		94	84	10	96			62	107
3776	anthracene										
	33. ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
	33. ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
	33. ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
	33. ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
	33. ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
	33. ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
	33. ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
	33. ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
	33. ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
	33. ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
	33. ug/kg	N.D.		84	87	3	94			52	113
0111	Moisture										
	0.080 % by wt.	* Batch: 981650199820001A	12				100	100	0	99	101



Lancaster Laboratories
2425 New Holland Pike
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Hattiesburg, MS 39405-0425
Phone: 601-250-1100 Fax: 601-250-2681

See reverse side for explanation of symbols and abbreviations

2276 11/11/01





LLI Sample No. 2943357

GEO-33/5-6' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	69	39	108
	2-Flphenol	70	35	108
	2,4,6-TBP	113	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	71	31	126
	2-Fbiphenyl	73	45	113
	Tphenyl14	83	37	130



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2425 New Holland Pike
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see reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943359

Collected: 6/ 9/98 at 13:09 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O.
 Rel.

GE0-33/5-6' Matrix Spike Dup Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 3356- SDG#: HMS04-20MSD*

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION	LIMIT	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0118	Moisture	19.3	0.080		% by wt.	
0121	Moisture Duplicate	21.6	0.080		% 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	ATTN: Garet Van de Steeg, PhD
1 COPY TO	Michael Pisani & Associates	ATTN: Mr. David Upthegrove
1 COPY TO	Data Package Group	

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 20:12:49 D 0003 22 129915 618556
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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(015) 741 612 07





LLI Sample No. SW 2943359

Collected: 6/ 9/98 at 13:09 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

GEO-33/5-6' Matrix Spike Dup Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20MSD*

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	phenol	2,100.	67.	ug/kg	2,600.	83.
3753	bis (2-chloroethyl) ether	1,600.	33.	ug/kg	2,000.	41.
1186	2-chlorophenol	2,000.	33.	ug/kg	2,400.	41.
3754	1,3-dichlorobenzene	980.	33.	ug/kg	1,200.	41.
1187	1,4-dichlorobenzene	1,100.	33.	ug/kg	1,300.	41.
3755	1,2-dichlorobenzene	1,300.	33.	ug/kg	1,600.	41.
4690	2-methylphenol	2,000.	33.	ug/kg	2,400.	41.
4691	2,2'-oxybis (1-chloropropane)	1,500.	33.	ug/kg	1,900.	41.
4692	3- and 4-methylphenol	2,100.	67.	ug/kg	2,500.	83.
1188	N-nitrosodi-n-propylamine	2,000.	33.	ug/kg	2,400.	41.
3757	hexachloroethane	970.	33.	ug/kg	1,200.	41.
3758	nitrobenzene	2,000.	33.	ug/kg	2,400.	41.
3759	isophorone	2,200.	33.	ug/kg	2,700.	41.
3746	2-nitrophenol	2,000.	67.	ug/kg	2,500.	83.
3747	2,4-dimethylphenol	2,000.	67.	ug/kg	2,400.	83.
3760	bis (2-chloroethoxy) methane	1,900.	67.	ug/kg	2,400.	83.
3748	2,4-dichlorophenol	2,300.	67.	ug/kg	2,800.	83.
1189	1,2,4-trichlorobenzene	1,800.	33.	ug/kg	2,300.	41.
3761	naphthalene	1,800.	33.	ug/kg	2,200.	41.
4693	4-chloroaniline	1,500.	33.	ug/kg	1,900.	41.
3762	hexachlorobutadiene	1,700.	67.	ug/kg	2,100.	83.
1190	4-chloro-3-methylphenol	2,300.	67.	ug/kg	2,900.	83.
4694	2-methylnaphthalene	2,200.	33.	ug/kg	2,700.	41.
3763	hexachlorocyclopentadiene	3,500.	170.	ug/kg	4,400.	210.
3749	2,4,6-trichlorophenol	2,700.	67.	ug/kg	3,400.	83.
4695	2,4,5-trichlorophenol	2,700.	67.	ug/kg	3,400.	83.
3764	2-chloronaphthalene	2,600.	33.	ug/kg	3,200.	41.
4696	2-nitroaniline	2,300.	33.	ug/kg	2,900.	41.
3766	dimethyl phthalate	2,500.	67.	ug/kg	3,100.	83.
3765	acenaphthylene	2,500.	33.	ug/kg	3,100.	41.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2/20/98 11:41 AM





LLI Sample No. SW 2943359

Collected: 6/ 9/98 at 13:09 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GE0-33/5-6' Matrix Spike Dup Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20MSD*

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	1,900.	67.	ug/kg	2,300.	83.
1191	acenaphthene	2,700.	33.	ug/kg	3,300.	41.
3750	2,4-dinitrophenol	2,200.	190.	ug/kg	2,700.	240.
1192	4-nitrophenol	2,700.	170.	ug/kg	3,300.	210.
4698	dibenzofuran	2,800.	33.	ug/kg	3,500.	41.
1193	2,4-dinitrotoluene	3,000.	67.	ug/kg	3,700.	83.
3767	2,6-dinitrotoluene	2,700.	33.	ug/kg	3,400.	41.
3770	diethyl phthalate	2,600.	67.	ug/kg	3,300.	83.
3769	4-chlorophenyl phenyl ether	2,900.	33.	ug/kg	3,500.	41.
3768	fluorene	2,900.	33.	ug/kg	3,600.	41.
4700	4-nitroaniline	2,200.	67.	ug/kg	2,800.	83.
3751	4,6-dinitro-2-methylphenol	2,600.	170.	ug/kg	3,200.	210.
3772	N-nitrosodiphenylamine	2,700.	33.	ug/kg	3,300.	41.
3773	4-bromophenyl phenyl ether	3,000.	67.	ug/kg	3,800.	83.
3774	hexachlorobenzene	3,400.	33.	ug/kg	4,300.	41.
1194	pentachlorophenol	2,800.	170.	ug/kg	3,400.	210.
3775	phenanthrene	3,400.	33.	ug/kg	4,200.	41.
3776	anthracene	3,200.	33.	ug/kg	3,900.	41.
4702	carbazole	2,800.	33.	ug/kg	3,500.	41.
3777	di-n-butyl phthalate	2,900.	67.	ug/kg	3,500.	83.
3778	fluoranthene	3,600.	33.	ug/kg	4,400.	41.
1195	pyrene	2,900.	33.	ug/kg	3,600.	41.
3780	butyl benzyl phthalate	2,500.	67.	ug/kg	3,100.	83.
3783	3,3'-dichlorobenzidine	2,000.	67.	ug/kg	2,500.	83.
3781	benzo (a) anthracene	3,100.	33.	ug/kg	3,800.	41.
3784	bis (2-ethylhexyl) phthalate	2,500.	67.	ug/kg	3,100.	83.
3782	chrysene	2,900.	33.	ug/kg	3,600.	41.
3785	di-n-octyl phthalate	2,900.	67.	ug/kg	3,600.	83.
3786	benzo (b) fluoranthene	3,100.	33.	ug/kg	3,800.	41.
3787	benzo (k) fluoranthene	3,100.	33.	ug/kg	3,800.	41.
3788	benzo (a) pyrene	3,100.	33.	ug/kg	3,900.	41.
3789	indeno (1,2,3-cd) pyrene	3,000.	33.	ug/kg	3,700.	41.
3790	dibenz (a,h) anthracene *	3,100.	33.	ug/kg	3,800.	41.
3791	benzo (ghi) perylene	2,900.	33.	ug/kg	3,600.	41.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2943359

Collected: 6/ 9/98 at 13:09 by DCU

Submitted: 6/10/98 Reported: 7/14/98

Discard: 8/14/98

GEO-33/5-6' Matrix Spike Dup Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20MSD*

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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221b Rev. 9.0.07





LLI Sample No. SW 2943359

Collected: 06/09/98 at 13:09 by DCU

Submitted: 06/10/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-33/5-6' Matrix Spike Dup Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3356- SDG#: HMS04-20MSD*

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 1415	John M. Becker
4688	TCL Semivolatiles	SW-846 8270C	1	06/29/98 1533	Phillip R. Esbenshade
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/29/98 1533	Phillip R. Esbenshade
0118	Moisture	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward
0121	Moisture Duplicate	EPA 160.3 modified	1	06/14/98 1808	Patrick N. Ward



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LLI Sample No. 2943359
 GEO-33/5-6' Matrix Spike Dup Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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 Semivolatiles		Batch: 98162SLE026										
1185	phenol											
67.	ug/kg	N.D.		74	62	18	79			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		66	47	32	72			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		77	59	28	82			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		66	30	77	88			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		68	32	73	88			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		74	38	64	92			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		73	59	22	77			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		68	46	39	76			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		74	62	19	80			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		75	59	24	81			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		66	29	77	87			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		79	59	29	86			56	110	
3759	isophorone											
33.	ug/kg	N.D.		79	65	20	86			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		79	60	27	86			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		70	59	16	82			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		72	57	22	77			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		84	68	21	90			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		86	55	43	97			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		78	54	36	87			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		54	46	16	71			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		90	52	54	110			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		78	69	11	85			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		83	65	24	89			60	102	



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LLI Sample No. 2943359
GEO-33/5-6' Matrix Spike Dup Grab Soil Sample
Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
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.		71	53	28	84			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		92	81	12	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		88	81	8	92			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		89	77	15	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		78	70	10	83			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		85	75	13	91			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		84	75	12	86			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLE026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		61	56	10	64			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		85	77	9	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		76	65	14	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		90	80	12	97			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	82	8	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		92	89	3	98			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	82	8	92			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		85	79	8	91			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		88	86	3	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		89	84	6	91			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	67	8	78			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		84	78	8	84			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	80	2	89			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		92	91	1	96			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		103	103	0	107			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		88	83	6	93			42	108



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2016 10 13 11:01





LLI Sample No. 2943359
 GEO-33/5-6' Matrix Spike Dup Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
 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.		94	84	10	96			62	107
3776	anthracene										
	33. ug/kg	N.D.		99	89	10	96			62	105
4702	carbazole										
	33. ug/kg	N.D.		90	84	6	92			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		85	86	1	92			59	114
3778	fluoranthene										
	33. ug/kg	N.D.		98	90	8	100			58	110
1195	pyrene										
	33. ug/kg	N.D.		81	76	5	82			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		72	75	4	76			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		57	60	5	56			15	94
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		88	89	1	93			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		72	75	3	75			8	158
3782	chrysene										
	33. ug/kg	N.D.		85	83	2	88			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		83	87	6	85			54	127
3786	benzo (b) fluoranthene										
	33. ug/kg	N.D.		88	89	2	89			59	105
3787	benzo (k) fluoranthene										
	33. ug/kg	N.D.		88	92	5	97			63	108
3788	benzo (a) pyrene										
	33. ug/kg	N.D.		88	92	4	95			61	107
3789	indeno (1,2,3-cd) pyrene										
	33. ug/kg	N.D.		86	88	2	94			55	111
3790	dibenz (a,h) anthracene										
	33. ug/kg	N.D.		89	92	3	95			60	117
3791	benzo (ghi) perylene										
	33. ug/kg	N.D.		84	87	3	94			52	113
0118	Moisture										
	0.080 % by wt.	* Batch: 981650199820001A									
0121	Moisture Duplicate										
	0.080 % by wt.	Batch: 981650199820001A									



Lancaster Laboratories
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2013-01-18 10:11





LLI Sample No. 2943359
GEO-33/5-6' Matrix Spike Dup Grab Soil Sample
Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618556
Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	59	39	108
	2-Flphenol	56	35	108
	2,4,6-TBP	106	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	57	31	126
	2-Fbiphenyl	73	45	113
	Tphenylid14	80	37	130



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LLI Sample No. SW 2943380

Collected: 6/ 9/98 at 15:55 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-26/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2623- SDG#: HMS05-01

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	DETECTION	METHOD LIMIT UNITS	RESULTS	DETECTION	METHOD LIMIT
4688	TCL Semivolatiles			See Page			2
4689	TCL Semivolatiles cont'd			See Page			3
0111	Moisture	15.4	0.080	% by wt.			
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.							

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
21:11:11 D 0003 6 129915 618562
412 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

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LLI Sample No. SW 2943380
 Collected: 6/ 9/98 at 15:55 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98
 Discard: 8/ 6/98

GEO-26/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 2623- SDG#: HMS05-01

Account No: 07802
 Kerr-McGee Corporation
 P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	79.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	39.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	79.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	79.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	79.
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.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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LLI Sample No. SW 2943380

Collected: 6/ 9/98 at 15:55 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-26/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2623- SDG#: HMS05-01

Account No: 07802
Kerr-McGee Corporation
P.O. 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
TCL Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	230.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	79.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	79.
3778	fluoranthene	61.	J	33.	72.	J
1195	pyrene	72.	J	33.	85.	J
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	39.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	79.
3781	benzo (a) anthracene	34.	J	33.	40.	J
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	79.
3782	chrysene	34.	J	33.	40.	J
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3786	benzo (b) fluoranthene	46.	J	33.	54.	J
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	39.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	39.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	39.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER
ACIL
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LLI Sample No. SW 2943380

Collected: 6/ 9/98 at 15:55 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-26/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2623- SDG#: HMS05-01

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS SVOA



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2275





LLI Sample No. SW 2943380

Collected: 06/09/98 at 15:55 by DCU

Submitted: 06/10/98

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

GEO-26/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 2623- SDG#: HMS05-01

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	06/26/98 2323	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/26/98 2323	Eileen Hostetler
0111	Moisture	EPA 160.3 modified	1	06/13/98 1831	Patrick N. Ward



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2015-11-11 10:11 AM





Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. 2943380

GEO-26/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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 Semivolatiles		Batch: 98162SLF026									
1185	phenol										
67.	ug/kg	N.D.		79	69	14	81			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		73	67	10	79			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		79	70	12	84			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		75	67	12	83			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		75	66	12	82			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		78	69	12	85			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		78	70	11	84			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		81	73	11	87			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		78	70	10	84			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	70	12	83			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		76	67	13	84			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		81	72	12	89			56	110
3759	isophorone										
33.	ug/kg	N.D.		85	74	14	92			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		83	71	15	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		79	69	14	86			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		76	67	12	82			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		82	71	14	86			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		80	70	13	87			57	104
3761	naphthalene										
33.	ug/kg	N.D.		75	65	14	79			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		63	59	6	64			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	71	15	89			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		85	74	15	90			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		78	69	12	83			60	102



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943380

GEO-26/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
33.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108



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See reverse side for explanation of symbols and abbreviations

2015 11/11/15





LLI Sample No. 2943380

GEO-26/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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.		82	72	13	88			62	107
3776	anthracene										
33.	ug/kg	N.D.		83	70	16	91			62	105
4702	carbazole										
33.	ug/kg	N.D.		84	73	14	91			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		80	71	12	87			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		84	73	14	91			58	110
1195	pyrene										
33.	ug/kg	N.D.		78	67	15	83			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		77	68	13	85			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		67	62	8	53			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		85	74	14	91			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		76	66	14	82			8	158
3782	chrysene										
33.	ug/kg	N.D.		82	72	13	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		81	70	15	86			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		79	69	13	85			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		84	72	16	90			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		86	74	15	93			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		85	73	16	91			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		84	71	17	90			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	71	17	90			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981640199820003A	4				100	100	0	99	101



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
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2015-06-11 11:11





LLI Sample No. 2943380

GEO-26/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
Kerr-McGee Corporation

		SURROGATE SUMMARY		SURROGATE LIMITS	
TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH	
4688 TCL Semivolatiles	Phenol-d6	45	39	108	
	2-F1pheno1	45	35	108	
	2,4,6-TBP	53	23	125	
4689 TCL Semivolatiles cont'd	Nitrobz-d5	45	31	126	
	2-Fbiphenyl	46	45	113	
	Tphenylid14	49	37	130	



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LLI Sample No. SW 2943381

Collected: 6/ 9/98 at 16:01 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-26/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2656- SDG#: HMS05-02

Account No: 07802
Kerr-McGee Corporation
P.O. 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	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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
21:13:50 D 0003 6 129915 618562
412 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2943381

Collected: 6/ 9/98 at 16:01 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-26/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2656- SDG#: HMS05-02

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	78.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	39.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	78.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	78.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	78.
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.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2015 04 17 11:11





LLI Sample No. SW 2943381

Collected: 6/ 9/98 at 16:01 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-26/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2656- SDG#: HMS05-02

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	230.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	78.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	78.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	39.
1195	pyrene	N.D.	33.	ug/kg	N.D.	39.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	78.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	39.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	39.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	39.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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216 04 11 97





LLI Sample No. SW 2943381

Collected: 6/ 9/98 at 16:01 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-26/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2656- SDG#: HMS05-02

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2943381

Collected: 06/09/98 at 16:01 by DCU

Submitted: 06/10/98

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

GEO-26/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 2656- SDG#: HMS05-02

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1		06/11/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1		06/29/98 1221	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		06/29/98 1221	Eileen Hostetler
0111	Moisture	EPA 160.3 modified	1		06/13/98 1831	Patrick N. Ward



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LLI Sample No. 2943381

GEO-26/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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 Semivolatiles		Batch: 98162SLF026										
1185	phenol											
67.	ug/kg	N.D.		79	69	14	81			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		73	67	10	79			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		79	70	12	84			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		75	67	12	83			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		75	66	12	82			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		78	69	12	85			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		78	70	11	84			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		81	73	11	87			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		78	70	10	84			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		79	70	12	83			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		76	67	13	84			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		81	72	12	89			56	110	
3759	isophorone											
33.	ug/kg	N.D.		85	74	14	92			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		83	71	15	86			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		79	69	14	86			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		76	67	12	82			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		82	71	14	86			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		80	70	13	87			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		75	65	14	79			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		63	59	6	64			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		83	71	15	89			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		85	74	15	90			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		78	69	12	83			60	102	



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2015-05-11 11:17





LLI Sample No. 2943381

GEO-26/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
33.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108



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2015-06-10 10:17





LLI Sample No. 2943381

GEO-26/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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.		82	72	13	88			62	107
3776	anthracene										
33.	ug/kg	N.D.		83	70	16	91			62	105
4702	carbazole										
33.	ug/kg	N.D.		84	73	14	91			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		80	71	12	87			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		84	73	14	91			58	110
1195	pyrene										
33.	ug/kg	N.D.		78	67	15	83			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		77	68	13	85			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		67	62	8	53			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		85	74	14	91			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		76	66	14	82			8	158
3782	chrysene										
33.	ug/kg	N.D.		82	72	13	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		81	70	15	86			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		79	69	13	85			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		84	72	16	90			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		86	74	15	93			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		85	73	16	91			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		84	71	17	90			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	71	17	90			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981640199820003A	4				100	100	0	99	101



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10-11-01





LLI Sample No. 2943381

GEO-26/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	69	39	108
		2-Flphenol	67	35	108
		2,4,6-TBP	81	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	66	31	126
		2-Fbiphenyl	67	45	113
		Tphenyl14	76	37	130



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717-656-2300 Fax: 717-656-2661

See reverse side for explanation of symbols and abbreviations

2014-12-11 10:11:11





LLI Sample No. SW 2943382

Collected: 6/ 9/98 at 16:30 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-27/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2723- SDG#: HMS05-03

Account No: 07802
Kerr-McGee Corporation
P.O. 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	7.70	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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
21:16:06 D 0003 6 129915 618562
412 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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

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LLI Sample No. SW 2943382
 Collected: 6/ 9/98 at 16:30 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98
 Discard: 8/ 6/98

GEO-27/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 2723- SDG#: HMS05-03

Account No: 07802
 Kerr-McGee Corporation
 P.O. 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 Semivolatiles							
1185	phenol	N.D.	67.	ug/kg	N.D.	72.	
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	36.	
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	36.	
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	36.	
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	36.	
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	36.	
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	36.	
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	36.	
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	72.	
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	36.	
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	36.	
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	36.	
3759	isophorone	N.D.	33.	ug/kg	N.D.	36.	
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	72.	
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	72.	
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	72.	
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	72.	
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	36.	
3761	naphthalene	N.D.	33.	ug/kg	N.D.	36.	
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	36.	
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	72.	
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	72.	
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	36.	
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	180.	
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	72.	
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	72.	
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	36.	
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	36.	
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	72.	
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	36.	

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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 717-656-2300 Fax 717-656-2681

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22 6 14 11 11





LLI Sample No. SW 2943382
Collected: 6/ 9/98 at 16:30 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98
Discard: 8/ 6/98

GEO-27/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2723- SDG#: HMS05-03

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd							
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	72.	
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	36.	
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	210.	
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	180.	
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	36.	
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	72.	
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	36.	
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	72.	
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	36.	
3768	fluorene	N.D.	33.	ug/kg	N.D.	36.	
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	72.	
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	180.	
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	36.	
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	72.	
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	36.	
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	180.	
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	36.	
3776	anthracene	N.D.	33.	ug/kg	N.D.	36.	
4702	carbazole	N.D.	33.	ug/kg	N.D.	36.	
3777	di-n-butyl phthalate	N.D.	33.	ug/kg	N.D.	36.	
3778	fluoranthene	N.D.	67.	ug/kg	N.D.	72.	
1195	pyrene	N.D.	33.	ug/kg	N.D.	36.	
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	72.	
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	72.	
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	36.	
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	72.	
3782	chrysene	N.D.	33.	ug/kg	N.D.	36.	
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	72.	
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	36.	
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	36.	
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	36.	
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	36.	
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	36.	
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	36.	

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2943382

Collected: 6/ 9/98 at 16:30 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-27/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2723- SDG#: HMS05-03

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
2425 New Holland Pike
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02/15/98 10:51 AM





LLI Sample No. SW 2943382

Collected: 06/09/98 at 16:30 by DCU

Submitted: 06/10/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-27/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2723- SDG#: HMS05-03

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	06/27/98 0017	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/27/98 0017	Eileen Hostetler
0111	Moisture	EPA 160.3 modified	1	06/13/98 1831	Patrick N. Ward



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2015 11 10 11:07





LLI Sample No. 2943382

GEO-27/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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 Semivolatiles		Batch: 98162SLF026										
1185	phenol											
67.	ug/kg	N.D.		79	69	14	81			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		73	67	10	79			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		79	70	12	84			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		75	67	12	83			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		75	66	12	82			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		78	69	12	85			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		78	70	11	84			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		81	73	11	87			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		78	70	10	84			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		79	70	12	83			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		76	67	13	84			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		81	72	12	89			56	110	
3759	isophorone											
33.	ug/kg	N.D.		85	74	14	92			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		83	71	15	86			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		79	69	14	86			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		76	67	12	82			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		82	71	14	86			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		80	70	13	87			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		75	65	14	79			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		63	59	6	64			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		83	71	15	89			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		85	74	15	90			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		78	69	12	83			60	102	



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
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0211 071





LLI Sample No. 2943382

GEO-27/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
33.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108



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

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LLI Sample No. 2943382

GEO-27/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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.		82	72	13	88			62	107
3776	anthracene										
33.	ug/kg	N.D.		83	70	16	91			62	105
4702	carbazole										
33.	ug/kg	N.D.		84	73	14	91			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		80	71	12	87			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		84	73	14	91			58	110
1195	pyrene										
33.	ug/kg	N.D.		78	67	15	83			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		77	68	13	85			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		67	62	8	53			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		85	74	14	91			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		76	66	14	82			8	158
3782	chrysene										
33.	ug/kg	N.D.		82	72	13	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		81	70	15	86			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		79	69	13	85			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		84	72	16	90			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		86	74	15	93			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		85	73	16	91			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		84	71	17	90			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	71	17	90			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981640199820003A	4				100	100	0	99	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

12/19/98 11:11 AM





LLI Sample No. 2943382

GEO-27/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	79	39	108
		2-F1phenol	80	35	108
		2,4,6-TBP	97	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	80	31	126
		2-Fbiphenyl	88	45	113
		Tphenylid14	83	37	130



Lancaster Laboratories
2425 New Holland Pike
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Lancaster, PA 17605-2425
717-656-2390 Fax 717-656-2681

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02/27/01 3:07





LLI Sample No. SW 2943383

Collected: 6/ 9/98 at 16:34 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-27/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2756- SDG#: HMS05-04

Account No: 07802
Kerr-McGee Corporation
P.O. 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	8.92	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: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
21:18:17 D 0003 6 129915 618562
412 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2943383

Collected: 6/ 9/98 at 16:34 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98
Discard: 8/ 6/98

GEO-27/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2756- SDG#: HMS05-04

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	73.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	37.
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.	33.	ug/kg	N.D.	37.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	37.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	73.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	37.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	37.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	37.
3759	isophorone	N.D.	33.	ug/kg	N.D.	37.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	73.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	73.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	73.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	73.
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.	33.	ug/kg	N.D.	37.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	73.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	73.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	37.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	180.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	73.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	73.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	37.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	37.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	37.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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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. 11-97





LLI Sample No. SW 2943383
 Collected: 6/ 9/98 at 16:34 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98
 Discard: 8/ 6/98

GEO-27/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 2756- SDG#: HMS05-04

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O.
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CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	73.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	37.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	210.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	180.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	37.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	73.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	37.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	37.
3768	fluorene	N.D.	33.	ug/kg	N.D.	37.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	73.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	180.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	37.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	73.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	37.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	180.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	37.
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	N.D.	67.	ug/kg	N.D.	73.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	37.
1195	pyrene	N.D.	33.	ug/kg	N.D.	37.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	73.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	37.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	73.
3782	chrysene	N.D.	33.	ug/kg	N.D.	37.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	37.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	37.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	37.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	37.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	37.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	37.

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2943383

Collected: 6/ 9/98 at 16:34 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-27/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2756- SDG#: HMS05-04

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
ReI.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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22 41 24 11 11 11





LLI Sample No. SW 2943383

Collected: 06/09/98 at 16:34 by DCU

Submitted: 06/10/98

GEO-27/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2756- SDG#: HMS05-04

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	06/29/98 1434	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/29/98 1434	Eileen Hostetler
0111	Moisture	EPA 160.3 modified	1	06/13/98 1831	Patrick N. Ward



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LLI Sample No. 2943383

GEO-27/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
-----		Batch: 98162SLF026										
-----		4688 TCL Semivolatiles										
1185	phenol											
67.	ug/kg	N.D.		79	69	14	81			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		73	67	10	79			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		79	70	12	84			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		75	67	12	83			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		75	66	12	82			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		78	69	12	85			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		78	70	11	84			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		81	73	11	87			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		78	70	10	84			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		79	70	12	83			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		76	67	13	84			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		81	72	12	89			56	110	
3759	isophorone											
33.	ug/kg	N.D.		85	74	14	92			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		83	71	15	86			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		79	69	14	86			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		76	67	12	82			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		82	71	14	86			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		80	70	13	87			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		75	65	14	79			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		63	59	6	64			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		83	71	15	89			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		85	74	15	90			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		78	69	12	83			60	102	



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See reverse side for explanation of symbols and abbreviations.

02/15/01 11:01 AM





LLI Sample No. 2943383
 GEO-27/5-6' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
 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.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
33.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943383

GEO-27/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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.		82	72	13	88			62	107
3776	anthracene										
33.	ug/kg	N.D.		83	70	16	91			62	105
4702	carbazole										
33.	ug/kg	N.D.		84	73	14	91			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		80	71	12	87			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		84	73	14	91			58	110
1195	pyrene										
33.	ug/kg	N.D.		78	67	15	83			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		77	68	13	85			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		67	62	8	53			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		85	74	14	91			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		76	66	14	82			8	158
3782	chrysene										
33.	ug/kg	N.D.		82	72	13	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		81	70	15	86			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		79	69	13	85			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		84	72	16	90			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		86	74	15	93			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		85	73	16	91			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		84	71	17	90			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	71	17	90			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981640199820003A	4				100	100	0	99	101

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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. **2943383**
GEO-27/5-6' Grab Soil Sample
Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	78	39	108
		2-Flphenol	75	35	108
		2,4,6-TBP	90	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	75	31	126
		2-Fbiphenyl	73	45	113
		Tphenyl14	79	37	130





LLI Sample No. SW 2943384

Collected: 6/ 9/98 at 13:00 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-33/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3301- SDG#: HMS05-05

Account No: 07802
Kerr-McGee Corporation
P.O. 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
4688	TCL Semivolatiles						See Page 2
4689	TCL Semivolatiles cont'd						See Page 3
0111	Moisture	11.4		0.080			% by wt.
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.							

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
21:20:20 D 0003 6 129915 618562
412 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2943384

Collected: 6/ 9/98 at 13:00 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-33/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3301- SDG#: HMS05-05

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	670.	ug/kg	N.D.	750.
3753	bis (2-chloroethyl) ether	N.D.	330.	ug/kg	N.D.	380.
1186	2-chlorophenol	N.D.	330.	ug/kg	N.D.	380.
3754	1,3-dichlorobenzene	N.D.	330.	ug/kg	N.D.	380.
1187	1,4-dichlorobenzene	N.D.	330.	ug/kg	N.D.	380.
3755	1,2-dichlorobenzene	N.D.	330.	ug/kg	N.D.	380.
4690	2-methylphenol	N.D.	330.	ug/kg	N.D.	380.
4691	2,2'-oxybis (1-chloropropane)	N.D.	330.	ug/kg	N.D.	380.
4692	3- and 4-methylphenol	N.D.	670.	ug/kg	N.D.	750.
1188	N-nitrosodi-n-propylamine	N.D.	330.	ug/kg	N.D.	380.
3757	hexachloroethane	N.D.	330.	ug/kg	N.D.	380.
3758	nitrobenzene	N.D.	330.	ug/kg	N.D.	380.
3759	isophorone	N.D.	330.	ug/kg	N.D.	380.
3746	2-nitrophenol	N.D.	670.	ug/kg	N.D.	750.
3747	2,4-dimethylphenol	N.D.	670.	ug/kg	N.D.	750.
3760	bis (2-chloroethoxy) methane	N.D.	670.	ug/kg	N.D.	750.
3748	2,4-dichlorophenol	N.D.	670.	ug/kg	N.D.	750.
1189	1,2,4-trichlorobenzene	N.D.	330.	ug/kg	N.D.	380.
3761	naphthalene	7,400.	330.	ug/kg	8,300.	380.
4693	4-chloroaniline	N.D.	330.	ug/kg	N.D.	380.
3762	hexachlorobutadiene	N.D.	670.	ug/kg	N.D.	750.
1190	4-chloro-3-methylphenol	N.D.	670.	ug/kg	N.D.	750.
4694	2-methylnaphthalene	9,400.	330.	ug/kg	11,000.	380.
3763	hexachlorocyclopentadiene	N.D.	1,700.	ug/kg	N.D.	1,900.
3749	2,4,6-trichlorophenol	N.D.	670.	ug/kg	N.D.	750.
4695	2,4,5-trichlorophenol	N.D.	670.	ug/kg	N.D.	750.
3764	2-chloronaphthalene	N.D.	330.	ug/kg	N.D.	380.
4696	2-nitroaniline	N.D.	330.	ug/kg	N.D.	380.
3766	dimethyl phthalate	N.D.	670.	ug/kg	N.D.	750.
3765	acenaphthylene	18,000.	330.	ug/kg	20,000.	380.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
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See reverse side for explanation of symbols and abbreviations.

2.13 09.11.97





LLI Sample No. SW 2943384

Collected: 6/ 9/98 at 13:00 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-33/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3301- SDG#: HMS05-05

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	670.	ug/kg	N.D.	750.
1191	acenaphthene	59,000.	J 6,700.	ug/kg	66,000.	J7,500.
3750	2,4-dinitrophenol	N.D.	1,900.	ug/kg	N.D.	2,200.
1192	4-nitrophenol	N.D.	1,700.	ug/kg	N.D.	1,900.
4698	dibenzofuran	31,000.	330.	ug/kg	35,000.	380.
1193	2,4-dinitrotoluene	N.D.	670.	ug/kg	N.D.	750.
3767	2,6-dinitrotoluene	N.D.	330.	ug/kg	N.D.	380.
3770	diethyl phthalate	N.D.	670.	ug/kg	N.D.	750.
3769	4-chlorophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	380.
3768	fluorene	69,000.	6,700.	ug/kg	78,000.	7,500.
4700	4-nitroaniline	N.D.	670.	ug/kg	N.D.	750.
3751	4,6-dinitro-2-methylphenol	N.D.	1,700.	ug/kg	N.D.	1,900.
3772	N-nitrosodiphenylamine	N.D.	330.	ug/kg	N.D.	380.
3773	4-bromophenyl phenyl ether	N.D.	670.	ug/kg	N.D.	750.
3774	hexachlorobenzene	N.D.	330.	ug/kg	N.D.	380.
1194	pentachlorophenol	N.D.	1,700.	ug/kg	N.D.	1,900.
3775	phenanthrene	270,000.	6,700.	ug/kg	300,000.	7,500.
3776	anthracene	84,000.	6,700.	ug/kg	94,000.	7,500.
4702	carbazole	14,000.	330.	ug/kg	16,000.	380.
3777	di-n-butyl phthalate	N.D.	670.	ug/kg	N.D.	750.
3778	fluoranthene	390,000.	6,700.	ug/kg	440,000.	7,500.
1195	pyrene	280,000.	6,700.	ug/kg	320,000.	7,500.
3780	butyl benzyl phthalate	N.D.	670.	ug/kg	N.D.	750.
3783	3,3'-dichlorobenzidine	N.D.	670.	ug/kg	N.D.	750.
3781	benzo (a) anthracene	92,000.	6,700.	ug/kg	100,000.	7,500.
3784	bis (2-ethylhexyl) phthalate	N.D.	670.	ug/kg	N.D.	750.
3782	chrysene	90,000.	6,700.	ug/kg	100,000.	7,500.
3785	di-n-octyl phthalate	N.D.	670.	ug/kg	N.D.	750.
3786	benzo (b) fluoranthene	86,000.	6,700.	ug/kg	97,000.	7,500.
3787	benzo (k) fluoranthene	32,000.	330.	ug/kg	36,000.	380.
3788	benzo (a) pyrene	57,000.	J 6,700.	ug/kg	64,000.	J7,500.
3789	indeno (1,2,3-cd) pyrene	32,000.	330.	ug/kg	37,000.	380.
3790	dibenz (a,h) anthracene	9,000.	330.	ug/kg	10,000.	380.
3791	benzo (ghi) perylene	26,000.	330.	ug/kg	30,000.	380.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER
ACIL
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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2943384

Collected: 6/ 9/98 at 13:00 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-33/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3301- SDG#: HMS05-05

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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 semivolatiles compounds were raised due to the high concentration of target compounds.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

0215 11/11/98





LLI Sample No. SW 2943384

Collected: 06/09/98 at 13:00 by DCU

Submitted: 06/10/98

GEO-33/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3301- SDG#: HMS05-05

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	06/30/98 1544	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/30/98 1544	Eileen Hostetler
0111	Moisture	EPA 160.3 modified	1	06/13/98 1831	Patrick N. Ward



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LLI Sample No. 2943384

GEO-33/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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 Semivolatiles		Batch: 98162SLF026									
1185	phenol										
670.	ug/kg	N.D.		79	69	14	81			49	105
3753	bis (2-chloroethyl) ether										
330.	ug/kg	N.D.		73	67	10	79			53	109
1186	2-chlorophenol										
330.	ug/kg	N.D.		79	70	12	84			55	107
3754	1,3-dichlorobenzene										
330.	ug/kg	N.D.		75	67	12	83			53	103
1187	1,4-dichlorobenzene										
330.	ug/kg	N.D.		75	66	12	82			52	103
3755	1,2-dichlorobenzene										
330.	ug/kg	N.D.		78	69	12	85			56	107
4690	2-methylphenol										
330.	ug/kg	N.D.		78	70	11	84			57	101
4691	2,2'-oxybis (1-chloropropane)										
330.	ug/kg	N.D.		81	73	11	87			38	117
4692	3- and 4-methylphenol										
670.	ug/kg	N.D.		78	70	10	84			48	116
1188	N-nitrosodi-n-propylamine										
330.	ug/kg	N.D.		79	70	12	83			50	124
3757	hexachloroethane										
330.	ug/kg	N.D.		76	67	13	84			52	108
3758	nitrobenzene										
330.	ug/kg	N.D.		81	72	12	89			56	110
3759	isophorone										
330.	ug/kg	N.D.		85	74	14	92			57	114
3746	2-nitrophenol										
670.	ug/kg	N.D.		83	71	15	86			59	107
3747	2,4-dimethylphenol										
670.	ug/kg	N.D.		79	69	14	86			39	108
3760	bis (2-chloroethoxy) methane										
670.	ug/kg	N.D.		76	67	12	82			56	103
3748	2,4-dichlorophenol										
670.	ug/kg	N.D.		82	71	14	86			59	100
1189	1,2,4-trichlorobenzene										
330.	ug/kg	N.D.		80	70	13	87			57	104
3761	naphthalene										
330.	ug/kg	N.D.		75	65	14	79			58	99
4693	4-chloroaniline										
330.	ug/kg	N.D.		63	59	6	64			1	102
3762	hexachlorobutadiene										
670.	ug/kg	N.D.		83	71	15	89			56	115
1190	4-chloro-3-methylphenol										
670.	ug/kg	N.D.		85	74	15	90			56	108
4694	2-methylnaphthalene										
330.	ug/kg	N.D.		78	69	12	83			60	102



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943384

GEO-33/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562 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										
1,700.	ug/kg	N.D.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
670.	ug/kg	N.D.		86	77	10	94			62	106
4695	2,4,5-trichlorophenol										
670.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
330.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
330.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
670.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
330.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
670.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
6,700.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
1,900.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
1,700.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
330.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
670.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
330.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
670.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
330.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
6,700.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
670.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
1,700.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
330.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
670.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
330.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
1,700.	ug/kg	N.D.		89	76	16	97			42	108



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations

2015-04-14 11:11





LLI Sample No. 2943384

GEO-33/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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										
6,700.	ug/kg	N.D.		82	72	13	88			62	107
3776	anthracene										
6,700.	ug/kg	N.D.		83	70	16	91			62	105
4702	carbazole										
330.	ug/kg	N.D.		84	73	14	91			57	112
3777	di-n-butyl phthalate										
670.	ug/kg	N.D.		80	71	12	87			59	114
3778	fluoranthene										
6,700.	ug/kg	N.D.		84	73	14	91			58	110
1195	pyrene										
6,700.	ug/kg	N.D.		78	67	15	83			52	115
3780	butyl benzyl phthalate										
670.	ug/kg	N.D.		77	68	13	85			58	119
3783	3,3'-dichlorobenzidine										
670.	ug/kg	N.D.		67	62	8	53			15	94
3781	benzo (a) anthracene										
6,700.	ug/kg	N.D.		85	74	14	91			63	106
3784	bis (2-ethylhexyl) phthalate										
670.	ug/kg	N.D.		76	66	14	82			8	158
3782	chrysene										
6,700.	ug/kg	N.D.		82	72	13	88			60	107
3785	di-n-octyl phthalate										
670.	ug/kg	N.D.		81	70	15	86			54	127
3786	benzo (b) fluoranthene										
6,700.	ug/kg	N.D.		79	69	13	85			59	105
3787	benzo (k) fluoranthene										
330.	ug/kg	N.D.		84	72	16	90			63	108
3788	benzo (a) pyrene										
6,700.	ug/kg	N.D.		86	74	15	93			61	107
3789	indeno (1,2,3-cd) pyrene										
330.	ug/kg	N.D.		85	73	16	91			55	111
3790	dibenz (a,h) anthracene										
330.	ug/kg	N.D.		84	71	17	90			60	117
3791	benzo (ghi) perylene										
330.	ug/kg	N.D.		84	71	17	90			52	113
0111	Moisture										
0.080	% by wt.		4				100	100	0	99	101
		Batch: 981640199820003A									



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See reverse side for explanation of symbols and abbreviations.

11-1-1998





LLI Sample No. 2943384

GEO-33/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
Kerr-McGee Corporation

		SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	(5)	39	108
		2-Flphenol	(5)	35	108
		2,4,6-TBP	(5)	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	(5)	31	126
		2-Fbiphenyl	(5)	45	113
		Tphenylid14	(5)	37	130

(5) Accurate surrogate recoveries could not be determined due to interferences or dilution necessary for this sample.



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See reverse side for explanation of symbols and abbreviations

2011





LLI Sample No. SW 2943385

Collected: 6/ 9/98 at 13:03 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-33/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3323- SDG#: HMS05-06

Account No: 07802
Kerr-McGee Corporation
P.O. 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	15.1	0.080	% by wt.		
<p>"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.</p>						

1 COPY TO Kerr-McGee Corporation ATTN: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
21:22:42 D 0003 6 129915 618562
412 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2943385

Collected: 6/ 9/98 at 13:03 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-33/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3323- SDG#: HMS05-06

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	pheno1	N.D.	67.	ug/kg	N.D.	79.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	39.
4692	3- and 4-methylpheno1	N.D.	67.	ug/kg	N.D.	79.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	79.
3748	2,4-dichloropheno1	N.D.	67.	ug/kg	N.D.	79.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3761	naphthalene	640.	33.	ug/kg	750.	39.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	39.
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	750.	33.	ug/kg	880.	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.	33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3765	acenaphthylene	1,400.	33.	ug/kg	1,700.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943385
 Collected: 6/ 9/98 at 13:03 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98
 Discard: 8/ 6/98

GEO-33/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 3323- SDG#: HMS05-06

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
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
1191	acenaphthene	4,200.	33.	ug/kg	5,000.	39.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	230.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	2,300.	33.	ug/kg	2,800.	39.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.
3768	fluorene	5,300.	33.	ug/kg	6,200.	39.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	79.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.
3775	phenanthrene	25,000.	670.	ug/kg	29,000.	790.
3776	anthracene	7,200.	670.	ug/kg	8,500.	790.
4702	carbazole	1,400.	33.	ug/kg	1,600.	39.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3778	fluoranthene	36,000.	670.	ug/kg	42,000.	790.
1195	pyrene	25,000.	670.	ug/kg	30,000.	790.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	79.
3781	benzo (a) anthracene	8,900.	670.	ug/kg	11,000.	790.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	79.
3782	chrysene	8,200.	670.	ug/kg	9,600.	790.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3786	benzo (b) fluoranthene	7,300.	670.	ug/kg	8,600.	790.
3787	benzo (k) fluoranthene	2,500.	33.	ug/kg	2,900.	39.
3788	benzo (a) pyrene	4,500.	33.	ug/kg	5,200.	39.
3789	indeno (1,2,3-cd) pyrene	2,500.	33.	ug/kg	3,000.	39.
3790	dibenz (a,h) anthracene	710.	33.	ug/kg	840.	39.
3791	benzo (ghi) perylene	2,000.	33.	ug/kg	2,400.	39.

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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. SW 2943385

Collected: 6/ 9/98 at 13:03 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98

Discard: 8/ 6/98

GEO-33/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3323- SDG#: HMS05-06

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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0214-11-11-01





LLI Sample No. SW 2943385

Collected: 06/09/98 at 13:03 by DCU

Submitted: 06/10/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-33/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
3323- SDG#: HMS05-06

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1		06/11/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1		06/29/98 1647	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		06/29/98 1647	Eileen Hostetler
0111	Moisture	EPA 160.3 modified	1		06/13/98 1831	Patrick N. Ward



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LLI Sample No. 2943385

GEO-33/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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 Semivolatiles		Batch: 98162SLF026										
1185	phenol											
67.	ug/kg	N.D.		79	69	14	81			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		73	67	10	79			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		79	70	12	84			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		75	67	12	83			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		75	66	12	82			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		78	69	12	85			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		78	70	11	84			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		81	73	11	87			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		78	70	10	84			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		79	70	12	83			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		76	67	13	84			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		81	72	12	89			56	110	
3759	isophorone											
33.	ug/kg	N.D.		85	74	14	92			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		83	71	15	86			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		79	69	14	86			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		76	67	12	82			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		82	71	14	86			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		80	70	13	87			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		75	65	14	79			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		63	59	6	64			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		83	71	15	89			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		85	74	15	90			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		78	69	12	83			60	102	



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LLI Sample No. 2943385
 GEO-33/2-3' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
 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.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
33.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108



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LLI Sample No. 2943385

GEO-33/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
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										
670.	ug/kg	N.D.		82	72	13	88			62	107
3776	anthracene										
670.	ug/kg	N.D.		83	70	16	91			62	105
4702	carbazole										
33.	ug/kg	N.D.		84	73	14	91			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		80	71	12	87			59	114
3778	fluoranthene										
670.	ug/kg	N.D.		84	73	14	91			58	110
1195	pyrene										
670.	ug/kg	N.D.		78	67	15	83			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		77	68	13	85			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		67	62	8	53			15	94
3781	benzo (a) anthracene										
670.	ug/kg	N.D.		85	74	14	91			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		76	66	14	82			8	158
3782	chrysene										
670.	ug/kg	N.D.		82	72	13	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		81	70	15	86			54	127
3786	benzo (b) fluoranthene										
670.	ug/kg	N.D.		79	69	13	85			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		84	72	16	90			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		86	74	15	93			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		85	73	16	91			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		84	71	17	90			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	71	17	90			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981640199820003A	4				100	100	0	99	101



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LLI Sample No. 2943385

GEO-33/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618562
Kerr-McGee Corporation

	TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
				LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	81	39	108
		2-FIphenol	79	35	108
		2,4,6-TBP	96	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	83	31	126
		2-Fbiphenyl	85	45	113
		Tphenylid14	78	37	130



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12/14/01 10:11 AM





LLI Sample No. SW 2945101

Collected: 6/10/98 at 10:40 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-34/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
340-1 SDG#: HMS05-07BKG

Account No: 07802
Kerr-McGee Corporation
P.O. 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
4688	TCL Semivolatiles						See Page 2
4689	TCL Semivolatiles cont'd						See Page 3
0111	Moisture	8.93	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: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 07:57:46 D 0003 14 129915 618995
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945101

Collected: 6/10/98 at 10:40 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-34/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
340-1 SDG#: HMS05-07BKG

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	pheno1	350.	J	330.	ug/kg	380.	J 370.
3753	bis (2-chloroethyl) ether	N.D.		170.	ug/kg	N.D.	180.
1186	2-chloropheno1	N.D.		170.	ug/kg	N.D.	180.
3754	1,3-dichlorobenzene	N.D.		170.	ug/kg	N.D.	180.
1187	1,4-dichlorobenzene	N.D.		170.	ug/kg	N.D.	180.
3755	1,2-dichlorobenzene	N.D.		170.	ug/kg	N.D.	180.
4690	2-methylpheno1	N.D.		170.	ug/kg	N.D.	180.
4691	2,2'-oxybis (1-chloropropane)	N.D.		170.	ug/kg	N.D.	180.
4692	3- and 4-methylpheno1	N.D.		330.	ug/kg	N.D.	370.
1188	N-nitrosodi-n-propylamine	N.D.		170.	ug/kg	N.D.	180.
3757	hexachloroethane	N.D.		170.	ug/kg	N.D.	180.
3758	nitrobenzene	N.D.		170.	ug/kg	N.D.	180.
3759	isophorone	N.D.		170.	ug/kg	N.D.	180.
3746	2-nitrophenol	N.D.		330.	ug/kg	N.D.	370.
3747	2,4-dimethylpheno1	N.D.		330.	ug/kg	N.D.	370.
3760	bis (2-chloroethoxy) methane	N.D.		330.	ug/kg	N.D.	370.
3748	2,4-dichloropheno1	N.D.		330.	ug/kg	N.D.	370.
1189	1,2,4-trichlorobenzene	N.D.		170.	ug/kg	N.D.	180.
3761	naphthalene	310.	J	170.	ug/kg	340.	J 180.
4693	4-chloroaniline	N.D.		170.	ug/kg	N.D.	180.
3762	hexachlorobutadiene	N.D.		330.	ug/kg	N.D.	370.
1190	4-chloro-3-methylpheno1	N.D.		330.	ug/kg	N.D.	370.
4694	2-methylnaphthalene	650.	J	170.	ug/kg	710.	J 180.
3763	hexachlorocyclopentadiene	N.D.		830.	ug/kg	N.D.	920.
3749	2,4,6-trichloropheno1	N.D.		330.	ug/kg	N.D.	370.
4695	2,4,5-trichloropheno1	N.D.		330.	ug/kg	N.D.	370.
3764	2-chloronaphthalene	N.D.		170.	ug/kg	N.D.	180.
4696	2-nitroaniline	N.D.		170.	ug/kg	N.D.	180.
3766	dimethyl phthalate	N.D.		330.	ug/kg	N.D.	370.
3765	acenaphthylene	360.	J	170.	ug/kg	390.	J 180.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

2210 11/98





LLI Sample No. SW 2945101

Collected: 6/10/98 at 10:40 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-34/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
340-1 SDG#: HMS05-07BKG

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	330.	ug/kg	N.D.	370.
1191	acenaphthene	N.D.	170.	ug/kg	N.D.	180.
3750	2,4-dinitrophenol	N.D.	970.	ug/kg	N.D.	1,100.
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	920.
4698	dibenzofuran	N.D.	170.	ug/kg	N.D.	180.
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	370.
3767	2,6-dinitrotoluene	N.D.	170.	ug/kg	N.D.	180.
3770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	370.
3769	4-chlorophenyl phenyl ether	N.D.	170.	ug/kg	N.D.	180.
3768	fluorene	N.D.	170.	ug/kg	N.D.	180.
4700	4-nitroaniline	N.D.	330.	ug/kg	N.D.	370.
3751	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	920.
3772	N-nitrosodiphenylamine	N.D.	170.	ug/kg	N.D.	180.
3773	4-bromophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	370.
3774	hexachlorobenzene	N.D.	170.	ug/kg	N.D.	180.
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	920.
3775	phenanthrene	380.	J 170.	ug/kg	420.	J 180.
3776	anthracene	440.	J 170.	ug/kg	480.	J 180.
4702	carbazole	N.D.	170.	ug/kg	N.D.	180.
3777	di-n-butyl phthalate	N.D.	330.	ug/kg	N.D.	370.
3778	fluoranthene	820.	J 170.	ug/kg	890.	J 180.
1195	pyrene	830.	J 170.	ug/kg	910.	J 180.
3780	butyl benzyl phthalate	N.D.	330.	ug/kg	N.D.	370.
3783	3,3'-dichlorobenzidine	N.D.	330.	ug/kg	N.D.	370.
3781	benzo (a) anthracene	550.	J 170.	ug/kg	610.	J 180.
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	370.
3782	chrysene	820.	J 170.	ug/kg	900.	J 180.
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	370.
3786	benzo (b) fluoranthene	1,300.	J 170.	ug/kg	1,400.	J 180.
3787	benzo (k) fluoranthene	410.	J 170.	ug/kg	440.	J 180.
3788	benzo (a) pyrene	680.	J 170.	ug/kg	750.	J 180.
3789	indeno (1,2,3-cd) pyrene	630.	J 170.	ug/kg	690.	J 180.
3790	dibenz (a,h) anthracene	210.	J 170.	ug/kg	230.	J 180.
3791	benzo (ghi) perylene	520.	J 170.	ug/kg	570.	J 180.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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See reverse side for explanation of symbols and abbreviations.

2015 04 13 10:07





LLI Sample No. SW 2945101

Collected: 6/10/98 at 10:40 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-34/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
340-1 SDG#: HMS05-07BKG

Account No: 07802
Kerr-McGee Corporation
P.O. 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
TCL Semivolatiles cont'd							

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 non-target compounds.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS SVQA



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2015 Ret. 4.1.11





LLI Sample No. SW 2945101

Collected: 06/10/98 at 10:40 by DU

Submitted: 06/12/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-34/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
340-1 SDG#: HMS05-07BKG

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/13/98 1349	Rick Shober
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/13/98 1349	Rick Shober
0111	Moisture	EPA 160.3 modified	1	06/16/98 2051	Patrick N. Ward



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3216 Rev. 6/1/97





LLI Sample No. 2945101
 GEO-34/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
 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 Semivolatiles		Batch: 98166SLA026									
1185 phenol	330. ug/kg	N.D.		75	107	32	84			49	105
3753 bis (2-chloroethyl) ether	170. ug/kg	N.D.		79	107	30	86			53	109
1186 2-chlorophenol	170. ug/kg	N.D.		80	104	26	93			55	107
3754 1,3-dichlorobenzene	170. ug/kg	N.D.		88	96	9	91			53	103
1187 1,4-dichlorobenzene	170. ug/kg	N.D.		87	95	9	91			52	103
3755 1,2-dichlorobenzene	170. ug/kg	N.D.		92	100	9	95			56	107
4690 2-methylphenol	170. ug/kg	N.D.		82	109	29	92			57	101
4691 2,2'-oxybis (1-chloropropane)	170. ug/kg	N.D.		85	110	26	92			38	117
4692 3- and 4-methylphenol	330. ug/kg	N.D.		81	109	30	91			48	116
1188 N-nitrosodi-n-propylamine	170. ug/kg	N.D.		85	114	30	96			50	124
3757 hexachloroethane	170. ug/kg	N.D.		89	92	4	90			52	108
3758 nitrobenzene	170. ug/kg	N.D.		87	110	24	96			56	110
3759 isophorone	170. ug/kg	N.D.		88	112	24	94			57	114
3746 2-nitrophenol	330. ug/kg	N.D.		79	102	25	97			59	107
3747 2,4-dimethylphenol	330. ug/kg	N.D.		83	107	26	92			39	108
3760 bis (2-chloroethoxy) methane	330. ug/kg	N.D.		78	108	32	89			56	103
3748 2,4-dichlorophenol	330. ug/kg	N.D.		78	97	21	93			59	100
1189 1,2,4-trichlorobenzene	170. ug/kg	N.D.		90	92	2	96			57	104
3761 naphthalene	170. ug/kg	N.D.		83	97	14	89			58	99
4693 4-chloroaniline	170. ug/kg	N.D.		48	70	37	50			1	102
3762 hexachlorobutadiene	330. ug/kg	N.D.		93	95	2	104			56	115
1190 4-chloro-3-methylphenol	330. ug/kg	N.D.		85	109	25	97			56	108
4694 2-methylnaphthalene	170. ug/kg	N.D.		82	92	9	92			60	102



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LLI Sample No. 2945101

GEO-34/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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										
830.	ug/kg	N.D.		18	18	0	86			27	113
3749	2,4,6-trichlorophenol										
330.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichlorophenol										
330.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
170.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
170.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
330.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
170.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
330.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
170.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
970.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
830.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
170.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
330.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
170.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
330.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
170.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
170.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
330.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
830.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
170.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
330.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
170.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenol										
830.	ug/kg	N.D.		92	93	2	90			42	108



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2276-11-11





LLI Sample No. 2945101
 GEO-34/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
 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										
170.	ug/kg	N.D.		83	96	13	93			62	107
3776	anthracene										
170.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
170.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
330.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
170.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
170.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
330.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
330.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
170.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
330.	ug/kg	82. J ug/kg		79	100	23	88			8	158
3782	chrysene										
170.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
330.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
170.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
170.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
170.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
170.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
170.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
170.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981670199820004A	2				100	100	0	99	101



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2015 10 10 11:17





LLI Sample No. 2945101
 GEO-34/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
 Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Phenol-d6	107	39 108
		2-Flphenol	110	35 108
		2,4,6-TBP	89	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	110	31 126
		2-Fbiphenyl	103	45 113
		Tphenylid14	89	37 130



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2215 1/11/01





LLI Sample No. SW 2945102

Collected: 6/10/98 at 10:43 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-34/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
342-3 SDG#: HMS05-08

Account No: 07802
Kerr-McGee Corporation
P.O. 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	11.3	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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
07:59:41 D 0003 14 129915 618995
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2219 Re. 3-0-97





LLI Sample No. SW 2945102

Collected: 6/10/98 at 10:43 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-34/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
342-3 SDG#: HMS05-08

Account No: 07802
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Oklahoma City OK 73125

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ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL Semivolatiles							
1185	phenol	230.	J	67.	ug/kg	260.	J 75.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	38.
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.		33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	75.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	38.
3759	isophorone	N.D.		33.	ug/kg	N.D.	38.
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.		67.	ug/kg	N.D.	75.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	75.
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.		33.	ug/kg	N.D.	38.
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	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.	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.		33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	75.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
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2216 04/11/2001 07





LLI Sample No. SW 2945102

Collected: 6/10/98 at 10:43 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-34/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
342-3 SDG#: HMS05-08

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	38.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	220.
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.	75.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	75.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	75.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	75.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	38.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	75.
3782	chrysene	N.D.	33.	ug/kg	N.D.	38.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

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Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945102
Collected: 6/10/98 at 10:43 by DU

Submitted: 6/12/98 Reported: 7/22/98
Discard: 8/22/98

GEO-34/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
342-3 SDG#: HMS05-08

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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

See reverse side for explanation of symbols and abbreviations.

2215 Hwy. And. 17





LLI Sample No. SW 2945102

Collected: 06/10/98 at 10:43 by DU

Submitted: 06/12/98

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

GEO-34/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 342-3 SDG#: HMS05-08

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1		06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1		07/13/98 1707	Rick Shober
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		07/13/98 1707	Rick Shober
0111	Moisture	EPA 160.3 modified	1		06/16/98 2051	Patrick N. Ward



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





LLI Sample No. 2945102
GEO-34/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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 Semivolatiles		Batch: 98166SLA026									
1185	phenol										
67.	ug/kg	N.D.		75	107	32	84			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		79	107	30	86			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		80	104	26	93			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		88	96	9	91			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		87	95	9	91			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		92	100	9	95			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		82	109	29	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		85	110	26	92			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		81	109	30	91			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		85	114	30	96			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		89	92	4	90			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	110	24	96			56	110
3759	isophorone										
33.	ug/kg	N.D.		88	112	24	94			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	102	25	97			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		83	107	26	92			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		78	108	32	89			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		78	97	21	93			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		90	92	2	96			57	104
3761	naphthalene										
33.	ug/kg	N.D.		83	97	14	89			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		48	70	37	50			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		93	95	2	104			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		85	109	25	97			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		82	92	9	92			60	102



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See reverse side for explanation of symbols and abbreviations

0076 03/11/07





LLI Sample No. 2945102

GEO-34/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		18	18	0	86			27	113
3749	2,4,6-trichlorophenoI										
67.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichlorophenoI										
67.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
33.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenoI										
170.	ug/kg	N.D.		92	93	2	90			42	108



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LLI Sample No. 2945102
 GEO-34/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
 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.		83	96	13	93			62	107
3776	anthracene										
33.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
33.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	82. J ug/kg		79	100	23	88			8	158
3782	chrysene										
33.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.	+ Batch: 981670199820004A	2				100	100	0	99	101



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3215 11/15/02





LLI Sample No. 2945102
GEO-34/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Phenol-d6	78	39 108
		2-F1pheno1	79	35 108
		2,4,6-TBP	86	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	92	31 126
		2-Fbiphenyl	91	45 113
		Tphenyl-d14	89	37 130



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Q210 10/29/01





LLI Sample No. SW 2945103

Collected: 6/10/98 at 10:48 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-34/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
345-6 SDG#: HMS05-09

Account No: 07802
Kerr-McGee Corporation
P.O. 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	11.6		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 ATTN: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 08:01:44 D 0003 14 129915 618995
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA

MEMBER
ACIL
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LLI Sample No. SW 2945103

Collected: 6/10/98 at 10:48 by DU

Submitted: 6/12/98 Reported: 7/22/98
Discard: 8/22/98

GEO-34/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
345-6 SDG#: HMS05-09

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	phenol	240.	J	67.	ug/kg	270.	J 75.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	38.
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.		33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	75.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	38.
3759	isophorone	N.D.		33.	ug/kg	N.D.	38.
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.		67.	ug/kg	N.D.	75.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	75.
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.		33.	ug/kg	N.D.	38.
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	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.	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.		33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	75.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945103

Collected: 6/10/98 at 10:48 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-34/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
345-6 SDG#: HMS05-09

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	38.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	220.
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.	75.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	75.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	75.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	75.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	38.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	75.
3782	chrysene	N.D.	33.	ug/kg	N.D.	38.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

2210 10/98





LLI Sample No. SW 2945103

Collected: 6/10/98 at 10:48 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-34/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
345-6 SDG#: HMS05-09

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Retl.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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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Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

2215 194 4:1 97





LLI Sample No. SW 2945103

Collected: 06/10/98 at 10:48 by DU

Submitted: 06/12/98

GEO-34/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
345-6 SDG#: HMS05-09

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/13/98 1804	Rick Shober
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/13/98 1804	Rick Shober
0111	Moisture	EPA 160.3 modified	1	06/16/98 2051	Patrick N. Ward



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See reverse side for explanation of symbols and abbreviations

0015 11-11-98-21





LLI Sample No. 2945103

GEO-34/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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 Semivolatiles		Batch: 98166SLA026									
1185	phenol										
67.	ug/kg	N.D.		75	107	32	84			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		79	107	30	86			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		80	104	26	93			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		88	96	9	91			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		87	95	9	91			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		92	100	9	95			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		82	109	29	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		85	110	26	92			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		81	109	30	91			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		85	114	30	96			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		89	92	4	90			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	110	24	96			56	110
3759	isophorone										
33.	ug/kg	N.D.		88	112	24	94			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	102	25	97			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		83	107	26	92			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		78	108	32	89			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		78	97	21	93			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		90	92	2	96			57	104
3761	naphthalene										
33.	ug/kg	N.D.		83	97	14	89			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		48	70	37	50			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		93	95	2	104			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		85	109	25	97			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		82	92	9	92			60	102



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See reverse side for explanation of symbols and abbreviations

0213 11/11/04





LLI Sample No. 2945103

GEO-34/5-6 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		18	18	0	86			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
33.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		92	93	2	90			42	108



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2945103

GEO-34/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		83	96	13	93			62	107
3776	anthracene										
33.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
33.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	82.	J ug/kg	79	100	23	88			8	158
3782	chrysene										
33.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.						100	100	0	99	101

* Batch: 981670199820004A



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2945103
GEO-34/5-6" Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Phenol-d6	77	39 108
		2-Flphenol	79	35 108
		2,4,6-TBP	92	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	90	31 126
		2-Fbiphenyl	91	45 113
		Tphenyl-d14	91	37 130



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1216 12/97





LLI Sample No. SW 2945104

Collected: 6/10/98 at 09:18 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-28/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
280-1 SDG#: HMS05-10

Account No: 07802
Kerr-McGee Corporation
P.O. 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	13.3		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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
08:03:41 D 0003 14 129915 618995
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945104

Collected: 6/10/98 at 09:18 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-28/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
280-1 SDG#: HMS05-10

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	pheno1	N.D.	67.	ug/kg	N.D.	77.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	38.
1186	2-chloropheno1	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-methylpheno1	N.D.	33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	38.
4692	3- and 4-methylpheno1	N.D.	67.	ug/kg	N.D.	77.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	33.	ug/kg	N.D.	38.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	77.
3747	2,4-dimethylpheno1	N.D.	67.	ug/kg	N.D.	77.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	77.
3748	2,4-dichloropheno1	N.D.	67.	ug/kg	N.D.	77.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3761	naphthalene	65.	J 33.	ug/kg	75.	J 38.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	38.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	77.
1190	4-chloro-3-methylpheno1	N.D.	67.	ug/kg	N.D.	77.
4694	2-methylnaphthalene	44.	J 33.	ug/kg	51.	J 38.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichloropheno1	N.D.	67.	ug/kg	N.D.	77.
4695	2,4,5-trichloropheno1	N.D.	67.	ug/kg	N.D.	77.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	38.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3765	acenaphthylene	100.	J 33.	ug/kg	120.	J 38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2210 64-101-1





LLI Sample No. SW 2945104

Collected: 6/10/98 at 09:18 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-28/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
280-1 SDG#: HMS05-10

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	190.
4698	dibenzofuran	34.	J 33.	ug/kg	39.	J 38.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	77.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	77.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	77.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	160.	J 33.	ug/kg	180.	J 38.
3776	anthracene	120.	J 33.	ug/kg	130.	J 38.
4702	carbazole	N.D.	33.	ug/kg	N.D.	38.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3778	fluoranthene	880.	33.	ug/kg	1,000.	38.
1195	pyrene	1,300.	33.	ug/kg	1,500.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	77.
3781	benzo (a) anthracene	680.	33.	ug/kg	790.	38.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	77.
3782	chrysene	990.	33.	ug/kg	1,100.	38.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3786	benzo (b) fluoranthene	1,600.	33.	ug/kg	1,900.	38.
3787	benzo (k) fluoranthene	580.	33.	ug/kg	670.	38.
3788	benzo (a) pyrene	920.	33.	ug/kg	1,100.	38.
3789	indeno (1,2,3-cd) pyrene	630.	33.	ug/kg	730.	38.
3790	dibenz (a,h) anthracene	170.	J 33.	ug/kg	200.	J 38.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2018 06 01 09:01





LLI Sample No. SW 2945104

Collected: 6/10/98 at 09:18 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-28/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
280-1 SDG#: HMS05-10

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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

Poor surrogate recoveries were observed for the GC/MS semivolatile compounds. The analysis was repeated outside of the required hold time and surrogate recoveries met requirements. The data reported is from the initial extraction of the sample. Both sets of data are being submitted in the data package. Please refer to the case narrative for further details.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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3275





LLI Sample No. SW 2945104

Collected: 06/10/98 at 09:18 by DU

Submitted: 06/12/98

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

GEO-28/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 280-1 SDG#: HMS05-10

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/18/98 0515	Rick Shober
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/18/98 0515	Rick Shober
0111	Moisture	EPA 160.3 modified	1	06/16/98 2051	Patrick N. Ward



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2215 (Rev. 8-1-97)





LLI Sample No. 2945104
GEO-28/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
-----		Batch: 98166SLA026										

4688	TCL Semivolatiles											
1185	phenol											
67.	ug/kg	N.D.		75	107	32	84			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		79	107	30	86			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		80	104	26	93			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		88	96	9	91			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		87	95	9	91			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		92	100	9	95			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		82	109	29	92			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		85	110	26	92			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		81	109	30	91			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		85	114	30	96			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		89	92	4	90			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		87	110	24	96			56	110	
3759	isophorone											
33.	ug/kg	N.D.		88	112	24	94			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		79	102	25	97			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		83	107	26	92			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		78	108	32	89			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		78	97	21	93			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		90	92	2	96			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		83	97	14	89			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		48	70	37	50			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		93	95	2	104			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		85	109	25	97			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		82	92	9	92			60	102	



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations

2215





LLI Sample No. 2945104

GEO-28/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		18	18	0	86			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
33.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		92	93	2	90			42	108



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See reverse side for explanation of symbols and abbreviations.

2015 Rev. 10/07





LLI Sample No. 2945104
GEO-28/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		83	96	13	93			62	107
3776	anthracene										
33.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
33.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	82.	J ug/kg	79	100	23	88			8	158
3782	chrysene										
33.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.		Batch: 981670199820004A	2			100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations

2000-04-01-01





LLI Sample No. 2945104
 GEO-28/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
 Kerr-McGee Corporation

SURROGATE SUMMARY			SURROGATE LIMITS	
TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	58	39	108
	2-Flphenol	59	35	108
	2,4,6-TBP	49	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	52	31	126
	2-Fbiphenyl	46	45	113
	Tphenylid14	30	37	130



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See reverse side for explanation of symbols and abbreviations

0115 10/11/01





LLI Sample No. SW 2945105

Collected: 6/10/98 at 09:21 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-28/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
282-3 SDG#: HMS05-11

Account No: 07802
Kerr-McGee Corporation
P.O. 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	17.3	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 ATTN: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
08:05:31 D 0003 14 129915 618995
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2215 04-15-01





LLI Sample No. SW 2945105

Collected: 6/10/98 at 09:21 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-28/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
282-3 SDG#: HMS05-11

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	phenoI	120.	J	67.	ug/kg	150.	J 81.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	40.
1186	2-chlorophenoI	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-methylphenoI	N.D.		33.	ug/kg	N.D.	40.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	40.
4692	3- and 4-methylphenoI	N.D.		67.	ug/kg	N.D.	81.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	40.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	40.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	40.
3759	isophorone	N.D.		33.	ug/kg	N.D.	40.
3746	2-nitrophenoI	N.D.		67.	ug/kg	N.D.	81.
3747	2,4-dimethylphenoI	N.D.		67.	ug/kg	N.D.	81.
3760	bis (2-chloroethoxy) methane	N.D.		67.	ug/kg	N.D.	81.
3748	2,4-dichlorophenoI	N.D.		67.	ug/kg	N.D.	81.
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.		33.	ug/kg	N.D.	40.
3762	hexachlorobutadiene	N.D.		67.	ug/kg	N.D.	81.
1190	4-chloro-3-methylphenoI	N.D.		67.	ug/kg	N.D.	81.
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-trichlorophenoI	N.D.		67.	ug/kg	N.D.	81.
4695	2,4,5-trichlorophenoI	N.D.		67.	ug/kg	N.D.	81.
3764	2-chloronaphthalene	N.D.		33.	ug/kg	N.D.	40.
4696	2-nitroaniline	N.D.		33.	ug/kg	N.D.	40.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	81.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	40.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

22 6 24 11 12





LLI Sample No. SW 2945105
 Collected: 6/10/98 at 09:21 by DU
 Submitted: 6/12/98 Reported: 7/22/98
 Discard: 8/22/98
 GEO-28/2-3' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS
 282-3 SDG#: HMS05-11

Account No: 07802
 Kerr-McGee Corporation
 P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	81.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	40.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	240.
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.	81.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	40.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	81.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	40.
3768	fluorene	N.D.	33.	ug/kg	N.D.	40.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	81.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	40.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	81.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	40.
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.	67.	ug/kg	N.D.	81.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	40.
1195	pyrene	N.D.	33.	ug/kg	N.D.	40.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	81.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	81.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	40.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	81.
3782	chrysene	N.D.	33.	ug/kg	N.D.	40.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	81.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	40.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	40.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	40.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	40.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	40.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	40.

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA

MEMBER
ACIL
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See reverse side for explanation of symbols and abbreviations.

2210 Rev 8/94





LLI Sample No. SW 2945105

Collected: 6/10/98 at 09:21 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-28/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
282-3 SDG#: HMS05-11

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
ReI.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2945105

Collected: 06/10/98 at 09:21 by DU

Submitted: 06/12/98

GEO-28/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
282-3 SDG#: HMS05-11

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/13/98 1958	Rick Shoher
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/13/98 1958	Rick Shoher
0111	Moisture	EPA 160.3 modified	1	06/16/98 2051	Patrick N. Ward



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2015-10-01 14:12:21





LLI Sample No. 2945105

GEO-28/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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 Semivolatiles		Batch: 98166SLA026										
1185	phenol											
67.	ug/kg	N.D.		75	107	32	84			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		79	107	30	86			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		80	104	26	93			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		88	96	9	91			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		87	95	9	91			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		92	100	9	95			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		82	109	29	92			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		85	110	26	92			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		81	109	30	91			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		85	114	30	96			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		89	92	4	90			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		87	110	24	96			56	110	
3759	isophorone											
33.	ug/kg	N.D.		88	112	24	94			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		79	102	25	97			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		83	107	26	92			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		78	108	32	89			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		78	97	21	93			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		90	92	2	96			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		83	97	14	89			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		48	70	37	50			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		93	95	2	104			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		85	109	25	97			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		82	92	9	92			60	102	



Lancaster Laboratories
2425 New Holland Pike
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717-556-2300 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2945105
GEO-28/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		18	18	0	86			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
33.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		92	93	2	90			42	108



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations

2215 Rev. 8-1-97





LLI Sample No. 2945105

GEO-28/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		83	96	13	93			62	107
3776	anthracene										
33.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
33.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	82. J ug/kg		79	100	23	88			8	158
3782	chrysene										
33.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.			2			100	100	0	99	101
		- Batch: 981670199820004A									



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See reverse side for explanation of symbols and abbreviations.

2015-09-08 10:27





LLI Sample No. 2945105
 GEO-28/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
 Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	76	39	108
	2-Flpheno1	78	35	108
	2,4,6-TBP	95	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	88	31	126
	2-Fbiphnyl	89	45	113
	Tphenyld14	92	37	130



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

2276 Rev. 5/2/97





LLI Sample No. SW 2945106
Collected: 6/10/98 at 09:25 by DU
Submitted: 6/12/98 Reported: 7/22/98
Discard: 8/22/98
GEO-28/5-6' Grab Soil Sample
Gulf States Creosoting Site: Hattiesburg, MS
285-6 SDG#: HMS05-12

Account No: 07802
Kerr-McGee Corporation
P.O. 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	14.8		0.080	% by wt.	

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

1 COPY TO Kerr-McGee Corporation ATTN: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
08:07:27 D 0003 14 129915 618995
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

MEMBER
ACIL
Lancaster Laboratories
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2216 7/22/98





LLI Sample No. SW 2945106

Collected: 6/10/98 at 09:25 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-28/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
285-6 SDG#: HMS05-12

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	phenol	200.	J	67.	ug/kg	230.	J 78.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	39.
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.		33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	39.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	78.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	39.
3759	isophorone	N.D.		33.	ug/kg	N.D.	39.
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.		67.	ug/kg	N.D.	78.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	78.
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.		33.	ug/kg	N.D.	39.
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.	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.		33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	78.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SV0A



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2215 4/98 3/4 17



**LLI Sample No. SW 2945106**

Collected: 6/10/98 at 09:25 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-28/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
285-6 SDG#: HMS05-12

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	230.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	78.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	78.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	39.
1195	pyrene	N.D.	33.	ug/kg	N.D.	39.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	78.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	39.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	39.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	39.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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22 8 1998 9 1 02





LLI Sample No. SW 2945106
Collected: 6/10/98 at 09:25 by DU
Submitted: 6/12/98 Reported: 7/22/98
Discard: 8/22/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ref.

GE0-28/5-6' Grab Soil Sample
Gulf States Creosoting Site: Hattiesburg, MS
285-6 SDG#: HMS05-12

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD	DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945106

Collected: 06/10/98 at 09:25 by DU

Submitted: 06/12/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-28/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
285-6 SDG#: HMS05-12

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/13/98 2055	Rick Shober
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/13/98 2055	Rick Shober
0111	Moisture	EPA 160.3 modified	1	06/16/98 2051	Patrick N. Ward



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LLI Sample No. 2945106
GEO-28/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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 Semivolatiles		Batch: 98166SLA026										
1185	phenol											
67.	ug/kg	N.D.		75	107	32	84			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		79	107	30	86			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		80	104	26	93			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		88	96	9	91			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		87	95	9	91			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		92	100	9	95			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		82	109	29	92			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		85	110	26	92			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		81	109	30	91			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		85	114	30	96			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		89	92	4	90			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		87	110	24	96			56	110	
3759	isophorone											
33.	ug/kg	N.D.		88	112	24	94			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		79	102	25	97			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		83	107	26	92			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		78	108	32	89			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		78	97	21	93			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		90	92	2	96			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		83	97	14	89			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		48	70	37	50			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		93	95	2	104			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		85	109	25	97			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		82	92	9	92			60	102	



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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. 2945106
GEO-28/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		18	18	0	86			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
33.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		92	93	2	90			42	108



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See reverse side for explanation of symbols and abbreviations.

2216 141 11 17





LLI Sample No. 2945106
GEO-28/5-6" Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		83	96	13	93			62	107
3776	anthracene										
33.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
33.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	82. J ug/kg		79	100	23	88			8	158
3782	chrysene										
33.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.	← Batch: 981670199820004A	2				100	100	0	99	101



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2015-04-23 11:11





LLI Sample No. 2945106
 GEO-28/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
 Kerr-McGee Corporation

SURROGATE SUMMARY

	TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
				LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	75	39	108
		2-Flphenol	78	35	108
		2,4,6-TBP	94	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	87	31	126
		2-Fbiphenyl	89	45	113
		Tphenylid14	90	37	130



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2276 04/12/07





LLI Sample No. SW 2945107

Collected: 6/10/98 at 08:45 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-29/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
290-1 SDG#: HMS05-13

Account No: 07802
Kerr-McGee Corporation
P.O. 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
4688	TCL Semivolatiles						See Page 2
4689	TCL Semivolatiles cont'd						See Page 3
0111	Moisture	12.3		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 ATTN: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 08:09:38 D 0003 14 129915 618995
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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211 Rev. 8/1/97





LLI Sample No. SW 2945107

Collected: 6/10/98 at 08:45 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-29/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
290-1 SDG#: HMS05-13

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	phenol	N.D.	330.	ug/kg	N.D.	380.	
3753	bis (2-chloroethyl) ether	N.D.	170.	ug/kg	N.D.	190.	
1186	2-chlorophenol	N.D.	170.	ug/kg	N.D.	190.	
3754	1,3-dichlorobenzene	N.D.	170.	ug/kg	N.D.	190.	
1187	1,4-dichlorobenzene	N.D.	170.	ug/kg	N.D.	190.	
3755	1,2-dichlorobenzene	N.D.	170.	ug/kg	N.D.	190.	
4690	2-methylphenol	N.D.	170.	ug/kg	N.D.	190.	
4691	2,2'-oxybis (1-chloropropane)	N.D.	170.	ug/kg	N.D.	190.	
4692	3- and 4-methylphenol	N.D.	330.	ug/kg	N.D.	380.	
1188	N-nitrosodi-n-propylamine	N.D.	170.	ug/kg	N.D.	190.	
3757	hexachloroethane	N.D.	170.	ug/kg	N.D.	190.	
3758	nitrobenzene	N.D.	170.	ug/kg	N.D.	190.	
3759	isophorone	N.D.	170.	ug/kg	N.D.	190.	
3746	2-nitrophenol	N.D.	330.	ug/kg	N.D.	380.	
3747	2,4-dimethylphenol	N.D.	330.	ug/kg	N.D.	380.	
3760	bis (2-chloroethoxy) methane	N.D.	330.	ug/kg	N.D.	380.	
3748	2,4-dichlorophenol	N.D.	330.	ug/kg	N.D.	380.	
1189	1,2,4-trichlorobenzene	N.D.	170.	ug/kg	N.D.	190.	
3761	naphthalene	310.	J 170.	ug/kg	350.	J 190.	
4693	4-chloroaniline	N.D.	170.	ug/kg	N.D.	190.	
3762	hexachlorobutadiene	N.D.	330.	ug/kg	N.D.	380.	
1190	4-chloro-3-methylphenol	N.D.	330.	ug/kg	N.D.	380.	
4694	2-methylnaphthalene	230.	J 170.	ug/kg	260.	J 190.	
3763	hexachlorocyclopentadiene	N.D.	830.	ug/kg	N.D.	950.	
3749	2,4,6-trichlorophenol	N.D.	330.	ug/kg	N.D.	380.	
4695	2,4,5-trichlorophenol	N.D.	330.	ug/kg	N.D.	380.	
3754	2-chloronaphthalene	N.D.	170.	ug/kg	N.D.	190.	
4696	2-nitroaniline	N.D.	170.	ug/kg	N.D.	190.	
3766	dimethyl phthalate	N.D.	330.	ug/kg	N.D.	380.	
3765	acenaphthylene	1,100.	J 170.	ug/kg	1,200.	J 190.	

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945107

Collected: 6/10/98 at 08:45 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-29/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
290-1 SDG#: HMS05-13

Account No: 07802
Kerr-McGee Corporation
P. O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	330.	ug/kg	N.D.	380.
1191	acenaphthene	N.D.	170.	ug/kg	N.D.	190.
3750	2,4-dinitrophenol	N.D.	970.	ug/kg	N.D.	1,100.
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	950.
4698	dibenzofuran	220.	J 170.	ug/kg	250.	J 190.
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	380.
3767	2,6-dinitrotoluene	N.D.	170.	ug/kg	N.D.	190.
3770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	380.
3769	4-chlorophenyl phenyl ether	N.D.	170.	ug/kg	N.D.	190.
3768	fluorene	420.	J 170.	ug/kg	480.	J 190.
4700	4-nitroaniline	N.D.	330.	ug/kg	N.D.	380.
3751	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	950.
3772	N-nitrosodiphenylamine	N.D.	170.	ug/kg	N.D.	190.
3773	4-bromophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	380.
3774	hexachlorobenzene	N.D.	170.	ug/kg	N.D.	190.
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	950.
3775	phenanthrene	2,400.	170.	ug/kg	2,800.	190.
3776	anthracene	2,200.	170.	ug/kg	2,500.	190.
4702	carbazole	780.	J 170.	ug/kg	880.	J 190.
3777	di-n-butyl phthalate	N.D.	330.	ug/kg	N.D.	380.
3778	fluoranthene	10,000.	170.	ug/kg	12,000.	190.
1195	pyrene	8,600.	170.	ug/kg	9,800.	190.
3780	butyl benzyl phthalate	N.D.	330.	ug/kg	N.D.	380.
3783	3,3'-dichlorobenzidine	N.D.	330.	ug/kg	N.D.	380.
3781	benzo (a) anthracene	3,600.	170.	ug/kg	4,100.	190.
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	380.
3782	chrysene	5,900.	170.	ug/kg	6,700.	190.
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	380.
3786	benzo (b) fluoranthene	7,600.	170.	ug/kg	8,600.	190.
3787	benzo (k) fluoranthene	2,800.	170.	ug/kg	3,200.	190.
3788	benzo (a) pyrene	3,000.	170.	ug/kg	3,500.	190.
3789	indeno (1,2,3-cd) pyrene	1,900.	170.	ug/kg	2,100.	190.
3790	dibenz (a,h) anthracene +	530.	J 170.	ug/kg	600.	J 190.
3791	benzo (ghi) perylene	1,200.	J 170.	ug/kg	1,400.	J 190.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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0210 7/27/98





LLI Sample No. SW 2945107

Collected: 6/10/98 at 08:45 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-29/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
290-1 SDG#: HMS05-13

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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 non-target compounds.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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02/10/98 4:11:17





LLI Sample No. SW 2945107

Collected: 06/10/98 at 08:45 by DU

Submitted: 06/12/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-29/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
290-1 SDG#: HMS05-13

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/13/98 2152	Rick Shoher
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/13/98 2152	Rick Shoher
0111	Moisture	EPA 160.3 modified	1	06/16/98 2051	Patrick N. Ward



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2015 Gov Analyst





LLI Sample No. 2945107
GEO-29/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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 Semivolatiles		Batch: 98166SLA026									
1185 phenol											
330.	ug/kg	N.D.		75	107	32	84			49	105
3753 bis (2-chloroethyl) ether											
170.	ug/kg	N.D.		79	107	30	86			53	109
1186 2-chlorophenol											
170.	ug/kg	N.D.		80	104	26	93			55	107
3754 1,3-dichlorobenzene											
170.	ug/kg	N.D.		88	96	9	91			53	103
1187 1,4-dichlorobenzene											
170.	ug/kg	N.D.		87	95	9	91			52	103
3755 1,2-dichlorobenzene											
170.	ug/kg	N.D.		92	100	9	95			56	107
4690 2-methylphenol											
170.	ug/kg	N.D.		82	109	29	92			57	101
4691 2,2'-oxybis (1-chloropropane)											
170.	ug/kg	N.D.		85	110	26	92			38	117
4692 3- and 4-methylphenol											
330.	ug/kg	N.D.		81	109	30	91			48	116
1188 N-nitrosodi-n-propylamine											
170.	ug/kg	N.D.		85	114	30	96			50	124
3757 hexachloroethane											
170.	ug/kg	N.D.		89	92	4	90			52	108
3758 nitrobenzene											
170.	ug/kg	N.D.		87	110	24	96			56	110
3759 isophorone											
170.	ug/kg	N.D.		88	112	24	94			57	114
3746 2-nitrophenol											
330.	ug/kg	N.D.		79	102	25	97			59	107
3747 2,4-dimethylphenol											
330.	ug/kg	N.D.		83	107	26	92			39	108
3760 bis (2-chloroethoxy) methane											
330.	ug/kg	N.D.		78	108	32	89			56	103
3748 2,4-dichlorophenol											
330.	ug/kg	N.D.		78	97	21	93			59	100
1189 1,2,4-trichlorobenzene											
170.	ug/kg	N.D.		90	92	2	96			57	104
3761 naphthalene											
170.	ug/kg	N.D.		83	97	14	89			58	99
4693 4-chloroaniline											
170.	ug/kg	N.D.		48	70	37	50			1	102
3762 hexachlorobutadiene											
330.	ug/kg	N.D.		93	95	2	104			56	115
1190 4-chloro-3-methylphenol											
330.	ug/kg	N.D.		85	109	25	97			56	108
4694 2-methylnaphthalene											
170.	ug/kg	N.D.		82	92	9	92			60	102



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22/6 4/10/07





LLI Sample No. 2945107

GEO-29/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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										
830.	ug/kg	N.D.		18	18	0	86			27	113
3749	2,4,6-trichloropheno]										
330.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichloropheno]										
330.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
170.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
170.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
330.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
170.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
330.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
170.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
970.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
830.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
170.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
330.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
170.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
330.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
170.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
170.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
330.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
830.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
170.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
330.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
170.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenol										
830.	ug/kg	N.D.		92	93	2	90			42	108



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See reverse side for explanation of symbols and abbreviations.

2013 04 11 11:17





LLI Sample No. 2945107
GEO-29/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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										
170.	ug/kg	N.D.		83	96	13	93			62	107
3776	anthracene										
170.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
170.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
330.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
170.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
170.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
330.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
330.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
170.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
330.	ug/kg	82. J ug/kg		79	100	23	88			8	158
3782	chrysene										
170.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
330.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
170.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
170.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
170.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
170.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
170.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
170.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.		2				100	100	0	99	101

* Batch: 981670199820004A



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





LLI Sample No. 2945107
GEO-29/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Pheno1-d6	93	39	108
	2-Flpheno1	94	35	108
	2,4,6-TBP	85	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	96	31	126
	2-Fbiphenyl	97	45	113
	Tphenyl14	86	37	130



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

See reverse side for explanation of symbols and abbreviations.

2210 0 00 00 00





LLI Sample No. SW 2945108

Collected: 6/10/98 at 08:48 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-29/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
292-3 SDG#: HMS05-14

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	LIMIT	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	14.8	0.080	% by wt.		

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

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
08:11:40 D 0003 14 129915 618995
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945108

Collected: 6/10/98 at 08:48 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-29/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
292-3 SDG#: HMS05-14

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	pheno1	90.	J	67.	ug/kg	110.	J 78.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	39.
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.		33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	39.
4692	3- and 4-methylpheno1	N.D.		67.	ug/kg	N.D.	78.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	39.
3759	isophorone	N.D.		33.	ug/kg	N.D.	39.
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.		67.	ug/kg	N.D.	78.
3748	2,4-dichloropheno1	N.D.		67.	ug/kg	N.D.	78.
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.		33.	ug/kg	N.D.	39.
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.		33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	78.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

2275





LLI Sample No. SW 2945108

Collected: 6/10/98 at 08:48 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-29/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
292-3 SDG#: HMS05-14

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	230.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	78.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	78.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	39.
1195	pyrene	N.D.	33.	ug/kg	N.D.	39.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	78.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	39.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	39.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	39.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVQA



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LLI Sample No. SW 2945108

Collected: 6/10/98 at 08:48 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-29/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
292-3 SDG#: HMS05-14

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT		AS RECEIVED	DRY WEIGHT
NO.	ANALYSIS NAME	RESULTS	RESULTS
		METHOD	METHOD
		DETECTION LIMIT	DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945108

Collected: 06/10/98 at 08:48 by DU

Submitted: 06/12/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-29/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
292-3 SDG#: HMS05-14

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/14/98 1127	Rick Shober
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/14/98 1127	Rick Shober
0111	Moisture	EPA 160.3 modified	1	06/16/98 2051	Patrick N. Ward



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LLI Sample No. 2945108
GEO-29/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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 Semivolatiles		Batch: 98166SLA026									
1185	phenol										
67.	ug/kg	N.D.		75	107	32	84			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		79	107	30	86			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		80	104	26	93			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		88	96	9	91			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		87	95	9	91			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		92	100	9	95			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		82	109	29	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		85	110	26	92			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		81	109	30	91			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		85	114	30	96			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		89	92	4	90			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	110	24	96			56	110
3759	isophorone										
33.	ug/kg	N.D.		88	112	24	94			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	102	25	97			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		83	107	26	92			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		78	108	32	89			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		78	97	21	93			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		90	92	2	96			57	104
3761	naphthalene										
33.	ug/kg	N.D.		83	97	14	89			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		48	70	37	50			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		93	95	2	104			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		85	109	25	97			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		82	92	9	92			60	102



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717-656-2300, Fax: 717-656-2661

See reverse side for explanation of symbols and abbreviations.

2015 04/15/17





LLI Sample No. 2945108

GEO-29/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		18	18	0	86			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
33.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		92	93	2	90			42	108



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717-656-2300 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2945108

GEO-29/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		83	96	13	93			62	107
3776	anthracene										
33.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
33.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	82. J ug/kg		79	100	23	88			8	158
3782	chrysene										
33.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.						100	100	0	99	101

* Batch: 981670199820004A



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See reverse side for explanation of symbols and abbreviations.

2016 04 01/07





LLI Sample No. 2945108

GEO-29/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
Kerr-McGee Corporation

		SURROGATE SUMMARY		SURROGATE LIMITS	
TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH	
4688 TCL Semivolatiles	Pheno1-d6	76	39	108	
	2-Flpheno1	79	35	108	
	2,4,6-TBP	101	23	125	
4689 TCL Semivolatiles cont'd	Nitrobz-d5	88	31	126	
	2-Fbiphenyl	92	45	113	
	Tphenyl d14	86	37	130	



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See reverse side for explanation of symbols and abbreviations.

2215 1/94 3.0





LLI Sample No. SW 2945109

Collected: 6/10/98 at 08:51 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-29/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
295-6 SDG#: HMS05-15

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	LIMIT	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	14.1	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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
08:13:37 D 0003 14 129915 618995
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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.

2015 Rev. 8/1/97





LLI Sample No. SW 2945109
 Collected: 6/10/98 at 08:51 by DU

Submitted: 6/12/98 Reported: 7/22/98
 Discard: 8/22/98

GEO-29/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 295-6 SDG#: HMS05-15

Account No: 07802
 Kerr-McGee Corporation
 P.O. 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 Semivolatiles							
1185	phenol	92.	J	67.	ug/kg	110.	J 78.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	39.
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.		33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	39.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	78.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	39.
3759	isophorone	N.D.		33.	ug/kg	N.D.	39.
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.		67.	ug/kg	N.D.	78.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	78.
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.		33.	ug/kg	N.D.	39.
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.		33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	78.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



Lancaster Laboratories
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 Lancaster, PA 17605-2425
 717-656-2300 Fax: 717-656-2581

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7/25/98 10:14





LLI Sample No. SW 2945109

Collected: 6/10/98 at 08:51 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-29/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
295-6 SDG#: HMS05-15

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	230.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	78.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	78.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	39.
1195	pyrene	N.D.	33.	ug/kg	N.D.	39.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	78.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	39.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	39.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	39.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Nesiund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

2275 10/11/98





LLI Sample No. SW 2945109

Collected: 6/10/98 at 08:51 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-29/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
295-6 SDG#: HMS05-15

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2215 12/1/94 11





LLI Sample No. SW 2945109

Collected: 06/10/98 at 08:51 by DU

Submitted: 06/12/98

GEO-29/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
295-6 SDG#: HMS05-15

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/14/98 1225	Rick Shober
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/14/98 1225	Rick Shober
0111	Moisture	EPA 160.3 modified	1	06/16/98 2051	Patrick N. Ward



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2215 Rev. 12-97





LLI Sample No. 2945109
GEO-29/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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 Semivolatiles		Batch: 98166SLA026										
1185	phenol											
67.	ug/kg	N.D.		75	107	32	84			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		79	107	30	86			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		80	104	26	93			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		88	96	9	91			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		87	95	9	91			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		92	100	9	95			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		82	109	29	92			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		85	110	26	92			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		81	109	30	91			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		85	114	30	96			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		89	92	4	90			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		87	110	24	96			56	110	
3759	isophorone											
33.	ug/kg	N.D.		88	112	24	94			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		79	102	25	97			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		83	107	26	92			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		78	108	32	89			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		78	97	21	93			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		90	92	2	96			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		83	97	14	89			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		48	70	37	50			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		93	95	2	104			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		85	109	25	97			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		82	92	9	92			60	102	



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2945109

GEO-29/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		18	18	0	86			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
33.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		92	93	2	90			42	108



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See reverse side for explanation of symbols and abbreviations

2016 Rev. 5-2-97





LLI Sample No. 2945109
GEO-29/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		83	96	13	93			62	107
3776	anthracene										
33.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
33.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	82. J ug/kg		79	100	23	88			8	158
3782	chrysene										
33.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.						100	100	0	99	101

* Batch: 981670199820004A



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

See reverse side for explanation of symbols and abbreviations.

11/11/04 10:11:11





LLI Sample No. 2945109
 GEO-29/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
 Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Phenol-d6	76	39 108
		2-Flphenol	79	35 108
		2,4,6-TBP	104	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	89	31 126
		2-Fbiphenyl	92	45 113
		Tphenyl-d14	88	37 130



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22/5/94, 8/12/97





LLI Sample No. SW 2945110

Collected: 6/10/98 at 09:02 by DJ

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-30/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
300-1 SDG#: HMS05-16

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	METHOD LIMIT	RESULTS	METHOD LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	13.6	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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
08:16:18 D 0003 14 129915 618995
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

02 4 1998 10 11





LLI Sample No. SW 2945110

Collected: 6/10/98 at 09:02 by DU

Submitted: 6/12/98 Reported: 7/22/98
Discard: 8/22/98

GEO-30/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
300-1 SDG#: HMS05-16

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	phenol	210.	J	67.	ug/kg	240.	J 77.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	39.
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	36.	J	33.	ug/kg	42.	J 39.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	39.
4692	3- and 4-methylphenol	120.	J	67.	ug/kg	140.	J 77.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	39.
3759	isophorone	N.D.		33.	ug/kg	N.D.	39.
3746	2-nitrophenol	N.D.		67.	ug/kg	N.D.	77.
3747	2,4-dimethylphenol	99.	J	67.	ug/kg	110.	J 77.
3760	bis (2-chloroethoxy) methane	N.D.		67.	ug/kg	N.D.	77.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	77.
1189	1,2,4-trichlorobenzene	N.D.		33.	ug/kg	N.D.	39.
3761	naphthalene	590.		33.	ug/kg	690.	39.
4693	4-chloroaniline	N.D.		33.	ug/kg	N.D.	39.
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	260.	J	33.	ug/kg	300.	J 39.
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.	39.
4696	2-nitroaniline	N.D.		33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	77.
3765	acenaphthylene	2,100.		33.	ug/kg	2,400.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVQA



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See reverse side for explanation of symbols and abbreviations

2016 PA 3.0.97





LLI Sample No. SW 2945110

Collected: 6/10/98 at 09:02 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-30/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
300-1 SDG#: HMS05-16

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd							
4697	3-nitroaniline	N.D.		67.	ug/kg	N.D.	77.
1191	acenaphthene	140.	J	33.	ug/kg	160.	J 39.
3750	2,4-dinitrophenol	N.D.		190.	ug/kg	N.D.	230.
1192	4-nitrophenol	N.D.		170.	ug/kg	N.D.	190.
4698	dibenzofuran	290.	J	33.	ug/kg	340.	J 39.
1193	2,4-dinitrotoluene	N.D.		67.	ug/kg	N.D.	77.
3767	2,6-dinitrotoluene	N.D.		33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.		67.	ug/kg	N.D.	77.
3769	4-chlorophenyl phenyl ether	N.D.		33.	ug/kg	N.D.	39.
3768	fluorene	400.		33.	ug/kg	470.	39.
4700	4-nitroaniline	N.D.		67.	ug/kg	N.D.	77.
3751	4,6-dinitro-2-methylphenol	N.D.		170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.		33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.		67.	ug/kg	N.D.	77.
3774	hexachlorobenzene	N.D.		33.	ug/kg	N.D.	39.
1194	pentachlorophenol	N.D.		170.	ug/kg	N.D.	190.
3775	phenanthrene	2,300.		33.	ug/kg	2,700.	39.
3776	anthracene	3,600.		33.	ug/kg	4,100.	39.
4702	carbazole	1,500.		33.	ug/kg	1,700.	39.
3777	di-n-butyl phthalate	N.D.		67.	ug/kg	N.D.	77.
3778	fluoranthene	20,000.		330.	ug/kg	23,000.	390.
1195	pyrene	16,000.		330.	ug/kg	19,000.	390.
3780	butyl benzyl phthalate	N.D.		67.	ug/kg	N.D.	77.
3783	3,3'-dichlorobenzidine	N.D.		67.	ug/kg	N.D.	77.
3781	benzo (a) anthracene	9,900.		330.	ug/kg	11,000.	390.
3784	bis (2-ethylhexyl) phthalate	N.D.		67.	ug/kg	N.D.	77.
3782	chrysene	13,000.		330.	ug/kg	15,000.	390.
3785	di-n-octyl phthalate	N.D.		67.	ug/kg	N.D.	77.
3786	benzo (b) fluoranthene	15,000.		330.	ug/kg	17,000.	390.
3787	benzo (k) fluoranthene	5,200.		33.	ug/kg	6,100.	39.
3788	benzo (a) pyrene	6,900.		330.	ug/kg	8,000.	390.
3789	indeno (1,2,3-cd) pyrene	4,900.		33.	ug/kg	5,600.	39.
3790	dibenz (a,h) anthracene	1,300.		33.	ug/kg	1,500.	39.
3791	benzo (ghi) perylene	3,200.		33.	ug/kg	3,700.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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See reverse side for explanation of symbols and abbreviations.

2210 Rev. 8/94/95





LLI Sample No. SW 2945110

Collected: 6/10/98 at 09:02 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-30/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
300-1 SDG#: HMS05-16

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Re1.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2215 PA 11/11





LLI Sample No. SW 2945110

Collected: 06/10/98 at 09:02 by DU

Submitted: 06/12/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-30/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
300-1 SDG#: HMS05-16

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/14/98 1322	Rick Shober
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/14/98 1322	Rick Shober
0111	Moisture	EPA 160.3 modified	1	06/16/98 2051	Patrick N. Ward



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LLI Sample No. 2945110

GEO-30/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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 Semivolatiles		Batch: 98166SLA026									
1185	phenol										
67.	ug/kg	N.D.		75	107	32	84			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		79	107	30	86			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		80	104	26	93			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		88	96	9	91			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		87	95	9	91			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		92	100	9	95			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		82	109	29	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		85	110	26	92			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		81	109	30	91			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		85	114	30	96			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		89	92	4	90			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	110	24	96			56	110
3759	isophorone										
33.	ug/kg	N.D.		88	112	24	94			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	102	25	97			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		83	107	26	92			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		78	108	32	89			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		78	97	21	93			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		90	92	2	96			57	104
3761	naphthalene										
33.	ug/kg	N.D.		83	97	14	89			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		48	70	37	50			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		93	95	2	104			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		85	109	25	97			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		82	92	9	92			60	102



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2016 Rev. 2/14/07





LLI Sample No. 2945110

GEO-30/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995 Kerr-McGee Corporation
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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.		18	18	0	86			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
33.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		92	93	2	90			42	108



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See reverse side for explanation of symbols and abbreviations

2216 Rev. 5.11.01





LLI Sample No. 2945110
 GEO-30/0-1' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
 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.		83	96	13	93			62	107
3776	anthracene										
33.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
330.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
330.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
330.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	82. J ug/kg		79	100	23	88			8	158
3782	chrysene										
330.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
330.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
330.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981670199820004A	2				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations.

2216 141 3/2/97





LLI Sample No. 2945110
GEO-30/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	77	39	108
	2-Flpheno	81	35	108
	2,4,6-TBP	107	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	93	31	126
	2-Fbiphenyl	94	45	113
	Tphenyl14	89	37	130



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See reverse side for explanation of symbols and abbreviations

2216





LLI Sample No. SW 2945111

Collected: 6/10/98 at 09:06 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-30/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
302-3 SDG#: HMS05-17

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Re1.

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	19.0		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 ATTN: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 08:18:24 D 0003 14 129915 618995
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Neslund, B.S.
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See reverse side for explanation of symbols and abbreviations

2215 Rev 8/4/97





LLI Sample No. SW 2945111

Collected: 6/10/98 at 09:06 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-30/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
302-3 SDG#: HMS05-17

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	phenol	81.	J	67.	ug/kg	100.	J 82.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	41.
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.		33.	ug/kg	N.D.	41.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	41.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	82.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	41.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	41.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	41.
3759	isophorone	N.D.		33.	ug/kg	N.D.	41.
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.		67.	ug/kg	N.D.	82.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	82.
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.		33.	ug/kg	N.D.	41.
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.	210.
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.		33.	ug/kg	N.D.	41.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	82.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	41.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
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717-656-2300 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations

2210 1-91





LLI Sample No. SW 2945111

Collected: 6/10/98 at 09:06 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-30/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
302-3 SDG#: HMS05-17

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	240.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	210.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	41.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	82.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	41.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	82.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	41.
3768	fluorene	N.D.	33.	ug/kg	N.D.	41.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	82.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	210.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	41.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	82.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	41.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	210.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	41.
3776	anthracene	N.D.	33.	ug/kg	N.D.	41.
4702	carbazole	N.D.	33.	ug/kg	N.D.	41.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	82.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	41.
1195	pyrene	N.D.	33.	ug/kg	N.D.	41.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	82.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	82.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	41.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	82.
3782	chrysene	N.D.	33.	ug/kg	N.D.	41.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	82.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	41.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	41.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	41.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	41.
3790	dibenz (a,h) anthracene +	N.D.	33.	ug/kg	N.D.	41.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	41.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/1/97





LLI Sample No. SW 2945111

Collected: 6/10/98 at 09:06 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-30/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
302-3 SDG#: HMS05-17

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

22 5 12 9 11 17





LLI Sample No. SW 2945111

Collected: 06/10/98 at 09:06 by DU

Submitted: 06/12/98

GEO-30/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
302-3 SDG#: HMS05-17

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 35508	1	06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/14/98 1431	Rick Shober
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/14/98 1431	Rick Shober
0111	Moisture	EPA 160.3 modified	1	06/16/98 2051	Patrick N. Ward



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2215 Rev. 01/97





LLI Sample No. 2945111

GEO-30/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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 Semivolatiles		Batch: 98166SLA026									
1185	phenol										
67.	ug/kg	N.D.		75	107	32	84			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		79	107	30	86			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		80	104	26	93			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		88	96	9	91			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		87	95	9	91			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		92	100	9	95			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		82	109	29	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		85	110	26	92			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		81	109	30	91			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		85	114	30	96			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		89	92	4	90			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	110	24	96			56	110
3759	isophorone										
33.	ug/kg	N.D.		88	112	24	94			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	102	25	97			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		83	107	26	92			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		78	108	32	89			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		78	97	21	93			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		90	92	2	96			57	104
3761	naphthalene										
33.	ug/kg	N.D.		83	97	14	89			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		48	70	37	50			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		93	95	2	104			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		85	109	25	97			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		82	92	9	92			60	102



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2216 Rev. 9/04





LLI Sample No. 2945111
GEO-30/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		18	18	0	86			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
33.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		92	93	2	90			42	108



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See reverse side for explanation of symbols and abbreviations.

2025 10/10/2025





LLI Sample No. 2945111

GEO-30/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		83	96	13	93			62	107
3776	anthracene										
33.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
33.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	82. J ug/kg		79	100	23	88			8	158
3782	chrysene										
33.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981670199820004A	2				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations

2275 07.14.97





LLI Sample No. 2945111

GEO-30/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	75	39	108
		2-F1phenol	79	35	108
		2,4,6-TBP	100	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	90	31	126
		2-Fbiphenyl	90	45	113
		Tphenyl14	86	37	130



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See reverse side for explanation of symbols and abbreviations

2215 Rev. 11/97





LLI Sample No. SW 2945112

Collected: 6/10/98 at 09:10 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-30/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
305-6 SDG#: HMS05-18

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	LIMIT	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	13.5	0.080	% by wt.		

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

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
08:20:30 D 0003 14 129915 618995
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2945112

Collected: 6/10/98 at 09:10 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-30/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
305-6 SDG#: HMS05-18

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	phenol	130.	J	67.	ug/kg	150.	J 77.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	39.
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.		33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	39.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	77.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	39.
3759	isophorone	N.D.		33.	ug/kg	N.D.	39.
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.		67.	ug/kg	N.D.	77.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	77.
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.		33.	ug/kg	N.D.	39.
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.	39.
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.	39.
4696	2-nitroaniline	N.D.		33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	77.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

2210 Rev. 5.1.97





LLI Sample No. SW 2945112

Collected: 6/10/98 at 09:10 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-30/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
305-6 SDG#: HMS05-18

Account No: 07802
Kerr-McGee Corporation
P.O. 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
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	77.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	39.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	220.
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.	77.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	77.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	77.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	77.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	39.
1195	pyrene	N.D.	33.	ug/kg	N.D.	39.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	77.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	39.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	77.
3782	chrysene	N.D.	33.	ug/kg	N.D.	39.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	39.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	39.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	39.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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

See reverse side for explanation of symbols and abbreviations.

2016-11-10 10:10:10





LLI Sample No. SW 2945112

Collected: 6/10/98 at 09:10 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-30/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
305-6 SDG#: HMS05-18

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ret.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945112

Collected: 06/10/98 at 09:10 by DU

Submitted: 06/12/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-30/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
305-6 SDG#: HMS05-18

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/14/98 1528	Rick Shober
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/14/98 1528	Rick Shober
0111	Moisture	EPA 160.3 modified	1	06/16/98 2051	Patrick N. Ward



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LLI Sample No. 2945112

GEO-30/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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 Semivolatiles		Batch: 98166SLA026									
1185	phenol										
67.	ug/kg	N.D.		75	107	32	84			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		79	107	30	86			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		80	104	26	93			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		88	96	9	91			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		87	95	9	91			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		92	100	9	95			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		82	109	29	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		85	110	26	92			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		81	109	30	91			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		85	114	30	96			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		89	92	4	90			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	110	24	96			56	110
3759	isophorone										
33.	ug/kg	N.D.		88	112	24	94			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		79	102	25	97			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		83	107	26	92			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		78	108	32	89			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		78	97	21	93			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		90	92	2	96			57	104
3761	naphthalene										
33.	ug/kg	N.D.		83	97	14	89			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		48	70	37	50			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		93	95	2	104			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		85	109	25	97			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		82	92	9	92			60	102



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2216 Rev. 8/1/97





LLI Sample No. 2945112

GEO-30/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		18	18	0	86			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
33.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		92	93	2	90			42	108



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2216 Rev. 8/02





LLI Sample No. 2945112

GEO-30/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		83	96	13	93			62	107
3776	anthracene										
33.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
33.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	82. J ug/kg		79	100	23	88			8	158
3782	chrysene										
33.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.		2				100	100	0	99	101

← Batch: 981670199820004A



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See reverse side for explanation of symbols and abbreviations.

2275 04/11/17





LLI Sample No. 2945112
 GEO-30/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
 Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Phenol-d6	76	39 108
		2-Flpheno1	.79	35 108
		2,4,6-TBP	105	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	88	31 126
		2-Fbiphenyl	89	45 113
		Tphenylid14	86	37 130



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See reverse side for explanation of symbols and abbreviations

2210 9/9/04





LLI Sample No. SW 2945113

Collected: 6/10/98 at 09:35 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-31/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
310-1 SDG#: HMS05-19

Account No: 07802
Kerr-McGee Corporation
P.O. 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	12.3		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 ATTN: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 08:22:36 D 0003 14 129915 618995
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945113

Collected: 6/10/98 at 09:35 by DU

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GEO-31/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
310-1 SDG#: HMS05-19

Account No: 07802
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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 Semivolatiles							
1185	phenol	170.	J	67.	ug/kg	190.	J 76.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	38.
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.		33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	76.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	38.
3759	isophorone	N.D.		33.	ug/kg	N.D.	38.
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.		67.	ug/kg	N.D.	76.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	76.
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.		33.	ug/kg	N.D.	38.
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.		33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	76.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2016 Rev. 3/4/97





LLI Sample No. SW 2945113

Collected: 6/10/98 at 09:35 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-31/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
310-1 SDG#: HMS05-19

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	76.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	76.
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.	33.	ug/kg	N.D.	38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 6.1.97





LLI Sample No. SW 2945113

Collected: 6/10/98 at 09:35 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-31/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
310-1 SDG#: HMS05-19

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
ReI.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

2216 1-91





LLI Sample No. SW 2945113

Collected: 06/10/98 at 09:35 by DU

Submitted: 06/12/98

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

GEO-31/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 310-1 SDG#: HMS05-19

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1		06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1		07/14/98 1626	Rick Shober
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		07/14/98 1626	Rick Shober
0111	Moisture	EPA 160.3 modified	1		06/16/98 2051	Patrick N. Ward



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LLI Sample No. 2945113

GEO-31/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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 Semivolatiles		Batch: 98166SLA026									
1185 phenol	67. ug/kg	N.D.		75	107	32	84			49	105
3753 bis (2-chloroethyl) ether	33. ug/kg	N.D.		79	107	30	86			53	109
1186 2-chlorophenol	33. ug/kg	N.D.		80	104	26	93			55	107
3754 1,3-dichlorobenzene	33. ug/kg	N.D.		88	96	9	91			53	103
1187 1,4-dichlorobenzene	33. ug/kg	N.D.		87	95	9	91			52	103
3755 1,2-dichlorobenzene	33. ug/kg	N.D.		92	100	9	95			56	107
4690 2-methylphenol	33. ug/kg	N.D.		82	109	29	92			57	101
4691 2,2'-oxybis (1-chloropropane)	33. ug/kg	N.D.		85	110	26	92			38	117
4692 3- and 4-methylphenol	67. ug/kg	N.D.		81	109	30	91			48	116
1188 N-nitrosodi-n-propylamine	33. ug/kg	N.D.		85	114	30	96			50	124
3757 hexachloroethane	33. ug/kg	N.D.		89	92	4	90			52	108
3758 nitrobenzene	33. ug/kg	N.D.		87	110	24	96			56	110
3759 isophorone	33. ug/kg	N.D.		88	112	24	94			57	114
3746 2-nitrophenol	67. ug/kg	N.D.		79	102	25	97			59	107
3747 2,4-dimethylphenol	67. ug/kg	N.D.		83	107	26	92			39	108
3760 bis (2-chloroethoxy) methane	67. ug/kg	N.D.		78	108	32	89			56	103
3748 2,4-dichlorophenol	67. ug/kg	N.D.		78	97	21	93			59	100
1189 1,2,4-trichlorobenzene	33. ug/kg	N.D.		90	92	2	96			57	104
3761 naphthalene	33. ug/kg	N.D.		83	97	14	89			58	99
4693 4-chloroaniline	33. ug/kg	N.D.		48	70	37	50			1	102
3762 hexachlorobutadiene	67. ug/kg	N.D.		93	95	2	104			56	115
1190 4-chloro-3-methylphenol	67. ug/kg	N.D.		85	109	25	97			56	108
4694 2-methylnaphthalene	33. ug/kg	N.D.		82	92	9	92			60	102



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See reverse side for explanation of symbols and abbreviations.

2015 045 814.01





LLI Sample No. 2945113

GEO-31/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		18	18	0	86			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
33.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		92	93	2	90			42	108



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0215 Rev 9/2/97





LLI Sample No. 2945113

GEO-31/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		83	96	13	93			62	107
3776	anthracene										
33.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
33.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	82. J ug/kg		79	100	23	88			8	158
3782	chrysene										
33.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.		2				100	100	0	99	101
		* Batch: 981670199820004A									



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2216 7/95 3/11/97





LLI Sample No. 2945113
 GEO-31/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
 Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	77	39	108
		2-F1pheno1	81	35	108
		2,4,6-TBP	110	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	91	31	126
		2-Fbiphenyl	94	45	113
		Tphenylid14	91	37	130



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See reverse side for explanation of symbols and abbreviations

2216 Rev 04/07





LLI Sample No. SW 2945114

Collected: 6/10/98 at 09:38 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-31/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
312-3 SDG#: HMS05-20*

Account No: 07802
Kerr-McGee Corporation
P.O. 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	12.6	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 ATTN: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
08:24:39 D 0003 14. 129915 618995
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2216 11/15/97





LLI Sample No. SW 2945114

Collected: 6/10/98 at 09:38 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-31/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
312-3 SDG#: HMS05-20*

Account No: 07802
Kerr-McGee Corporation
P.O. 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
TCL Semivolatiles							
1185	phenol	120.	J	67.	ug/kg	140.	J 76.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	38.
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.		33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	76.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	38.
3759	isophorone	N.D.		33.	ug/kg	N.D.	38.
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.		67.	ug/kg	N.D.	76.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	76.
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.		33.	ug/kg	N.D.	38.
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.		33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	76.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2210 Rev 9/1/97





LLI Sample No. SW 2945114

Collected: 6/10/98 at 09:38 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-31/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
312-3 SDG#: HMS05-20*

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	76.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	76.
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.	33.	ug/kg	N.D.	38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

1216 Rev. 4.1.92





LLI Sample No. SW 2945114

Collected: 6/10/98 at 09:38 by DU

Submitted: 6/12/98 Reported: 7/22/98

Discard: 8/22/98

GEO-31/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
312-3 SDG#: HMS05-20*

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
2425 New Holland Pike
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717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations

2010 Rev. 3/4/97





LLI Sample No. SW 2945114

Collected: 06/10/98 at 09:38 by DU

Submitted: 06/12/98

GEO-31/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
312-3 SDG#: HMS05-20*

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 0030	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/14/98 1724	Rick Shober
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/14/98 1724	Rick Shober
0111	Moisture	EPA 160.3 modified	1	06/16/98 2051	Patrick N. Ward



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LLI Sample No. 2945114

GEO-31/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH	
-----		Batch: 98166SLA026										
-----		4688 TCL Semivolatiles										
1185	phenol											
67.	ug/kg	N.D.		75	107	32	84			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		79	107	30	86			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		80	104	26	93			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		88	96	9	91			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		87	95	9	91			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		92	100	9	95			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		82	109	29	92			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		85	110	26	92			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		81	109	30	91			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		85	114	30	96			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		89	92	4	90			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		87	110	24	96			56	110	
3759	isophorone											
33.	ug/kg	N.D.		88	112	24	94			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		79	102	25	97			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		83	107	26	92			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		78	108	32	89			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		78	97	21	93			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		90	92	2	96			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		83	97	14	89			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		48	70	37	50			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		93	95	2	104			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		85	109	25	97			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		82	92	9	92			60	102	



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2216 9/1/93 1:17





LLI Sample No. 2945114

GEO-31/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		18	18	0	86			27	113
3749	2,4,6-trichloropheno1										
67.	ug/kg	N.D.		81	95	17	97			62	106
4695	2,4,5-trichloropheno1										
67.	ug/kg	N.D.		85	93	9	98			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		90	98	8	95			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		83	115	32	97			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		77	108	34	96			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	92	9	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		65	94	36	59			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	94	3	91			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		91	94	3	89			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		83	112	29	109			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	99	11	92			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		84	105	22	106			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		81	108	29	104			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		78	107	31	95			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	95	12	93			52	110
3768	fluorene										
33.	ug/kg	N.D.		94	99	5	93			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		71	103	37	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		75	78	3	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		82	106	25	90			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		80	92	13	95			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		32	31	2	80			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		92	93	2	90			42	108



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LLI Sample No. 2945114

GEO-31/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
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.		83	96	13	93			62	107
3776	anthracene										
33.	ug/kg	N.D.		84	94	9	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		85	107	23	93			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		82	109	28	94			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		88	81	6	96			58	110
1195	pyrene										
33.	ug/kg	N.D.		82	77	5	92			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		76	107	34	90			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		48	71	39	50			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		88	85	3	95			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	82. J ug/kg		79	100	23	88			8	158
3782	chrysene										
33.	ug/kg	N.D.		83	77	6	94			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		88	104	17	92			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		82	71	9	90			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		89	88	1	97			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		84	77	7	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		49	47	4	96			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		57	55	3	97			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		48	40	13	96			52	113
0111	Moisture										
0.080	% by wt.			2			100	100	0	99	101
		* Batch: 981670199820004A									



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12/16 Rev. 8/11/17





LLI Sample No. 2945114
 GEO-31/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618995
 Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Pheno1-d6	76	39	108
		2-Flpheno1	78	35	108
		2,4,6-TBP	100	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	89	31	126
		2-Fbiphenyl	93	45	113
		Tphenylid14	90	37	130



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2216 Rev. 4/2/97





LLI Sample No. SW 2945136

Collected: 06/10/98 at 10:26 by DU

Submitted: 06/12/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-32/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
320-1 SDG#: HMS06-02

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	07/07/98 0316	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/07/98 0316	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1704	Patrick N. Ward



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2215 (Rev. 3-2-97)





LLI Sample No. 2945136

GEO-32/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
-----		Batch: 98166SLB026		-----							
4688	TCL Semivolatiles										
1185	phenol										
67.	ug/kg	N.D.		93	86	7	93			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		84	81	3	83			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		87	84	3	85			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		82	70	16	89			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	71	16	87			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		87	74	16	90			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		84	84	0	85			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		90	87	3	91			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		84	81	2	85			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	80	1	79			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		67	46	38	85			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	86	1	85			56	110
3759	isophorone										
33.	ug/kg	N.D.		90	90	1	91			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		77	71	8	87			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	89	1	84			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	85			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		91	89	2	92			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		90	75	18	92			57	104
3761	naphthalene										
33.	ug/kg	N.D.		85	76	12	84			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		69	72	3	61			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	73	27	99			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		86	86	0	88			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	75	15	85			60	102



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2216 Rev. 6.1.17





LII Sample No. 2945136

GEO-32/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		70	58	18	88			42	108



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2215 Rev. 8/11





LLI Sample No. 2945136

GEO-32/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		98	76	21	98			62	107
3776 anthracene	33. ug/kg	N.D.		95	78	19	99			62	105
4702 carbazole	33. ug/kg	N.D.		93	86	8	96			57	112
3777 di-n-butyl phthalate	67. ug/kg	N.D.		98	86	13	99			59	114
3778 fluoranthene	33. ug/kg	N.D.		93	68	23	99			58	110
1195 pyrene	33. ug/kg	N.D.		98	76	19	99			52	115
3780 butyl benzyl phthalate	67. ug/kg	N.D.		95	90	6	100			58	119
3783 3,3'-dichlorobenzidine	67. ug/kg	N.D.		78	79	1	55			15	94
3781 benzo (a) anthracene	33. ug/kg	N.D.		91	71	20	100			63	106
3784 bis (2-ethylhexyl) phthalate	67. ug/kg	N.D.		103	72	34	98			8	158
3782 chrysene	33. ug/kg	N.D.		137	93	33	131			60	107
3785 di-n-octyl phthalate	67. ug/kg	N.D.		103	67	42	94			54	127
3786 benzo (b) fluoranthene	33. ug/kg	N.D.		70	48	26	75			59	105
3787 benzo (k) fluoranthene	33. ug/kg	N.D.		93	61	35	85			63	108
3788 benzo (a) pyrene	33. ug/kg	N.D.		102	68	35	97			61	107
3789 indeno (1,2,3-cd) pyrene	33. ug/kg	N.D.		59	43	28	106			55	111
3790 dibenz (a,h) anthracene	33. ug/kg	N.D.		64	47	31	102			60	117
3791 benzo (ghi) perylene	33. ug/kg	N.D.		47	35	27	104			52	113
0111 Moisture	0.080 % by wt.	* Batch: 981680199820000A	7				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2945136

GEO-32/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Pheno1-d6	86	39	108
	2-Flpheno1	83	35	108
	2,4,6-TBP	85	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	71	31	126
	2-Fbiphny1	77	45	113
	Tpheny1d14	111	37	130



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations

2216 1A1 3 1 1





LLI Sample No. SW 2945137

Collected: 6/10/98 at 10:29 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-32/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
322-3 SDG#: HMS06-03

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	METHOD LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles			See Page 2		
4689	TCL Semivolatiles cont'd			See Page 3		
0111	Moisture	13.9	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: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Uptegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 04:43:22 D 0003 16 129915 619002
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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

2015 07/23/98





LLI Sample No. SW 2945137

Collected: 6/10/98 at 10:29 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-32/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
322-3 SDG#: HMS06-03

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	phenol	100.	J	67.	ug/kg	120.	J 77.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	39.
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.		33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	39.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	77.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	39.
3759	isophorone	N.D.		33.	ug/kg	N.D.	39.
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.		67.	ug/kg	N.D.	77.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	77.
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.		33.	ug/kg	N.D.	39.
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.	39.
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.	39.
4696	2-nitroaniline	N.D.		33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	77.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	39.

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

MEMBER
ACIL

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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2945137

Collected: 6/10/98 at 10:29 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-32/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
322-3 SDG#: HMS06-03

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	77.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	39.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	230.
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.	77.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	77.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	77.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	77.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	39.
1195	pyrene	N.D.	33.	ug/kg	N.D.	39.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	77.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	39.
3784	bis (2-ethylhexyl) phthalate	130.	J 67.	ug/kg	150.	J 77.
3782	chrysene	N.D.	33.	ug/kg	N.D.	39.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	39.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	39.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	39.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	39.

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Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

2016 Rev. 4/07/07





LLI Sample No. SW 2945137

Collected: 6/10/98 at 10:29 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-32/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
322-3 SDG#: HMS06-03

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
	TCL Semivolatiles cont'd					

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2945137

Collected: 06/10/98 at 10:29 by DU

Submitted: 06/12/98

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

GEO-32/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 322-3 SDG#: HMS06-03

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	07/06/98 1441	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/06/98 1441	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1704	Patrick N. Ward



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2215





LLI Sample No. 2945137

GEO-32/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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 Semivolatiles	Batch: 98166SLB026									

1185	phenol										
67.	ug/kg	N.D.		93	86	7	93			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		84	81	3	83			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		87	84	3	85			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		82	70	16	89			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	71	16	87			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		87	74	16	90			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		84	84	0	85			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		90	87	3	91			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		84	81	2	85			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	80	1	79			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		67	46	38	85			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	86	1	85			56	110
3759	isophorone										
33.	ug/kg	N.D.		90	90	1	91			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		77	71	8	87			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	89	1	84			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	85			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		91	89	2	92			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		90	75	18	92			57	104
3761	naphthalene										
33.	ug/kg	N.D.		85	76	12	84			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		69	72	3	61			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	73	27	99			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		86	86	0	88			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	75	15	85			60	102



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations

2216 Rev. 9-1-11





LLI Sample No. 2945137

GEO-32/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		70	58	18	88			42	108



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See reverse side for explanation of symbols and abbreviations.

2210 Pa. 10171





LLI Sample No. 2945137

GEO-32/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		98	76	21	98			62	107
3776	anthracene										
33.	ug/kg	N.D.		95	78	19	99			62	105
4702	carbazole										
33.	ug/kg	N.D.		93	86	8	96			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		98	86	13	99			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		93	68	23	99			58	110
1195	pyrene										
33.	ug/kg	N.D.		98	76	19	99			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		95	90	6	100			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		78	79	1	55			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		91	71	20	100			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		103	72	34	98			8	158
3782	chrysene										
33.	ug/kg	N.D.		137	93	33	131			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		103	67	42	94			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		70	48	26	75			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		93	61	35	85			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		102	68	35	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		59	43	28	106			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		64	47	31	102			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		47	35	27	104			52	113
0111	Moisture										
0.080	% by wt.	* Batch: 981680199820000A	7				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations

2216 Rev. 3/4/77





LLI Sample No. 2945137

GEO-32/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles	Pheno1-d6	90	39	108
	2-F1pheno1	92	35	108
	2,4,6-TBP	118	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	70	31	126
	2-Fb1phny1	75	45	113
	Tpheny1d14	110	37	130



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LLI Sample No. SW 2945138

Collected: 6/10/98 at 10:34 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-32/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
325-6 SDG#: HMS06-04

Account No: 07802
Kerr-McGee Corporation
P.O. 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	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 Kerr-McGee Corporation
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ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
04:44:41 D 0003 16 129915 619002
863 0.00 00033420 ASR000



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LLI Sample No. SW 2945138

Collected: 6/10/98 at 10:34 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-32/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
325-6 SDG#: HMS06-04

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	phenol	150.	J	67.	ug/kg	170.	J 78.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	39.
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.		33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	39.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	78.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	39.
3759	isophorone	N.D.		33.	ug/kg	N.D.	39.
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.		67.	ug/kg	N.D.	78.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	78.
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.		33.	ug/kg	N.D.	39.
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.	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.		33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	78.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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

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2276 Rev. 11/97





LII Sample No. SW 2945138

Collected: 6/10/98 at 10:34 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-32/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
325-6 SDG#: HMS06-04

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd							
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.	190.	ug/kg	N.D.	230.	
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.	
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.	
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	78.	
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.	
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.	
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	78.	
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.	
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.	
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	78.	
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.	
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.	
3775	phenanthrene	73.	J 33.	ug/kg	85.	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	N.D.	67.	ug/kg	N.D.	78.	
3778	fluoranthene	110.	J 33.	ug/kg	130.	J 39.	
1195	pyrene	89.	J 33.	ug/kg	110.	J 39.	
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	78.	
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	78.	
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	39.	
3784	bis (2-ethylhexyl) phthalate	120.	J 67.	ug/kg	140.	J 78.	
3782	chrysene	35.	J 33.	ug/kg	41.	J 39.	
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	78.	
3786	benzo (b) fluoranthene	350.	33.	ug/kg	410.	39.	
3787	benzo (k) fluoranthene	290.	J 33.	ug/kg	350.	J 39.	
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	39.	
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	39.	
3790	dibenz (a,h) anthracene *	N.D.	33.	ug/kg	N.D.	39.	
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	39.	

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SV04



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See reverse side for explanation of symbols and abbreviations

221-194-1-1





LLI Sample No. SW 2945138

Collected: 6/10/98 at 10:34 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-32/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
325-6 SDG#: HMS06-04

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2216 7/1 9/12/97





LLI Sample No. SW 2945138

Collected: 06/10/98 at 10:34 by DU

Submitted: 06/12/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-32/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
325-6 SDG#: HMS06-04

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	07/06/98 1536	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/06/98 1536	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1704	Patrick N. Ward



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LLI Sample No. 2945138

GEO-32/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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 Semivolatiles	Batch: 98166SLB026									
1185	phenol										
67.	ug/kg	N.D.		93	86	7	93			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		84	81	3	83			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		87	84	3	85			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		82	70	16	89			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	71	16	87			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		87	74	16	90			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		84	84	0	85			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		90	87	3	91			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		84	81	2	85			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	80	1	79			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		67	46	38	85			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	86	1	85			56	110
3759	isophorone										
33.	ug/kg	N.D.		90	90	1	91			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		77	71	8	87			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	89	1	84			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	85			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		91	89	2	92			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		90	75	18	92			57	104
3761	naphthalene										
33.	ug/kg	N.D.		85	76	12	84			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		69	72	3	61			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	73	27	99			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		86	86	0	88			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	75	15	85			60	102



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. **2945138**

GEO-32/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichloropheno										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichloropheno										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachloropheno										
170.	ug/kg	N.D.		70	58	18	88			42	108



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2216 Rev. 8-1-97





LLI Sample No. 2945138

GEO-32/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		98	76	21	98			62	107
3776	anthracene										
33.	ug/kg	N.D.		95	78	19	99			62	105
4702	carbazole										
33.	ug/kg	N.D.		93	86	8	96			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		98	86	13	99			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		93	68	23	99			58	110
1195	pyrene										
33.	ug/kg	N.D.		98	76	19	99			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		95	90	6	100			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		78	79	1	55			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		91	71	20	100			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		103	72	34	98			8	158
3782	chrysene										
33.	ug/kg	N.D.		137	93	33	131			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		103	67	42	94			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		70	48	26	75			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		93	61	35	85			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		102	68	35	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		59	43	28	106			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		64	47	31	102			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		47	35	27	104			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981680199820000A	7				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations.

22/8 Rev. 4/19/77





LLI Sample No. SW 2945135

Collected: 6/10/98 at 09:42 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-31/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
315-6 SDG#: HMS06-01

Account No: 07802
Kerr-McGee Corporation
P.O. 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	11.3		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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
04:40:55 D 0003 16 129915 619002
863 0.00 00033420 ASR000



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Lancaster, PA 17605-2425
717-656-2300 Fax 717-656-2581

See reverse side for explanation of symbols and abbreviations

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2945135

Collected: 6/10/98 at 09:42 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-31/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
315-6 SDG#: HMS06-01

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	75.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	38.
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.	33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	75.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	75.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	75.
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.	33.	ug/kg	N.D.	38.
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	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.	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.	33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

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

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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SV0A





LLI Sample No. SW 2945135

Collected: 6/10/98 at 09:42 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-31/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
315-6 SDG#: HMS06-01

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	38.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	220.
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.	75.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	75.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	75.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	75.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	38.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	75.
3782	chrysene	N.D.	33.	ug/kg	N.D.	38.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene *	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVQA



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2945135

Collected: 6/10/98 at 09:42 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-31/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
315-6 SDG#: HMS06-01

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945135

Collected: 06/10/98 at 09:42 by DU

Submitted: 06/12/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-31/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
315-6 SDG#: HMS06-01

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	07/06/98 1346	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/06/98 1346	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1704	Patrick N. Ward



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02/16/2000 11:41





LLI Sample No. 2945135

GEO-31/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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 Semivolatiles	Batch: 98166SLB026									

1185	phenol										
67.	ug/kg	N.D.		93	86	7	93			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		84	81	3	83			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		87	84	3	85			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		82	70	16	89			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	71	16	87			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		87	74	16	90			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		84	84	0	85			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		90	87	3	91			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		84	81	2	85			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	80	1	79			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		67	46	38	85			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	86	1	85			56	110
3759	isophorone										
33.	ug/kg	N.D.		90	90	1	91			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		77	71	8	87			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	89	1	84			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	85			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		91	89	2	92			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		90	75	18	92			57	104
3761	naphthalene										
33.	ug/kg	N.D.		85	76	12	84			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		69	72	3	61			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	73	27	99			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		86	86	0	88			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	75	15	85			60	102



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2211 Rev. A 10/7





L.L.I Sample No. 2945135

GEO-31/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		70	58	18	88			42	108



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2015-03-17 11:41





LLI Sample No. 2945135

GEO-31/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS OUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		98	76	21	98			62	107
3776	anthracene										
33.	ug/kg	N.D.		95	78	19	99			62	105
4702	carbazole										
33.	ug/kg	N.D.		93	86	8	96			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		98	86	13	99			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		93	68	23	99			58	110
1195	pyrene										
33.	ug/kg	N.D.		98	76	19	99			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		95	90	6	100			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		78	79	1	55			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		91	71	20	100			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		103	72	34	98			8	158
3782	chrysene										
33.	ug/kg	N.D.		137	93	33	131			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		103	67	42	94			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		70	48	26	75			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		93	61	35	85			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		102	68	35	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		59	43	28	106			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		64	47	31	102			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		47	35	27	104			52	113
0111	Moisture										
0.080	% by wt.	* Batch: 981680199820000A	7				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations.

2216 7/11/02





LLI Sample No. 2945135

GEO-31/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Pheno1-d6	84	39 108
		2-F1pheno1	84	35 108
		2,4,6-TBP	112	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	66	31 126
		2-Fbiphenyl	70	45 113
		Tphenylid14	105	37 130



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2015 Rev. 2/12/07





LLI Sample No. SW 2945136

Collected: 6/10/98 at 10:26 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-32/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
320-1 SDG#: HMS06-02

Account No: 07802
Kerr-McGee Corporation
P.O. 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	14.1		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: Garet Van de Steeg, PhD
ATTN: Mr. David Uptegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
04:42:02 D 0003 16 129915 619002
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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0016 0011 0011





LLI Sample No. SW 2945136

Collected: 6/10/98 at 10:26 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-32/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
320-1 SDG#: HMS06-02

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	120.	J	67.	ug/kg	140. J 78.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D. 39.
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.		33.	ug/kg	N.D. 39.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D. 39.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D. 78.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D. 39.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D. 39.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D. 39.
3759	isophorone	N.D.		33.	ug/kg	N.D. 39.
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.		67.	ug/kg	N.D. 78.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D. 78.
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.		33.	ug/kg	N.D. 39.
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.		33.	ug/kg	N.D. 39.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D. 78.
3765	acenaphthylene	41.	J	33.	ug/kg	48. J 39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2016 Rev. 4/10/97





LLI Sample No. SW 2945136

Collected: 6/10/98 at 10:26 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-32/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
320-1 SDG#: HMS06-02

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd							
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.	190.	ug/kg	N.D.	230.	
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.	
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.	
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	78.	
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.	
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.	
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	78.	
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.	
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.	
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	78.	
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.	
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.	67.	ug/kg	N.D.	78.	
3778	fluoranthene	120.	J	33.	130.	J	39.
1195	pyrene	210.	J	33.	250.	J	39.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	78.	
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	78.	
3781	benzo (a) anthracene	250.	J	33.	290.	J	39.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	78.	
3782	chrysene	320.	J	33.	370.	J	39.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	78.	
3786	benzo (b) fluoranthene	650.		33.	760.		39.
3787	benzo (k) fluoranthene	400.		33.	460.		39.
3788	benzo (a) pyrene	260.	J	33.	310.	J	39.
3789	indeno (1,2,3-cd) pyrene	230.	J	33.	260.	J	39.
3790	dibenz (a,h) anthracene	54.	J	33.	63.	J	39.
3791	benzo (ghi) perylene	200.	J	33.	230.	J	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVQA



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LLI Sample No. SW 2945136

Collected: 6/10/98 at 10:26 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-32/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
320-1 SDG#: HMS06-02

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS SVOA



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2216 06/18/98





LLI Sample No. 2945138

GEO-32/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	86	39	108
	2-FIphenol	85	35	108
	2,4,6-TBP	111	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	66	31	126
	2-Fbiphenyl	72	45	113
	Tphenylid14	107	37	130



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2276 Rev. 4/1997





LLI Sample No. SW 2945139

Collected: 6/10/98 at 15:20 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-03/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
032-3 SDG#: HMS06-05

Account No: 07802
Kerr-McGee Corporation
P.O. 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
4688	TCL Semivolatiles			See Page	2	
4689	TCL Semivolatiles cont'd			See Page	3	
0111	Moisture	9.02	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: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates	ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group	

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 04:45:58 D 0003 16 129915 619002
 863 0.00 00033420 ASR000

Respectfully Submitted
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2275 Rev. 8/01/98





LLI Sample No. SW 2945139

Collected: 6/10/98 at 15:20 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-03/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
032-3 SOG#: HMS06-05

Account No: 07802
Kerr-McGee Corporation
P.O. 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
TCL Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	73.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	37.
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.	33.	ug/kg	N.D.	37.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	37.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	73.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	37.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	37.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	37.
3759	isophorone	N.D.	33.	ug/kg	N.D.	37.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	73.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	73.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	73.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	73.
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.	33.	ug/kg	N.D.	37.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	73.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	73.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	37.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	180.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	73.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	73.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	37.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	37.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	37.

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

Respectfully Submitted
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221a





LLI Sample No. SW 2945139

Collected: 6/10/98 at 15:20 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-03/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
032-3 SDG#: HMS06-05

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	73.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	37.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	210.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	180.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	37.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	73.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	37.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	37.
3768	fluorene	N.D.	33.	ug/kg	N.D.	37.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	73.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	180.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	37.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	73.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	37.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	180.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	37.
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	N.D.	67.	ug/kg	N.D.	73.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	37.
1195	pyrene	N.D.	33.	ug/kg	N.D.	37.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	73.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	37.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	73.
3782	chrysene	N.D.	33.	ug/kg	N.D.	37.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	37.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	37.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	37.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	37.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	37.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	37.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS SVQA



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2216





LLI Sample No. SW 2945139

Collected: 6/10/98 at 15:20 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-03/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
032-3 SDG#: HMS06-05

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2215 1/97 11:11





LLI Sample No. SW 2945139

Collected: 06/10/98 at 15:20 by DU

Submitted: 06/12/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-03/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
032-3 SDG#: HMS06-05

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	07/06/98 1631	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/06/98 1631	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1704	Patrick N. Ward



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LLI Sample No. 2945139
 GEO-03/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
 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 Semivolatiles		Batch: 98166SLB026										
1185	phenol											
67.	ug/kg	N.D.		93	86	7	93			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		84	81	3	83			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		87	84	3	85			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		82	70	16	89			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		84	71	16	87			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		87	74	16	90			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		84	84	0	85			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		90	87	3	91			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		84	81	2	85			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		79	80	1	79			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		67	46	38	85			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		87	86	1	85			56	110	
3759	isophorone											
33.	ug/kg	N.D.		90	90	1	91			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		77	71	8	87			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		88	89	1	84			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		86	85	1	85			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		91	89	2	92			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		90	75	18	92			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		85	76	12	84			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		69	72	3	61			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		95	73	27	99			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		86	86	0	88			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		87	75	15	85			60	102	



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LLI Sample No. 2945139

GEO-03/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		70	58	18	88			42	108



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See reverse side for explanation of symbols and abbreviations

0215 06.11





LLI Sample No. 2945139

GEO-03/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		98	76	21	98			62	107
3776	anthracene										
33.	ug/kg	N.D.		95	78	19	99			62	105
4702	carbazole										
33.	ug/kg	N.D.		93	86	8	96			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		98	86	13	99			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		93	68	23	99			58	110
1195	pyrene										
33.	ug/kg	N.D.		98	76	19	99			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		95	90	6	100			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		78	79	1	55			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		91	71	20	100			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		103	72	34	98			8	158
3782	chrysene										
33.	ug/kg	N.D.		137	93	33	131			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		103	67	42	94			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		70	48	26	75			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		93	61	35	85			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		102	68	35	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		59	43	28	106			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		64	47	31	102			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		47	35	27	104			52	113
0111	Moisture										
0.080	% by wt.	* Batch: 981680199820000A	7				100	100	0	99	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. 2945139
GEO-03/2-3' Grab Soil Sample
Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Pheno1-d6	90	39	108
	2-F1pheno1	91	35	108
	2,4,6-TBP	110	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	69	31	126
	2-Fbiphny1	77	45	113
	Tpheny1d14	112	37	130



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax 717-656-2661

See reverse side for explanation of symbols and abbreviations.

2216 04/12/11





LLI Sample No. SW 2945140

Collected: 6/10/98 at 15:25 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-03/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
035-6 SDG#: HMS06-06

Account No: 07802
Kerr-McGee Corporation
P.O. 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	10.8		0.080	% by wt.	
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Kerr-McGee Corporation	ATTN: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates	ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group	

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 04:47:17 D 0003 16 129915 619002
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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 Lancaster, PA 17605-2425
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3216 01/11/97





LLI Sample No. SW 2945140

Collected: 6/10/98 at 15:25 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-03/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
035-6 SDG#: HMS06-06

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	phenol	170.	J	67.	ug/kg	190.	J 75.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	37.
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.		33.	ug/kg	N.D.	37.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	37.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	75.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	37.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	37.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	37.
3759	isophorone	N.D.		33.	ug/kg	N.D.	37.
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.		67.	ug/kg	N.D.	75.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	75.
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.		33.	ug/kg	N.D.	37.
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	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.	75.
4695	2,4,5-trichlorophenol	N.D.		67.	ug/kg	N.D.	75.
3764	2-chloronaphthalene	N.D.		33.	ug/kg	N.D.	37.
4696	2-nitroaniline	N.D.		33.	ug/kg	N.D.	37.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	75.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	37.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2945140

Collected: 6/10/98 at 15:25 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-03/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
035-6 SDG#: HMS06-06

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	37.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	220.
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.	75.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	37.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	37.
3768	fluorene	N.D.	33.	ug/kg	N.D.	37.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	37.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	75.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	37.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	37.
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	N.D.	67.	ug/kg	N.D.	75.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	37.
1195	pyrene	N.D.	33.	ug/kg	N.D.	37.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	75.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	37.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	75.
3782	chrysene	N.D.	33.	ug/kg	N.D.	37.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	37.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	37.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	37.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	37.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	37.
3791	benzo (ghi) perylene-	N.D.	33.	ug/kg	N.D.	37.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945140

Collected: 6/10/98 at 15:25 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-03/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
035-6 SDG#: HMS06-06

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Retl.

CAT NO.	ANALYSIS NAME	AS RECEIVED		DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945140

Collected: 06/10/98 at 15:25 by DU

Submitted: 06/12/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-03/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
035-6 SDG#: HMS06-06

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	07/06/98 1726	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/06/98 1726	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1704	Patrick N. Ward



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0215 1 1 1 1 1





LLI Sample No. 2945140

GEO-03/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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 Semivolatiles											

Batch: 98166SLB026											
1185 phenol											
67.	ug/kg	N.D.		93	86	7	93			49	105
3753 bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		84	81	3	83			53	109
1186 2-chlorophenol											
33.	ug/kg	N.D.		87	84	3	85			55	107
3754 1,3-dichlorobenzene											
33.	ug/kg	N.D.		82	70	16	89			53	103
1187 1,4-dichlorobenzene											
33.	ug/kg	N.D.		84	71	16	87			52	103
3755 1,2-dichlorobenzene											
33.	ug/kg	N.D.		87	74	16	90			56	107
4690 2-methylphenol											
33.	ug/kg	N.D.		84	84	0	85			57	101
4691 2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		90	87	3	91			38	117
4692 3- and 4-methylphenol											
67.	ug/kg	N.D.		84	81	2	85			48	116
1188 N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		79	80	1	79			50	124
3757 hexachloroethane											
33.	ug/kg	N.D.		67	46	38	85			52	108
3758 nitrobenzene											
33.	ug/kg	N.D.		87	86	1	85			56	110
3759 isophorone											
33.	ug/kg	N.D.		90	90	1	91			57	114
3746 2-nitrophenol											
67.	ug/kg	N.D.		77	71	8	87			59	107
3747 2,4-dimethylphenol											
67.	ug/kg	N.D.		88	89	1	84			39	108
3760 bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		86	85	1	85			56	103
3748 2,4-dichlorophenol											
67.	ug/kg	N.D.		91	89	2	92			59	100
1189 1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		90	75	18	92			57	104
3761 naphthalene											
33.	ug/kg	N.D.		85	76	12	84			58	99
4693 4-chloroaniline											
33.	ug/kg	N.D.		69	72	3	61			1	102
3762 hexachlorobutadiene											
67.	ug/kg	N.D.		95	73	27	99			56	115
1190 4-chloro-3-methylphenol											
67.	ug/kg	N.D.		86	86	0	88			56	108
4694 2-methylnaphthalene											
33.	ug/kg	N.D.		87	75	15	85			60	102



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

2015-09-10 10:11





LLI Sample No. 2945140

GEO-03/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		70	58	18	88			42	108



Lancaster Laboratories
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717-656-2300 Fax 717-656-2681

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0219





LLI Sample No. 2945140

GEO-03/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		98	76	21	98			62	107
3776	anthracene										
33.	ug/kg	N.D.		95	78	19	99			62	105
4702	carbazole										
33.	ug/kg	N.D.		93	86	8	96			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		98	86	13	99			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		93	68	23	99			58	110
1195	pyrene										
33.	ug/kg	N.D.		98	76	19	99			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		95	90	6	100			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		78	79	1	55			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		91	71	20	100			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		103	72	34	98			8	158
3782	chrysene										
33.	ug/kg	N.D.		137	93	33	131			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		103	67	42	94			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		70	48	26	75			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		93	61	35	85			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		102	68	35	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		59	43	28	106			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		64	47	31	102			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		47	35	27	104			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981680199820000A	7				100	100	0	99	101



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2425 New Holland Pike
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2945140

GEO-03/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	89	39	108
	2-F1phenol	88	35	108
	2,4,6-TBP	104	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	66	31	126
	2-Fbiphenyl	71	45	113
	Tphenylid14	109	37	130



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See reverse side for explanation of symbols and abbreviations.

2216 11/15/01





LLI Sample No. SW 2945141

Collected: 6/10/98 at 14:38 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-10/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
102-3 SDG#: HMS06-07

Account No: 07802
Kerr-McGee Corporation
P.O. 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	11.7	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: Garet Van de Steeg, PhD
1 COPY TO	Michael Pisani & Associates	ATTN: Mr. David Upthegrove
1 COPY TO	Data Package Group	

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 04:48:42 D 0003 16 129915 619002
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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. 11-11





LLI Sample No. SW 2945141

Collected: 6/10/98 at 14:38 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-10/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
102-3 SDG#: HMS06-07

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	pheno1	N.D.	67.	ug/kg	N.D.	76.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	38.
1186	2-chloropheno1	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-methylpheno1	N.D.	33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	38.
4692	3- and 4-methylpheno1	N.D.	67.	ug/kg	N.D.	76.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	33.	ug/kg	N.D.	38.
3746	2-nitropheno1	N.D.	67.	ug/kg	N.D.	76.
3747	2,4-dimethylpheno1	N.D.	67.	ug/kg	N.D.	76.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	76.
3748	2,4-dichloropheno1	N.D.	67.	ug/kg	N.D.	76.
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.	33.	ug/kg	N.D.	38.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	76.
1190	4-chloro-3-methylpheno1	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-trichloropheno1	N.D.	67.	ug/kg	N.D.	76.
4695	2,4,5-trichloropheno1	N.D.	67.	ug/kg	N.D.	76.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	38.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVQA



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See reverse side for explanation of symbols and abbreviations

Date: 7/23/98





LLI Sample No. SW 2945141

Collected: 6/10/98 at 14:38 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-10/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
102-3 SDG#: HMS06-07

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	76.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	76.
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	350.	33.	ug/kg	400.	38.
3787	benzo (k) fluoranthene	290.	J 33.	ug/kg	330.	J 38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene-	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945141

Collected: 6/10/98 at 14:38 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-10/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
102-3 SDG#: HMS06-07

Account No: 07802
Kerr-McGee Corporation
P.O. 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
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TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2016 01 11 11:11





LLI Sample No. SW 2945141

Collected: 06/10/98 at 14:38 by DU

Submitted: 06/12/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-10/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
102-3 SDG#: HMS06-07

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS		ANALYST
				ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1		06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1		07/06/98 1821	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		07/06/98 1821	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1		06/17/98 1704	Patrick N. Ward



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LLI Sample No. 2945141

GEO-10/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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 Semivolatiles	Batch: 98166SLB026									

1185	phenol										
67.	ug/kg	N.D.		93	86	7	93			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		84	81	3	83			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		87	84	3	85			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		82	70	16	89			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	71	16	87			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		87	74	16	90			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		84	84	0	85			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		90	87	3	91			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		84	81	2	85			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	80	1	79			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		67	46	38	85			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	86	1	85			56	110
3759	isophorone										
33.	ug/kg	N.D.		90	90	1	91			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		77	71	8	87			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	89	1	84			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	85			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		91	89	2	92			59	100
1189	1,2,4-trichlorobenzene -										
33.	ug/kg	N.D.		90	75	18	92			57	104
3761	naphthalene										
33.	ug/kg	N.D.		85	76	12	84			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		69	72	3	61			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	73	27	99			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		86	86	0	88			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	75	15	85			60	102



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2216 Rev. 9-2007





LLI Sample No. 2945141

GEO-10/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichloropheno]										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichloropheno]										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylpheno]										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		70	58	18	88			42	108



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See reverse side for explanation of symbols and abbreviations

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LLI Sample No. 2945141

GEO-10/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		98	76	21	98			62	107
3776	anthracene										
33.	ug/kg	N.D.		95	78	19	99			62	105
4702	carbazole										
33.	ug/kg	N.D.		93	86	8	96			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		98	86	13	99			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		93	68	23	99			58	110
1195	pyrene										
33.	ug/kg	N.D.		98	76	19	99			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		95	90	6	100			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		78	79	1	55			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		91	71	20	100			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		103	72	34	98			8	158
3782	chrysene										
33.	ug/kg	N.D.		137	93	33	131			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		103	67	42	94			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		70	48	26	75			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		93	61	35	85			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		102	68	35	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		59	43	28	106			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		64	47	31	102			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		47	35	27	104			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981680199820000A	7				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations

2216





LLI Sample No. 2945141

GEO-10/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	62	39	108
		2-Flphenol	62	35	108
		2,4,6-TBP	72	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	50	31	126
		2-Fbiphenyl	54	45	113
		Tphenyld14	73	37	130



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22 9 17 11 17





LLI Sample No. SW 2945142

Collected: 6/10/98 at 14:44 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-10/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
105-6 SDG#: HMS06-08

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	LIMIT	RESULTS	DETECTION LIMIT
			METHOD		METHOD	
4688	TCL Semivolatiles					See Page 2
4689	TCL Semivolatiles cont'd					See Page 3
0111	Moisture	12.8		0.080		% by wt.
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Kerr-McGee Corporation	ATTN: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates	ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group	

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 04:50:06 D 0003 16 129915 619002
 863 0.00 00033420 ASR000

Respectfully Submitted
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2215 9-11 8-1-97





LLI Sample No. SW 2945142

Collected: 6/10/98 at 14:44 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-10/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
105-6 SDG#: HMS06-08

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	pheno1	92.	J	67.	ug/kg	110.	J 76.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	38.
1186	2-chloropheno1	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-methylpheno1	N.D.		33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	38.
4692	3- and 4-methylpheno1	N.D.		67.	ug/kg	N.D.	76.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	38.
3759	isophorone	N.D.		33.	ug/kg	N.D.	38.
3746	2-nitrophenol	N.D.		67.	ug/kg	N.D.	76.
3747	2,4-dimethylpheno1	N.D.		67.	ug/kg	N.D.	76.
3760	bis (2-chloroethoxy) methane	N.D.		67.	ug/kg	N.D.	76.
3748	2,4-dichloropheno1	N.D.		67.	ug/kg	N.D.	76.
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.		33.	ug/kg	N.D.	38.
3762	hexachlorobutadiene	N.D.		67.	ug/kg	N.D.	76.
1190	4-chloro-3-methylpheno1	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-trichloropheno1	N.D.		67.	ug/kg	N.D.	76.
4695	2,4,5-trichloropheno1	N.D.		67.	ug/kg	N.D.	76.
3764	2-chloronaphthalene	N.D.		33.	ug/kg	N.D.	38.
4696	2-nitroaniline	N.D.		33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	76.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300



Lancaster Laboratories
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SV0A





LLI Sample No. SW 2945142

Collected: 6/10/98 at 14:44 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-10/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
105-6 SDG#: HMS06-08

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	76.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	76.
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	340.	33.	ug/kg	390.	38.
3787	benzo (k) fluoranthene	290.	J 33.	ug/kg	330.	J 38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene-	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945142

Collected: 6/10/98 at 14:44 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-10/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
105-6 SDG#: HMS06-08

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
ReI.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2011-06-14 11:17





LLI Sample No. SW 2945142

Collected: 06/10/98 at 14:44 by DU

Submitted: 06/12/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

GEO-10/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
105-6 SDG#: HMS06-08

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	07/06/98 1916	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/06/98 1916	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1704	Patrick N. Ward



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2015 06/18/98





LLI Sample No. 2945142

GEO-10/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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 Semivolatiles	Batch: 98166SLB026									

1185	phenol										
67.	ug/kg	N.D.		93	86	7	93			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		84	81	3	83			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		87	84	3	85			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		82	70	16	89			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	71	16	87			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		87	74	16	90			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		84	84	0	85			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		90	87	3	91			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		84	81	2	85			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	80	1	79			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		67	46	38	85			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	86	1	85			56	110
3759	isophorone										
33.	ug/kg	N.D.		90	90	1	91			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		77	71	8	87			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	89	1	84			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	85			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		91	89	2	92			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		90	75	18	92			57	104
3761	naphthalene										
33.	ug/kg	N.D.		85	76	12	84			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		69	72	3	61			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	73	27	99			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		86	86	0	88			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	75	15	85			60	102



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01-11-98 11:31:11





LLI Sample No. 2945142

GEO-10/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									
4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		70	58	18	88			42	108



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2014 11/11/14





LLI Sample No. 2945142

GEO-10/5-6" Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		98	76	21	98			62	107
3776	anthracene										
33.	ug/kg	N.D.		95	78	19	99			62	105
4702	carbazole										
33.	ug/kg	N.D.		93	86	8	96			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		98	86	13	99			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		93	68	23	99			58	110
1195	pyrene										
33.	ug/kg	N.D.		98	76	19	99			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		95	90	6	100			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		78	79	1	55			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		91	71	20	100			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		103	72	34	98			8	158
3782	chrysene										
33.	ug/kg	N.D.		137	93	33	131			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		103	67	42	94			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		70	48	26	75			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		93	61	35	85			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		102	68	35	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		59	43	28	106			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.O.		64	47	31	102			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		47	35	27	104			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981680199820000A	7				100	100	0	99	101



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LLI Sample No. 2945142
GEO-10/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	85	39	108
		2-Flphenol	86	35	108
		2,4,6-TBP	87	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	67	31	126
		2-Fbiphenyl	67	45	113
		Tphenylid14	99	37	130



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2014-11-11 10:11:11





LLI Sample No. SW 2945143

Collected: 6/10/98 at 12:08 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-16/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
162-3 SDG#: HMS06-09

Account No: 07802
Kerr-McGee Corporation
P.O. 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	12.3		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	ATTN: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates	ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group	

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 04:51:45 D 0003 16 129915 619002
 863 0.00 00033420 ASR000



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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2945143

Collected: 6/10/98 at 12:08 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-16/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
162-3 SDG#: HMS06-09

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	pheno1	N.D.	67.	ug/kg	N.D.	76.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	38.
1186	2-chloropheno1	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-methylpheno1	N.D.	33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	38.
4692	3- and 4-methylpheno1	N.D.	67.	ug/kg	N.D.	76.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	33.	ug/kg	N.D.	38.
3746	2-nitropheno1	N.D.	67.	ug/kg	N.D.	76.
3747	2,4-dimethylpheno1	N.D.	67.	ug/kg	N.D.	76.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	76.
3748	2,4-dichloropheno1	N.D.	67.	ug/kg	N.D.	76.
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.	33.	ug/kg	N.D.	38.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	76.
1190	4-chloro-3-methylpheno1	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-trichloropheno1	N.D.	67.	ug/kg	N.D.	76.
4695	2,4,5-trichloropheno1	N.D.	67.	ug/kg	N.D.	76.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	38.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SV0A



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2014 01 14 11:21





LLI Sample No. SW 2945143

Collected: 6/10/98 at 12:08 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-16/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
162-3 SDG#: HMS06-09

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION LIMIT	METHOD UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	76.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	76.
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.	33.	ug/kg	N.D.	38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene-	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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. SW 2945143
Collected: 6/10/98 at 12:08 by DU

Submitted: 6/12/98 Reported: 7/23/98
Discard: 8/23/98

GEO-16/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
162-3 SDG#: HMS06-09

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945143

Collected: 06/10/98 at 12:08 by DU

Submitted: 06/12/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-16/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
162-3 SDG#: HMS06-09

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	07/06/98 2011	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/06/98 2011	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1704	Patrick N. Ward



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2015-11-11 10:47





LLI Sample No. 2945143

GEO-16/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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 Semivolatiles	Batch: 98166SLB026									

1185	phenol										
67.	ug/kg	N.D.		93	86	7	93			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		84	81	3	83			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		87	84	3	85			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		82	70	16	89			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	71	16	87			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		87	74	16	90			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		84	84	0	85			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		90	87	3	91			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		84	81	2	85			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	80	1	79			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		67	46	38	85			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	86	1	85			56	110
3759	isophorone										
33.	ug/kg	N.D.		90	90	1	91			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		77	71	8	87			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	89	1	84			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	85			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		91	89	2	92			59	100
1189	1,2,4-trichlorobenzene -										
33.	ug/kg	N.D.		90	75	18	92			57	104
3761	naphthalene										
33.	ug/kg	N.D.		85	76	12	84			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		69	72	3	61			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	73	27	99			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		86	86	0	88			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	75	15	85			60	102



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LLI Sample No. 2945143

GEO-16/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		70	58	18	88			42	108



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2/15/94 8:41





LLI Sample No. 2945143

GEO-16/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		98	76	21	98			62	107
3776	anthracene										
33.	ug/kg	N.D.		95	78	19	99			62	105
4702	carbazole										
33.	ug/kg	N.D.		93	86	8	96			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		98	86	13	99			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		93	68	23	99			58	110
1195	pyrene										
33.	ug/kg	N.D.		98	76	19	99			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		95	90	6	100			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		78	79	1	55			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		91	71	20	100			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		103	72	34	98			8	158
3782	chrysene										
33.	ug/kg	N.D.		137	93	33	131			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		103	67	42	94			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		70	48	26	75			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		93	61	35	85			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		102	68	35	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		59	43	28	106			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		64	47	31	102			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		47	35	27	104			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981680199820000A	7				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2945143

GEO-16/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	88	39	108
	2-F1pheno1	90	35	108
	2,4,6-TBP	111	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	74	31	126
	2-Fbiphenyl	80	45	113
	Tphenylid14	107	37	130



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See reverse side for explanation of symbols and abbreviations

2214





LLI Sample No. SW 2945144

Collected: 6/10/98 at 12:12 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-16/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
165-6 SDG#: HMS06-10

Account No: 07802
Kerr-McGee Corporation
P.O. 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	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: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 04:53:09 D 0003 16 129915 619002
 863 0.00 00033420 ASR000



Lancaster Laboratories
 2025 New Howard Pike
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 Lancaster, PA 17505-2425
 TEL: 610-270-0000 FAX: 717-656-2581

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA





LLI Sample No. SW 2945144

Collected: 6/10/98 at 12:12 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-16/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
165-6 SDG#: HMS06-10

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	pheno1	N.D.	67.	ug/kg	N.D.	79.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	40.
1186	2-chloropheno1	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-methylpheno1	N.D.	33.	ug/kg	N.D.	40.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	40.
4692	3- and 4-methylpheno1	N.D.	67.	ug/kg	N.D.	79.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	40.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	40.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	40.
3759	isophorone	N.D.	33.	ug/kg	N.D.	40.
3746	2-nitropheno1	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.	67.	ug/kg	N.D.	79.
3748	2,4-dichloropheno1	N.D.	67.	ug/kg	N.D.	79.
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.	33.	ug/kg	N.D.	40.
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.	40.
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.	40.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	40.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	40.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300



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Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2945144

Collected: 6/10/98 at 12:12 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-16/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
165-6 SDG#: HMS06-10

Account No: 07802
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Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	METHOD LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	230.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	40.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	40.
3768	fluorene	N.D.	33.	ug/kg	N.D.	40.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	40.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	79.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	40.
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.	67.	ug/kg	N.D.	79.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	40.
1195	pyrene	N.D.	33.	ug/kg	N.D.	40.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	79.
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.	33.	ug/kg	N.D.	40.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	40.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	40.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	40.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	40.
3791	benzo (ghi) perylene-	N.D.	33.	ug/kg	N.D.	40.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2945144

Collected: 6/10/98 at 12:12 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-16/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
165-6 SDG#: HMS06-10

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945144

Collected: 06/10/98 at 12:12 by DU

Submitted: 06/12/98

GEO-16/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
165-6 SDG#: HMS06-10

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS		ANALYST
				ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1		06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1		07/06/98 2241	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		07/06/98 2241	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1		06/17/98 1704	Patrick N. Ward



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LLI Sample No. 2945144

GEO-16/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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 Semivolatiles		Batch: 98166SLB026									
1185 phenol	67. ug/kg	N.D.		93	86	7	93			49	105
3753 bis (2-chloroethyl) ether	33. ug/kg	N.D.		84	81	3	83			53	109
1186 2-chlorophenol	33. ug/kg	N.D.		87	84	3	85			55	107
3754 1,3-dichlorobenzene	33. ug/kg	N.D.		82	70	16	89			53	103
1187 1,4-dichlorobenzene	33. ug/kg	N.D.		84	71	16	87			52	103
3755 1,2-dichlorobenzene	33. ug/kg	N.D.		87	74	16	90			56	107
4690 2-methylphenol	33. ug/kg	N.D.		84	84	0	85			57	101
4691 2,2'-oxybis (1-chloropropane)	33. ug/kg	N.D.		90	87	3	91			38	117
4692 3- and 4-methylphenol	67. ug/kg	N.D.		84	81	2	85			48	116
1188 N-nitrosodi-n-propylamine	33. ug/kg	N.D.		79	80	1	79			50	124
3757 hexachloroethane	33. ug/kg	N.D.		67	46	38	85			52	108
3758 nitrobenzene	33. ug/kg	N.D.		87	86	1	85			56	110
3759 isophorone	33. ug/kg	N.D.		90	90	1	91			57	114
3746 2-nitrophenol	67. ug/kg	N.D.		77	71	8	87			59	107
3747 2,4-dimethylphenol	67. ug/kg	N.D.		88	89	1	84			39	108
3760 bis (2-chloroethoxy) methane	67. ug/kg	N.D.		86	85	1	85			56	103
3748 2,4-dichlorophenol	67. ug/kg	N.D.		91	89	2	92			59	100
1189 1,2,4-trichlorobenzene	33. ug/kg	N.D.		90	75	18	92			57	104
3761 naphthalene	33. ug/kg	N.D.		85	76	12	84			58	99
4693 4-chloroaniline	33. ug/kg	N.D.		69	72	3	61			1	102
3762 hexachlorobutadiene	67. ug/kg	N.D.		95	73	27	99			56	115
1190 4-chloro-3-methylphenol	67. ug/kg	N.D.		86	86	0	88			56	108
4694 2-methylnaphthalene	33. ug/kg	N.D.		87	75	15	85			60	102



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LLI Sample No. 2945144

GEO-16/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		70	58	18	88			42	108



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2015-01-01 10:00





LLI Sample No. 2945144

GEO-16/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		98	76	21	98			62	107
3776	anthracene										
33.	ug/kg	N.D.		95	78	19	99			62	105
4702	carbazole										
33.	ug/kg	N.D.		93	86	8	96			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		98	86	13	99			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		93	68	23	99			58	110
1195	pyrene										
33.	ug/kg	N.D.		98	76	19	99			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		95	90	6	100			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		78	79	1	55			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		91	71	20	100			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		103	72	34	98			8	158
3782	chrysene										
33.	ug/kg	N.D.		137	93	33	131			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		103	67	42	94			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		70	48	26	75			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		93	61	35	85			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		102	68	35	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		59	43	28	106			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		64	47	31	102			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		47	35	27	104			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981680199820000A	7				100	100	0	99	101



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10/15/00 10:00





LLI Sample No. 2945144

GEO-16/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Pheno1-d6	88	39 108
		2-F1pheno1	91	35 108
		2,4,6-TBP	93	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	70	31 126
		2-Fbiphenyl	71	45 113
		Tphenylid14	103	37 130



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2425 New Holland Pike
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717-656-2300 Fax: 717-656-1681

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0015-10-11 11:11





LLI Sample No. SW 2945145

Collected: 6/10/98 at 11:23 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-17/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
172-3 SDG#: HMS06-11

Account No: 07802
Kerr-McGee Corporation
P.O. 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
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	11.0		0.080	% by wt.	
<p>"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.</p>						

1 COPY TO	Kerr-McGee Corporation	ATTN: Garet Van de Steeg, PhD
1 COPY TO	Michael Pisani & Associates	ATTN: Mr. David Upthegrove
1 COPY TO	Data Package Group	

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 04:54:25 D 0003 16 129915 619002
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945145

Collected: 6/10/98 at 11:23 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-17/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
172-3 SDG#: HMS06-11

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	phenol	85.	J	67.	ug/kg	96.	J 75.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	37.
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.		33.	ug/kg	N.D.	37.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	37.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	37.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	75.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	37.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	37.
3759	isophorone	N.D.		33.	ug/kg	N.D.	37.
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.		67.	ug/kg	N.D.	75.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	75.
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.		33.	ug/kg	N.D.	37.
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	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.	75.
4695	2,4,5-trichlorophenol	N.D.		67.	ug/kg	N.D.	75.
3764	2-chloronaphthalene	N.D.		33.	ug/kg	N.D.	37.
4696	2-nitroaniline	N.D.		33.	ug/kg	N.D.	37.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	75.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	37.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2015-07-10 10:11





LLI Sample No. SW 2945145

Collected: 6/10/98 at 11:23 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-17/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
172-3 SDG#: HMS06-11

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	37.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	220.
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.	75.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	37.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	37.
3768	fluorene	N.D.	33.	ug/kg	N.D.	37.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	37.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	75.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	37.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	37.
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	N.D.	67.	ug/kg	N.D.	75.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	37.
1195	pyrene	N.D.	33.	ug/kg	N.D.	37.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	75.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	37.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	75.
3782	chrysene	N.D.	33.	ug/kg	N.D.	37.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	37.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	37.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	37.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	37.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	37.
3791	benzo (ghi) perylene-	N.D.	33.	ug/kg	N.D.	37.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945145

Collected: 6/10/98 at 11:23 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-17/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
172-3 SDG#: HMS06-11

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
ReI.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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

02/11/98 11:21 AM





LLI Sample No. SW 2945145

Collected: 06/10/98 at 11:23 by DU

Submitted: 06/12/98

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

GEO-17/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 172-3 SDG#: HMS06-11

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	07/06/98 2336	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/06/98 2336	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1704	Patrick N. Ward



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 Lancaster, PA 17609-2425
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LLI Sample No. 2945145

GEO-17/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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 Semivolatiles		Batch: 98166SLB026									
1185	phenol										
67.	ug/kg	N.D.		93	86	7	93			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		84	81	3	83			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		87	84	3	85			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		82	70	16	89			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	71	16	87			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		87	74	16	90			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		84	84	0	85			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		90	87	3	91			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		84	81	2	85			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	80	1	79			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		67	46	38	85			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	86	1	85			56	110
3759	isophorone										
33.	ug/kg	N.D.		90	90	1	91			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		77	71	8	87			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	89	1	84			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	85			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		91	89	2	92			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		90	75	18	92			57	104
3761	naphthalene										
33.	ug/kg	N.D.		85	76	12	84			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		69	72	3	61			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	73	27	99			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		86	86	0	88			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	75	15	85			60	102



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2945145

GEO-17/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									
4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		70	58	18	88			42	108



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2215 04/11/01





LLI Sample No. **2945145**
 GEO-17/2-3' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
 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.		98	76	21	98			62	107
3776	anthracene										
	33. ug/kg	N.D.		95	78	19	99			62	105
4702	carbazole										
	33. ug/kg	N.D.		93	86	8	96			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		98	86	13	99			59	114
3778	fluoranthene										
	33. ug/kg	N.D.		93	68	23	99			58	110
1195	pyrene										
	33. ug/kg	N.D.		98	76	19	99			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		95	90	6	100			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		78	79	1	55			15	94
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		91	71	20	100			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		103	72	34	98			8	158
3782	chrysene										
	33. ug/kg	N.D.		137	93	33	131			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		103	67	42	94			54	127
3786	benzo (b) fluoranthene										
	33. ug/kg	N.D.		70	48	26	75			59	105
3787	benzo (k) fluoranthene										
	33. ug/kg	N.D.		93	61	35	85			63	108
3788	benzo (a) pyrene										
	33. ug/kg	N.D.		102	68	35	97			61	107
3789	indeno (1,2,3-cd) pyrene										
	33. ug/kg	N.D.		59	43	28	106			55	111
3790	dibenz (a,h) anthracene										
	33. ug/kg	N.D.		64	47	31	102			60	117
3791	benzo (ghi) perylene										
	33. ug/kg	N.D.		47	35	27	104			52	113
0111	Moisture										
	0.080 % by wt.	Batch: 981680199820000A	7				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2945145

GEO-17/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	87	39	108
		2-F1phenol	91	35	108
		2,4,6-TBP	97	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	72	31	126
		2-Fbiphenyl	75	45	113
		Tphenylid14	105	37	130



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2016 04 11 11:27





LLI Sample No. SW 2945146

Collected: 6/10/98 at 11:28 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-17/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
175-6 SDG#: HMS06-12

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	13.2	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 ATTN: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 04:55:42 D 0003 16 129915 619002
 863 0.00 00033420 ASR000

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945146

Collected: 6/10/98 at 11:28 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-17/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
175-6 SDG#: HMS06-12

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	pheno1	160.	J	67.	ug/kg	190.	J 77.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	38.
1186	2-chloropheno1	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-methylpheno1	N.D.		33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	38.
4692	3- and 4-methylpheno1	N.D.		67.	ug/kg	N.D.	38.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	77.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	38.
3759	isophorone	N.D.		33.	ug/kg	N.D.	38.
3746	2-nitrophenol	N.D.		67.	ug/kg	N.D.	77.
3747	2,4-dimethylpheno1	N.D.		67.	ug/kg	N.D.	77.
3760	bis (2-chloroethoxy) methane	N.D.		67.	ug/kg	N.D.	77.
3748	2,4-dichloropheno1	N.D.		67.	ug/kg	N.D.	77.
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.		33.	ug/kg	N.D.	38.
3762	hexachlorobutadiene	N.D.		67.	ug/kg	N.D.	77.
1190	4-chloro-3-methylpheno1	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-trichloropheno1	N.D.		67.	ug/kg	N.D.	77.
4695	2,4,5-trichloropheno1	N.D.		67.	ug/kg	N.D.	77.
3764	2-chloronaphthalene	N.D.		33.	ug/kg	N.D.	38.
4696	2-nitroaniline	N.D.		33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	77.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA

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ACIL
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2945146

Collected: 6/10/98 at 11:28 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-17/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
175-6 SDG#: HMS06-12

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	77.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	77.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	77.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	77.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	77.
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.	33.	ug/kg	N.D.	38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene-	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

2215





LLI Sample No. SW 2945146

Collected: 6/10/98 at 11:28 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-17/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
175-6 SDG#: HMS06-12

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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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Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

22-10-98





LLI Sample No. SW 2945146

Collected: 06/10/98 at 11:28 by DU

Submitted: 06/12/98

GEO-17/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
175-6 SDG#: HMS06-12

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	07/07/98 0031	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/07/98 0031	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1704	Patrick N. Ward



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2945146

GEO-17/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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 Semivolatiles		Batch: 98166SLB026									
1185	phenol										
67.	ug/kg	N.D.		93	86	7	93			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		84	81	3	83			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		87	84	3	85			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		82	70	16	89			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	71	16	87			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		87	74	16	90			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		84	84	0	85			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		90	87	3	91			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		84	81	2	85			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	80	1	79			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		67	46	38	85			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	86	1	85			56	110
3759	isophorone										
33.	ug/kg	N.D.		90	90	1	91			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		77	71	8	87			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	89	1	84			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	85			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		91	89	2	92			59	100
1189	1,2,4-trichlorobenzene -										
33.	ug/kg	N.D.		90	75	18	92			57	104
3761	naphthalene										
33.	ug/kg	N.D.		85	76	12	84			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		69	72	3	61			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	73	27	99			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		86	86	0	88			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	75	15	85			60	102



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See reverse side for explanation of symbols and abbreviations

2016-11-10 10:11





LLI Sample No. 2945146

GEO-17/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		70	58	18	88			42	108



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2945146

GEO-17/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		98	76	21	98			62	107
3776	anthracene										
33.	ug/kg	N.D.		95	78	19	99			62	105
4702	carbazole										
33.	ug/kg	N.D.		93	86	8	96			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		98	86	13	99			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		93	68	23	99			58	110
1195	pyrene										
33.	ug/kg	N.D.		98	76	19	99			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		95	90	6	100			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		78	79	1	55			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		91	71	20	100			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		103	72	34	98			8	158
3782	chrysene										
33.	ug/kg	N.D.		137	93	33	131			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		103	67	42	94			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		70	48	26	75			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		93	61	35	85			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		102	68	35	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		59	43	28	106			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		64	47	31	102			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		47	35	27	104			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981680199820000A	7				100	100	0	99	101



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2016-01-14 10:01





LLI Sample No. 2945146

GEO-17/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	88	39	108
		2-Flphenol	89	35	108
		2,4,6-TBP	101	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	70	31	126
		2-Fbiphenyl	74	45	113
		Tphenylid14	105	37	130



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2011-11-10 10:47





LLI Sample No. SW 2945147

Collected: 6/10/98 at 12:47 by DU

Submitted: 6/12/98 Reported: 7/23/98
Discard: 8/23/98

GEO-18/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
182-3 SDG#: HMS06-13

Account No: 07802
Kerr-McGee Corporation
P.O. 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	11.9	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: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
04:57:00 D 0003 16 129915 619002
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945147

Collected: 6/10/98 at 12:47 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-18/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
182-3 SDG#: HMS06-13

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	76.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	38.
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.	33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	76.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	76.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	76.
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.	33.	ug/kg	N.D.	38.
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.	33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2211 Rev. 11-97





LLI Sample No. SW 2945147

Collected: 6/10/98 at 12:47 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-18/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
182-3 SDG#: HHS06-13

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	76.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	76.
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.	33.	ug/kg	N.D.	38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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Lab No. 117-2300





LLI Sample No. SW 2945147

Collected: 6/10/98 at 12:47 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-18/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
182-3 SDG#: HMS06-13

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ret.

CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD
DETECTION LIMIT UNITS

DRY WEIGHT
RESULTS METHOD
DETECTION LIMIT

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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0076 10/1/98





LLI Sample No. SW 2945147

Collected: 06/10/98 at 12:47 by DU

Submitted: 06/12/98

GEO-18/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
182-3 SDG#: HMS06-13

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	07/07/98 0126	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/07/98 0126	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1704	Patrick N. Ward



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LLI Sample No. 2945147
GEO-18/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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 Semivolatiles	Batch: 98166SLB026									

1185	phenol										
67.	ug/kg	N.D.		93	86	7	93			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		84	81	3	83			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		87	84	3	85			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		82	70	16	89			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	71	16	87			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		87	74	16	90			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		84	84	0	85			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		90	87	3	91			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		84	81	2	85			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	80	1	79			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		67	46	38	85			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	86	1	85			56	110
3759	isophorone										
33.	ug/kg	N.D.		90	90	1	91			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		77	71	8	87			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	89	1	84			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	85			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		91	89	2	92			59	100
1189	1,2,4-trichlorobenzene -										
33.	ug/kg	N.D.		90	75	18	92			57	104
3761	naphthalene										
33.	ug/kg	N.D.		85	76	12	84			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		69	72	3	61			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	73	27	99			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		86	86	0	88			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	75	15	85			60	102



Lancaster Laboratories
2425 New Holland Pike
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717-556-2500 Fax 717-556-2681

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2945147

GED-18/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		70	58	18	88			42	108



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2018-09-14 11:11





L/LI Sample No. 2945147

GEO-18/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		98	76	21	98			62	107
3776	anthracene										
33.	ug/kg	N.D.		95	78	19	99			62	105
4702	carbazole										
33.	ug/kg	N.D.		93	86	8	96			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		98	86	13	99			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		93	68	23	99			58	110
1195	pyrene										
33.	ug/kg	N.D.		98	76	19	99			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		95	90	6	100			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		78	79	1	55			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		91	71	20	100			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		103	72	34	98			8	158
3782	chrysene										
33.	ug/kg	N.D.		137	93	33	131			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		103	67	42	94			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		70	48	26	75			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		93	61	35	85			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		102	68	35	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		59	43	28	106			55	111
3790	di-benz (a,h) anthracene										
33.	ug/kg	N.D.		64	47	31	102			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		47	35	27	104			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981680199820000A	7				100	100	0	99	101



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





LLI Sample No. 2945147

GEO-18/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	84	39	108
	2-Flphenol	88	35	108
	2,4,6-TBP	100	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	70	31	126
	2-Fbiphenyl	77	45	113
	Tphenylid14	103	37	130



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See reverse side for explanation of symbols and abbreviations

2215 10/13/01





LLI Sample No. SW 2945148

Collected: 6/10/98 at 12:50 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-18/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
185-6 SDG#: HMS06-14

Account No: 07802
Kerr-McGee Corporation
P.O. 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	11.8	0.080	% by wt.		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
04:58:20 D 0003 16 129915 619002
863 0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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PO Box 12425
Lancaster, PA 17605-2425
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LLI Sample No. SW 2945148

Collected: 6/10/98 at 12:50 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-18/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
185-6 SDG#: HMS06-14

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles							
1185	phenol	190.	J	67.	ug/kg	220.	J 76.
3753	bis (2-chloroethyl) ether	N.D.		33.	ug/kg	N.D.	38.
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.		33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.		33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.		67.	ug/kg	N.D.	76.
1188	N-nitrosodi-n-propylamine	N.D.		33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.		33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.		33.	ug/kg	N.D.	38.
3759	isophorone	N.D.		33.	ug/kg	N.D.	38.
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.		67.	ug/kg	N.D.	76.
3748	2,4-dichlorophenol	N.D.		67.	ug/kg	N.D.	76.
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.		33.	ug/kg	N.D.	38.
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.		33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.		67.	ug/kg	N.D.	76.
3765	acenaphthylene	N.D.		33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. SW 2945148

Collected: 6/10/98 at 12:50 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-18/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
185-6 SDG#: HMS06-14

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	76.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	76.
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.	33.	ug/kg	N.D.	38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	38.

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



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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. SW 2945148

Collected: 6/10/98 at 12:50 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

GEO-18/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
185-6 SDG#: HMS06-14

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			. DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
		UNITS			DETECTION LIMIT	

TCL Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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

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LLI Sample No. SW 2945148

Collected: 06/10/98 at 12:50 by DU

Submitted: 06/12/98

GEO-18/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
185-6 SDG#: HMS06-14

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/15/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	07/07/98 0221	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/07/98 0221	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1704	Patrick N. Ward



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0010 7/11/98





LLI Sample No. 2945148

GEO-18/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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 Semivolatiles		Batch: 98166SLB026									
1185	pheno1										
67.	ug/kg	N.D.		93	86	7	93			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		84	81	3	83			53	109
1186	2-chloropheno1										
33.	ug/kg	N.D.		87	84	3	85			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		82	70	16	89			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	71	16	87			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		87	74	16	90			56	107
4690	2-methylpheno1										
33.	ug/kg	N.D.		84	84	0	85			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		90	87	3	91			38	117
4692	3- and 4-methylpheno1										
67.	ug/kg	N.D.		84	81	2	85			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	80	1	79			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		67	46	38	85			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		87	86	1	85			56	110
3759	isophorone										
33.	ug/kg	N.D.		90	90	1	91			57	114
3746	2-nitropheno1										
67.	ug/kg	N.D.		77	71	8	87			59	107
3747	2,4-dimethylpheno1										
67.	ug/kg	N.D.		88	89	1	84			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	85			56	103
3748	2,4-dichloropheno1										
67.	ug/kg	N.D.		91	89	2	92			59	100
1189	1,2,4-trichlorobenzene -										
33.	ug/kg	N.D.		90	75	18	92			57	104
3761	naphthalene										
33.	ug/kg	N.D.		85	76	12	84			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		69	72	3	61			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		95	73	27	99			56	115
1190	4-chloro-3-methylpheno1										
67.	ug/kg	N.D.		86	86	0	88			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	75	15	85			60	102



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See reverse side for explanation of symbols and abbreviations.

2275 11/11/11





LLI Sample No. 2945148

GEO-18/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		10	7	32	87			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	97	2	103			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		97	95	2	101			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		95	82	15	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		84	86	3	85			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		90	92	2	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		85	80	7	90			62	101

4689	TCL Semivolatiles cont'd	Batch: 98166SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		78	82	5	65			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	75	15	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		16	12	28	73			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		91	95	4	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		95	83	13	97			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		96	88	8	102			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		89	90	0	99			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		91	92	1	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		76	65	16	81			52	110
3768	fluorene										
33.	ug/kg	N.D.		68	58	13	81			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		75	82	9	88			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		18	12	37	79			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		96	87	9	94			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		97	79	21	98			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		105	74	34	113			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		70	58	18	88			42	108



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2945148

GEO-18/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
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.		98	76	21	98			62	107
3776	anthracene										
33.	ug/kg	N.D.		95	78	19	99			62	105
4702	carbazole										
33.	ug/kg	N.D.		93	86	8	96			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		98	86	13	99			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		93	68	23	99			58	110
1195	pyrene										
33.	ug/kg	N.D.		98	76	19	99			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		95	90	6	100			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		78	79	1	55			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		91	71	20	100			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		103	72	34	98			8	158
3782	chrysene										
33.	ug/kg	N.D.		137	93	33	131			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		103	67	42	94			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		70	48	26	75			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		93	61	35	85			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		102	68	35	97			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		59	43	28	106			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		64	47	31	102			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		47	35	27	104			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981680199820000A	7				100	100	0	99	101



Lancaster Laboratories
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717-656-2300 Fax: 717-656-2681

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2216 11/11/07





LLI Sample No. 2945148
GEO-18/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	92	39	108
	2-Flpheno1	95	35	108
	2,4,6-TBP	107	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	75	31	126
	2-Fbiphenyl	84	45	113
	Tphenyl14	110	37	130



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12/15/2001 10:01





LLI Sample No. WW 2945149

Collected: 6/ 9/98 at 12:05 by DU

Submitted: 6/12/98 Reported: 7/23/98
Discard: 8/23/98

RB/6-9-98 Rinsate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB609 SDG#: HMS06-15RB

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT	
NO.	ANALYSIS NAME
4678	TCL Semivolatiles
4679	TCL Semivolatiles cont'd

	AS RECEIVED
	METHOD
RESULTS	DETECTION LIMIT UNITS

See Page 2
See Page 3

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
04:59:43 D 0003 16 129915 619002
863 0.00 00029700 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2018 4 20 11





LLI Sample No. WW 2945149

Collected: 6/ 9/98 at 12:05 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

RB/6-9-98 Rinsate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB609 SDG#: HMS06-15RB

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	2.	J	1. ug/l
3936	bis (2-chloroethyl) ether	N.D.		1. ug/l
3924	2-chlorophenol	N.D.		1. ug/l
3937	1,3-dichlorobenzene	N.D.		1. ug/l
3938	1,4-dichlorobenzene	N.D.		1. ug/l
3939	1,2-dichlorobenzene	N.D.		1. ug/l
4680	2-methylphenol	N.D.		1. ug/l
4681	2,2' oxybis (1-chloropropane)	N.D.		2. ug/l
4682	4-methylphenol	N.D.		3. ug/l
3942	N-nitrosodi-n-propylamine	N.D.		1. ug/l
3941	hexachloroethane	N.D.		1. ug/l
3943	nitrobenzene	N.D.		1. ug/l
3944	isophorone	N.D.		1. ug/l
3926	2-nitrophenol	N.D.		1. ug/l
3927	2,4-dimethylphenol	N.D.		1. ug/l
3945	bis (2-chloroethoxy) methane	N.D.		1. ug/l
3928	2,4-dichlorophenol	N.D.		1. ug/l
3946	1,2,4-trichlorobenzene	N.D.		1. ug/l
3947	naphthalene	N.D.		1. ug/l
3871	4-chloroaniline	N.D.		1. ug/l
3948	hexachlorobutadiene	N.D.		2. ug/l
3929	4-chloro-3-methylphenol	N.D.		1. ug/l
3905	2-methylnaphthalene	N.D.		1. ug/l
3949	hexachlorocyclopentadiene	N.D.		5. ug/l
3930	2,4,6-trichlorophenol	N.D.		2. ug/l
3922	2,4,5-trichlorophenol	N.D.		2. ug/l
3950	2-chloronaphthalene	N.D.		1. ug/l
3907	2-nitroaniline	N.D.		2. ug/l
3952	dimethyl phthalate	N.D.		2. ug/l
3951	acenaphthylene	N.D.		1. ug/l

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



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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 2945149

Collected: 6/ 9/98 at 12:05 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

RB/6-9-98 Rinsate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB609 SDG#: HMS06-15RB

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	16.	ug/l
3932	4-nitrophenol	N.D.	11.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethyl phthalate	N.D.	2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butyl phthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butyl benzyl phthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo (a) anthracene	N.D.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	N.D.	1.	ug/l
3976	benzo (k) fluoranthene	N.D.	1.	ug/l
3977	benzo (a) pyrene	N.D.	1.	ug/l
3978	indeno (1,2,3-cd) pyrene	N.D.	1.	ug/l
3979	dibenz (a,h) anthracene	N.D.	1.	ug/l
3980	benzo (ghi) perylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. **WW 2945149**

Collected: 6/ 9/98 at 12:05 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

RB/6-9-98 Rinsate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB609 SDG#: HMS06-15RB

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.
Due to insufficient sample, the quantitation limits for the GC/MS
semivolatile compounds were raised.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS SVOA



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02/11/98 11:11





LLI Sample No. WW 2945149

Collected: 06/09/98 at 12:05 by DU

Submitted: 06/12/98

RB/6-9-98 Rinsate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB609 SDG#: HMS06-15RB

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0813	BNA Water Extraction	SW-846 3510C	1	06/16/98 0800	Nathaniel R. Kurtz
4678	TCL Semivolatiles	SW-846 8270C	1	07/06/98 1907	Thaddeus C. Foreman
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/06/98 1907	Thaddeus C. Foreman



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LLI Sample No. 2945149
 RB/6-9-98 Rinsate Blank Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS

Group No. 619002
 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 Semivolatiles		Batch: 98167WAA026									

3925	phenol										
1.	ug/l	N.D.		53	50	6	49			5	83
3936	bis (2-chloroethyl) ether										
1.	ug/l	N.D.		93	90	3	89			66	106
3924	2-chlorophenol										
1.	ug/l	N.D.		93	89	5	90			62	107
3937	1,3-dichlorobenzene										
1.	ug/l	N.D.		78	83	6	74			45	91
3938	1,4-dichlorobenzene										
1.	ug/l	N.D.		81	83	3	75			45	94
3939	1,2-dichlorobenzene										
1.	ug/l	N.D.		88	88	0	82			52	97
4680	2-methylphenol										
1.	ug/l	N.D.		89	82	8	84			55	96
4681	2,2'-oxybis (1-chloropropane)										
2.	ug/l	N.D.		107	103	4	105			43	118
4682	4-methylphenol										
3.	ug/l	N.D.		87	82	6	83			48	99
3942	N-nitrosodi-n-propylamine										
1.	ug/l	N.D.		97	94	3	93			62	118
3941	hexachloroethane										
1.	ug/l	N.D.		69	73	6	59			40	84
3943	nitrobenzene										
1.	ug/l	N.D.		92	92	0	92			61	113
3944	isophorone										
1.	ug/l	N.D.		100	98	2	97			66	113
3926	2-nitrophenol										
1.	ug/l	N.D.		97	96	1	94			67	104
3927	2,4-dimethylphenol										
1.	ug/l	N.D.		86	85	1	83			52	99
3945	bis (2-chloroethoxy) methane										
1.	ug/l	N.D.		91	92	1	90			64	103
3928	2,4-dichlorophenol										
1.	ug/l	N.D.		95	93	2	90			65	98
3946	1,2,4-trichlorobenzene										
1.	ug/l	N.D.		82	87	6	80			52	93
3947	naphthalene										
1.	ug/l	N.D.		84	86	3	85			60	97
3871	4-chloroaniline										
1.	ug/l	N.D.		83	83	0	84			34	101
3948	hexachlorobutadiene										
2.	ug/l	N.D.		63	74	17	52			24	86
3929	4-chloro-3-methylphenol										
1.	ug/l	N.D.		100	98	2	96			60	111
3905	2-methylnaphthalene										
1.	ug/l	N.D.		85	87	3	85			62	98



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2015-03-15 10:17





LLI Sample No. 2945149
 RB/6-9-98 Rinsate Blank Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS

Group No. 619002
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3949	hexachlorocyclopentadiene										
	5. ug/l	N.D.		61	68	12	58			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		97	96	0	99			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		100	105	4	101			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	90	3	90			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		98	97	1	96			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		63	65	3	35			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		82	85	3	88			64	100

4679	TCL Semivolatiles cont'd	Batch: 98167WAA026									

3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	1	88			40	108
3954	acenaphthene										
	1. ug/l	N.D.		83	86	3	87			61	100
3931	2,4-dinitrophenol										
	16. ug/l	N.D.		97	97	0	117			25	124
3932	4-nitrophenol										
	11. ug/l	N.D.		47	48	2	51			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		85	89	4	90			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		100	98	2	100			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		98	98	0	99			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		82	81	1	70			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		86	90	4	89			62	104
3956	fluorene										
	1. ug/l	N.D.		88	91	3	93			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		96	95	0	95			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		94	97	3	99			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		88	88	1	90			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		89	88	1	91			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		103	106	3	95			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		71	87	20	98			46	114



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001 4 1 2 1 1





LLI Sample No. 2945149
 RB/6-9-98 Rinsate Blank Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS

Group No. 619002
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3963	phenanthrene										
1.	ug/l	N.D.		91	91	0	90			68	102
3964	anthracene										
1.	ug/l	N.D.		90	89	1	89			66	101
4684	carbazole										
1.	ug/l	N.D.		91	92	2	92			66	110
3965	di-n-butyl phthalate										
2.	ug/l	3.	J ug/l	88	89	0	87			61	105
3966	fluoranthene										
1.	ug/l	N.D.		86	86	0	92			66	106
3967	pyrene										
1.	ug/l	N.D.		119	112	6	108			58	112
3969	butyl benzyl phthalate										
2.	ug/l	11.	ug/l	75	73	3	79			48	105
3972	3,3'-dichlorobenzidine										
2.	ug/l	N.D.		70	70	1	74			37	104
3970	benzo (a) anthracene										
1.	ug/l	N.D.		90	89	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		91	91	0	89			64	113
3971	chrysene										
1.	ug/l	N.D.		89	86	3	81			67	101
3974	di-n-octyl phthalate										
2.	ug/l	N.D.		107	108	2	107			59	118
3975	benzo (b) fluoranthene										
1.	ug/l	N.D.		98	94	4	99			64	101
3976	benzo (k) fluoranthene										
1.	ug/l	N.D.		101	102	0	103			67	105
3977	benzo (a) pyrene										
1.	ug/l	N.D.		93	92	1	92			65	101
3978	indeno (1,2,3-cd) pyrene										
1.	ug/l	N.D.		89	86	2	81			59	111
3979	dibenz (a,h) anthracene										
1.	ug/l	N.D.		92	89	3	82			66	117
3980	benzo (ghi) perylene										
1.	ug/l	N.D.		93	92	2	83			55	115



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2945149
RB/6-9-98 Rinsate Blank Grab Water Sample
Gulf States Creosoting - Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	54	7	74
	Pheno1-d6	37	25	88
	2,4,6-TBP	88	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	78	47	114
	2-Fbiphnyl	78	51	106
	Tpheny1d14	74	37	119



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2270-100-01-01





LLI Sample No. **WW 2945150**

Collected: 6/10/98 at 15:45 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

RB/6-10-98 Rinsate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB610 SDG#: HMS06-16RB

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

4678 TCL Semivolatiles

See Page 2

4679 TCL Semivolatiles cont'd

See Page 3

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
05:00:48 D 0003 16 129915 619002
863 0.00 00029700 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2216 Rev 8/1/97





LLI Sample No. ww 2945150

Collected: 6/10/98 at 15:45 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

RB/6-10-98 Rinsate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB610 SDG#: HMS06-16RB

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'-oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethyl phthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2216 1-7-98 2-77





LLI Sample No. WW 2945150

Collected: 6/10/98 at 15:45 by DU

Submitted: 6/12/98 Reported: 7/23/98
Discard: 8/23/98

RB/6-10-98 Rinsate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB610 SDG#: HMS06-16RB

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	16.	ug/l
3932	4-nitrophenol	N.D.	11.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethyl phthalate	N.D.	2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butyl phthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butyl benzyl phthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo (a) anthracene	N.D.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	N.D.	1.	ug/l
3976	benzo (k) fluoranthene	N.D.	1.	ug/l
3977	benzo (a) pyrene	N.D.	1.	ug/l
3978	indeno (1,2,3-cd) pyrene	N.D.	1.	ug/l
3979	dibenz (a,h) anthracene	N.D.	1.	ug/l
3980	benzo (ghi) perylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300



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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



**LLI Sample No. WW 2945150**

Collected: 6/10/98 at 15:45 by DU

Submitted: 6/12/98 Reported: 7/23/98

Discard: 8/23/98

RB/6-10-98 Rinsate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB610 SDG#: HMS06-16RB

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

P.O.
Rel.CAT
NO. ANALYSIS NAME

AS RECEIVED	
RESULTS	METHOD DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.
Due to insufficient sample, the quantitation limits for the GC/MS semivolatile compounds were raised.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

02 6 14 8 1 1





LLI Sample No. WW 2945150

Collected: 06/10/98 at 15:45 by DU

Submitted: 06/12/98

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

RB/6-10-98 Rinsate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
 RB610 SDG#: HMS06-16RB

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	06/16/98 0800	Nathaniel R. Kurtz
4678	TCL Semivolatiles	SW-846 8270C	1	07/07/98 1150	Thaddeus C. Foreman
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/07/98 1150	Thaddeus C. Foreman



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LLI Sample No. 2945150
 RB/6-10-98 Rinsate Blank Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS

Group No. 619002
 Kerr-McGee Corporation

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

4678 TCL Semivolatiles		Batch: 98167WAA026									

3925	phenol										
	1. ug/l	N.D.		53	50	6	49			5	83
3936	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		93	90	3	89			66	106
3924	2-chlorophenol										
	1. ug/l	N.D.		93	89	5	90			62	107
3937	1,3-dichlorobenzene										
	1. ug/l	N.D.		78	83	6	74			45	91
3938	1,4-dichlorobenzene										
	1. ug/l	N.D.		81	83	3	75			45	94
3939	1,2-dichlorobenzene										
	1. ug/l	N.D.		88	88	0	82			52	97
4680	2-methylphenol										
	1. ug/l	N.D.		89	82	8	84			55	96
4681	2,2'-oxybis (1-chloropropane)										
	2. ug/l	N.D.		107	103	4	105			43	118
4682	4-methylphenol										
	3. ug/l	N.D.		87	82	6	83			48	99
3942	N-nitrosodi-n-propylamine										
	1. ug/l	N.D.		97	94	3	93			62	118
3941	hexachloroethane										
	1. ug/l	N.D.		69	73	6	59			40	84
3943	nitrobenzene										
	1. ug/l	N.D.		92	92	0	92			61	113
3944	isophorone										
	1. ug/l	N.D.		100	98	2	97			66	113
3926	2-nitrophenol										
	1. ug/l	N.D.		97	96	1	94			67	104
3927	2,4-dimethylphenol										
	1. ug/l	N.D.		86	85	1	83			52	99
3945	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		91	92	1	90			64	103
3928	2,4-dichlorophenol										
	1. ug/l	N.D.		95	93	2	90			65	98
3946	1,2,4-trichlorobenzene -										
	1. ug/l	N.D.		82	87	6	80			52	93
3947	naphthalene										
	1. ug/l	N.D.		84	86	3	85			60	97
3871	4-chloroaniline										
	1. ug/l	N.D.		83	83	0	84			34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		63	74	17	52			24	86
3929	4-chloro-3-methylphenol										
	1. ug/l	N.D.		100	98	2	96			60	111
3905	2-methylnaphthalene										
	1. ug/l	N.D.		85	87	3	85			62	98



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2215 Rev 7/97





LLI Sample No. 2945150
 RB/6-10-98 Rinsate Blank Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS

Group No. 619002
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3949	hexachlorocyclopentadiene										
	5. ug/l	N.D.		61	68	12	58			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		97	96	0	99			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		100	105	4	101			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	90	3	90			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		98	97	1	96			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		63	65	3	35			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		82	85	3	88			64	100

4679	TCL Semivolatiles cont'd	Batch: 98167WAA026									

3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	1	88			40	108
3954	acenaphthene										
	1. ug/l	N.D.		83	86	3	87			61	100
3931	2,4-dinitrophenol										
	16. ug/l	N.D.		97	97	0	117			25	124
3932	4-nitrophenol										
	11. ug/l	N.D.		47	48	2	51			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		85	89	4	90			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		100	98	2	100			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		98	98	0	99			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		82	81	1	70			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		86	90	4	89			62	104
3956	fluorene										
	1. ug/l	N.D.		88	91	3	93			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		96	95	0	95			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		94	97	3	99			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		88	88	1	90			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		89	88	1	91			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		103	106	3	95			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		71	87	20	98			46	114



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2945150
 RB/6-10-98 Rinsate Blank Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS

Group No. 619002
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3963	phenanthrene										
	1. ug/l	N.D.		91	91	0	90			68	102
3964	anthracene										
	1. ug/l	N.D.		90	89	1	89			66	101
4684	carbazole										
	1. ug/l	N.D.		91	92	2	92			66	110
3965	di-n-butyl phthalate										
	2. ug/l	3. J ug/l		88	89	0	87			61	105
3966	fluoranthene										
	1. ug/l	N.D.		86	86	0	92			66	106
3967	pyrene										
	1. ug/l	N.D.		119	112	6	108			58	112
3969	butyl benzyl phthalate										
	2. ug/l	11. ug/l		75	73	3	79			48	105
3972	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		70	70	1	74			37	104
3970	benzo (a) anthracene										
	1. ug/l	N.D.		90	89	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		91	91	0	89			64	113
3971	chrysene										
	1. ug/l	N.D.		89	86	3	81			67	101
3974	di-n-octyl phthalate										
	2. ug/l	N.D.		107	108	2	107			59	118
3975	benzo (b) fluoranthene										
	1. ug/l	N.D.		98	94	4	99			64	101
3976	benzo (k) fluoranthene										
	1. ug/l	N.D.		101	102	0	103			67	105
3977	benzo (a) pyrene										
	1. ug/l	N.D.		93	92	1	92			65	101
3978	indeno (1,2,3-cd) pyrene										
	1. ug/l	N.D.		89	86	2	81			59	111
3979	dibenz (a,h) anthracene										
	1. ug/l	N.D.		92	89	3	82			66	117
3980	benzo (ghi) perylene										
	1. ug/l	N.D.		93	92	2	83			55	115



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2016 Rev. 8/4/97





LLI Sample No. 2945150
RB/6-10-98 Rinsate Blank Grab Water Sample
Gulf States Creosoting - Hattiesburg, MS

Group No. 619002
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	45	7	74
	Pheno1-d6	32	25	88
	2,4,6-TBP	82	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	73	47	114
	2-Fbiphnyl	72	51	106
	Tphenyld14	62	37	119



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See reverse side for explanation of symbols and abbreviations.

2276 794 11-1-97





LLI Sample No. SW 2946082

Collected: 6/11/98 at 15:02 by DU

Submitted: 6/13/98 Reported: 7/16/98

Discard: 8/16/98

GEO-13/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-0 SDG#: HMS06-17

Account No: 07802
Kerr-McGee Corporation
P.O. 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	7.58	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: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
07:16:59 D 0003 3 129915 619182
0.00 00033420 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
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See reverse side for explanation of symbols and abbreviations.

2216 Rev 8-1-97





LLI Sample No. SW 2946082

Collected: 6/11/98 at 15:02 by DU

Submitted: 6/13/98 Reported: 7/16/98

Discard: 8/16/98

GEO-13/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-0 SDG#: HMS06-17

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	METHOD LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	72.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	36.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	36.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	36.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	36.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	36.
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	36.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	36.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	72.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	36.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	36.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	36.
3759	isophorone	N.D.	33.	ug/kg	N.D.	36.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	72.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	72.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	72.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	72.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	36.
3761	naphthalene	82.	J	33.	88.	J
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	36.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	72.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	72.
4694	2-methylnaphthalene	65.	J	33.	70.	J
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	180.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	72.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	72.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	36.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	36.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	72.
3765	acenaphthylene	1,200.	33.	ug/kg	1,300.	36.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2216 Rev 2/4/97





LLI Sample No. SW 2946082

Collected: 6/11/98 at 15:02 by DU

Submitted: 6/13/98 Reported: 7/16/98

Discard: 8/16/98

GEO-13/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-0 SDG#: HMS06-17

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Retl.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.		67.	ug/kg	N.D. 72.
1191	acenaphthene	45.	J	33.	ug/kg	49. J 36.
3750	2,4-dinitrophenol	N.D.		190.	ug/kg	N.D. 210.
1192	4-nitrophenol	N.D.		170.	ug/kg	N.D. 180.
4698	dibenzofuran	66.	J	33.	ug/kg	72. J 36.
1193	2,4-dinitrotoluene	N.D.		67.	ug/kg	N.D. 72.
3767	2,6-dinitrotoluene	N.D.		33.	ug/kg	N.D. 36.
3770	diethyl phthalate	N.D.		67.	ug/kg	N.D. 72.
3769	4-chlorophenyl phenyl ether	N.D.		33.	ug/kg	N.D. 36.
3768	fluorene	340.		33.	ug/kg	370. 36.
4700	4-nitroaniline	N.D.		67.	ug/kg	N.D. 72.
3751	4,6-dinitro-2-methylphenol	N.D.		170.	ug/kg	N.D. 180.
3772	N-nitrosodiphenylamine	N.D.		33.	ug/kg	N.D. 36.
3773	4-bromophenyl phenyl ether	N.D.		67.	ug/kg	N.D. 72.
3774	hexachlorobenzene	N.D.		33.	ug/kg	N.D. 36.
1194	pentachlorophenol	N.D.		170.	ug/kg	N.D. 180.
3775	phenanthrene	690.		33.	ug/kg	740. 36.
3776	anthracene	1,500.		33.	ug/kg	1,600. 36.
4702	carbazole	320.	J	33.	ug/kg	350. J 36.
3777	di-n-butyl phthalate	N.D.		67.	ug/kg	N.D. 72.
3778	fluoranthene	11,000.		170.	ug/kg	12,000. 180.
1195	pyrene	13,000.		170.	ug/kg	14,000. 180.
3780	butyl benzyl phthalate	N.D.		67.	ug/kg	N.D. 72.
3783	3,3'-dichlorobenzidine	N.D.		67.	ug/kg	N.D. 72.
3781	benzo (a) anthracene	6,200.		170.	ug/kg	6,700. 180.
3784	bis (2-ethylhexyl) phthalate	N.D.		67.	ug/kg	N.D. 72.
3782	chrysene	7,400.		170.	ug/kg	8,000. 180.
3785	di-n-octyl phthalate	N.D.		67.	ug/kg	N.D. 72.
3786	benzo (b) fluoranthene	8,500.		170.	ug/kg	9,200. 180.
3787	benzo (k) fluoranthene	3,300.		33.	ug/kg	3,600. 36.
3788	benzo (a) pyrene	4,800.		170.	ug/kg	5,200. 180.
3789	indeno (1,2,3-cd) pyrene	3,400.		33.	ug/kg	3,700. 36.
3790	dibenz (a,h) anthracene	840.		33.	ug/kg	910. 36.
3791	benzo (ghi) perylene-	2,100.		33.	ug/kg	2,300. 36.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2216 Rev 8/4/97





LLI Sample No. SW 2946082

Collected: 6/11/98 at 15:02 by DU

Submitted: 6/13/98 Reported: 7/16/98

Discard: 8/16/98

GEO-13/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-0 SDG#: HMS06-17

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd						

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2216 Rev. 8/4/97





LLI Sample No. SW 2946082

Collected: 06/11/98 at 15:02 by DU

Submitted: 06/13/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-13/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-0 SDG#: HMS06-17

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/17/98 0045	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/03/98 1855	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/03/98 1855	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1823	Patrick N. Ward



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LLI Sample No. 2946082

GEO-13/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619182
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 Semivolatiles		Batch: 98168SLA026									
1185	phenol										
67.	ug/kg	N.D.		89	96	8	82			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		93	94	1	82			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		89	92	4	84			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		95	98	3	78			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		94	97	3	79			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		95	99	3	83			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		88	89	1	83			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		98	101	4	87			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		85	88	4	78			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		82	87	6	77			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		92	96	4	73			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		94	99	5	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		97	100	3	90			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		95	97	2	88			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		91	95	4	81			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		92	96	4	84			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		94	97	4	87			59	100
1189	1,2,4-trichlorobenzene-										
33.	ug/kg	N.D.		101	102	1	87			57	104
3761	naphthalene										
33.	ug/kg	N.D.		111	93	15	83			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	55	2	84			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		109	112	2	88			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		88	91	4	84			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		130	92	26	84			60	102



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LLI Sample No. 2946082

GEO-13/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619182
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.		35	46	26	67			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	105	5	93			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		96	101	5	94			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		96	101	5	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		82	88	7	82			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		91	96	5	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		92	92	0	83			62	101

4689	TCL Semivolatiles cont'd	Batch: 98168SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		54	62	14	83			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	91	0	84			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		53	50	5	46			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	96	2	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		98	98	0	90			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		97	101	4	93			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		94	97	3	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		90	94	5	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		80	83	4	76			52	110
3768	fluorene										
33.	ug/kg	N.D.		81	73	8	76			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		79	81	2	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		60	55	9	68			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		98	100	2	84			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		102	100	1	90			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		116	116	0	100			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		99	100	1	85			42	108



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2216 Rev. 8/4/97





LLI Sample No. 2946082

GEO-13/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619182
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.		206	99	35	89			62	107
3776	anthracene										
33.	ug/kg	N.D.		115	104	8	90			62	105
4702	carbazole										
33.	ug/kg	N.D.		97	96	0	88			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		111	107	4	89			59	114
3778	fluoranthene										
170.	ug/kg	N.D.		163	103	25	89			58	110
1195	pyrene										
170.	ug/kg	N.D.		163	87	28	83			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		85	87	2	86			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		27	33	22	82			15	94
3781	benzo (a) anthracene										
170.	ug/kg	N.D.		113	95	11	85			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	101	11	76			8	158
3782	chrysene										
170.	ug/kg	N.D.		151	126	12	102			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		93	95	3	76			54	127
3786	benzo (b) fluoranthene										
170.	ug/kg	N.D.		92	78	10	63			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		98	90	7	75			63	108
3788	benzo (a) pyrene										
170.	ug/kg	N.D.		143	120	12	81			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		148	125	12	90			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		136	128	5	85			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		138	111	15	91			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981680199820002A	4				100	100	0	99	101



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2216 Rev 9/4/97





LLI Sample No. **2946082**
GEO-13/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619182
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	98	39	108
		2-Flphenol	102	35	108
		2,4,6-TBP	122	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	91	31	126
		2-Fbiphenyl	100	45	113
		Tphenylid14	83	37	130



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LLI Sample No. SW 2946083

Collected: 6/11/98 at 15:06 by DU

Submitted: 6/13/98 Reported: 7/16/98

Discard: 8/16/98

GEO-13/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-2 SDG#: HMS06-18

Account No: 07802
Kerr-McGee Corporation
P.O. 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	14.8	0.080	% by wt.		
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

1 COPY TO Kerr-McGee Corporation ATTN: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 07:19:52 D 0003 3 129915 619182
 0.00 00033420 ASR000

Respectfully Submitted
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2215 Rev. 8/4/97





LLI Sample No. SW 2946083

Collected: 6/11/98 at 15:06 by DU

Submitted: 6/13/98 Reported: 7/16/98

Discard: 8/16/98

GEO-13/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-2 SDG#: HMS06-18

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	78.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	39.
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.	33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	39.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	78.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	33.	ug/kg	N.D.	39.
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.	67.	ug/kg	N.D.	78.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	78.
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.	33.	ug/kg	N.D.	39.
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.	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.	33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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 Re 4.4.1





LLI Sample No. SW 2946083

Collected: 6/11/98 at 15:06 by DU

Submitted: 6/13/98 Reported: 7/16/98

Discard: 8/16/98

GEO-13/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-2 SDG#: HMS06-18

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
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.		190. ug/kg	N.D.	230.
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.
3767	2,6-dinitrotoluene	N.D.		33. ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.		67. ug/kg	N.D.	78.
3769	4-chlorophenyl phenyl ether	N.D.		33. ug/kg	N.D.	39.
3768	fluorene	280.	J	33. ug/kg	330.	J 39.
4700	4-nitroaniline	N.D.		67. ug/kg	N.D.	78.
3751	4,6-dinitro-2-methylphenol	N.D.		170. ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.		33. ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.		67. ug/kg	N.D.	78.
3774	hexachlorobenzene	N.D.		33. ug/kg	N.D.	39.
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.		67. ug/kg	N.D.	78.
3778	fluoranthene	42.	J	33. ug/kg	50.	J 39.
1195	pyrene	58.	J	33. ug/kg	68.	J 39.
3780	butyl benzyl phthalate	N.D.		67. ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.		67. ug/kg	N.D.	78.
3781	benzo (a) anthracene	35.	J	33. ug/kg	41.	J 39.
3784	bis (2-ethylhexyl) phthalate	N.D.		67. ug/kg	N.D.	78.
3782	chrysene	44.	J	33. ug/kg	51.	J 39.
3785	di-n-octyl phthalate	N.D.		67. ug/kg	N.D.	78.
3786	benzo (b) fluoranthene	380.		33. ug/kg	450.	39.
3787	benzo (k) fluoranthene	300.	J	33. ug/kg	350.	J 39.
3788	benzo (a) pyrene	N.D.		33. ug/kg	N.D.	39.
3789	indeno (1,2,3-cd) pyrene	N.D.		33. ug/kg	N.D.	39.
3790	dibenz (a,h) anthracene	N.D.		33. ug/kg	N.D.	39.
3791	benzo (ghi) perylene	N.D.		33. ug/kg	N.D.	39.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/4/97





LLI Sample No. SW 2946083

Collected: 6/11/98 at 15:06 by DU

Submitted: 6/13/98 Reported: 7/16/98

Discard: 8/16/98

GEO-13/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-2 SDG#: HMS06-18

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA



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2216 Rev. 8/4/97





LLI Sample No. SW 2946083

Collected: 06/11/98 at 15:06 by DU

Submitted: 06/13/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GEO-13/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-2 SDG#: HMS06-18

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/17/98 0045	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/03/98 0004	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/03/98 0004	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1823	Patrick N. Ward



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LLI Sample No. 2946083

GEO-13/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619182
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 Semivolatiles		Batch: 98168SLA026									
1185	phenol										
67.	ug/kg	N.D.		89	96	8	82			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		93	94	1	82			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		89	92	4	84			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		95	98	3	78			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		94	97	3	79			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		95	99	3	83			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		88	89	1	83			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		98	101	4	87			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		85	88	4	78			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		82	87	6	77			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		92	96	4	73			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		94	99	5	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		97	100	3	90			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		95	97	2	88			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		91	95	4	81			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		92	96	4	84			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		94	97	4	87			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		101	102	1	87			57	104
3761	naphthalene										
33.	ug/kg	N.D.		111	93	15	83			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	55	2	84			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		109	112	2	88			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		88	91	4	84			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		130	92	26	84			60	102





LLI Sample No. 2946083

GEO-13/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619182
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.		35	46	26	67			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	105	5	93			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		96	101	5	94			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		96	101	5	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		82	88	7	82			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		91	96	5	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		92	92	0	83			62	101

4689	TCL Semivolatiles cont'd	Batch: 98168SLA026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		54	62	14	83			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	91	0	84			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		53	50	5	46			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	96	2	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		98	98	0	90			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		97	101	4	93			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		94	97	3	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		90	94	5	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		80	83	4	76			52	110
3768	fluorene										
33.	ug/kg	N.D.		81	73	8	76			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		79	81	2	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		60	55	9	68			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		98	100	2	84			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		102	100	1	90			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		116	116	0	100			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		99	100	1	85			42	108



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See reverse side for explanation of symbols and abbreviations.

2275 11/11/01





LLI Sample No. 2946083

GEO-13/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619182
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.		206	99	35	89			62	107
3776	anthracene										
33.	ug/kg	N.D.		115	104	8	90			62	105
4702	carbazole										
33.	ug/kg	N.D.		97	96	0	88			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		111	107	4	89			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		163	103	25	89			58	110
1195	pyrene										
33.	ug/kg	N.D.		163	87	28	83			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		85	87	2	86			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		27	33	22	82			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		113	95	11	85			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		89	101	11	76			8	158
3782	chrysene										
33.	ug/kg	N.D.		151	126	12	102			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		93	95	3	76			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		92	78	10	63			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		98	90	7	75			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		143	120	12	81			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		148	125	12	90			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		136	128	5	85			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		138	111	15	91			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981680199820002A	4				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5.1.17





LLI Sample No. 2946083

GEO-13/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619182
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Phenol-d6	99	39 108
		2-Flphenol	107	35 108
		2,4,6-TBP	124	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	90	31 126
		2-Fbiphenyl	102	45 113
		Tphenylid14	117	37 130



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LLI Sample No. SW 2946084

Collected: 6/11/98 at 15:11 by DU

Submitted: 6/13/98 Reported: 7/16/98

Discard: 8/16/98

GEO-13/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-5 SDG#: HMS06-19*

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	LIMIT	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	12.5	0.080	% by wt.		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
07:22:32 D 0003 3 129915 619182
0.00 00033420 ASR000



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Respectfully Submitted
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Group Leader, GC/MS SVOA





LLI Sample No. SW 2946084

Collected: 6/11/98 at 15:11 by DU

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Discard: 8/16/98

GEO-13/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-5 SDG#: HMS06-19*

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 DETECTION LIMIT
TCL Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	76.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	38.
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.	33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	76.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	76.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	76.
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.	33.	ug/kg	N.D.	38.
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.	33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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Group Leader, GC/MS SVOA



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2216 11/19/97





LLI Sample No. SW 2946084

Collected: 6/11/98 at 15:11 by DU

Submitted: 6/13/98 Reported: 7/16/98

Discard: 8/16/98

GEO-13/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-5 SDG#: HMS06-19*

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
TCL Semivolatiles cont'd						
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.	190.	ug/kg	N.D.	220.
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.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	N.D.	33.	ug/kg	N.D.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
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.	67.	ug/kg	N.D.	76.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	38.
1195	pyrene	N.D.	33.	ug/kg	N.D.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	76.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	38.
3784	bis (2-ethylhexyl) phthalate	320.	J	67.	370.	J
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.	33.	ug/kg	N.D.	38.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	38.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	38.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene-	N.D.	33.	ug/kg	N.D.	38.

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2946084

Collected: 6/11/98 at 15:11 by DU

Submitted: 6/13/98 Reported: 7/16/98

Discard: 8/16/98

GEO-13/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-5 SDG#: HMS06-19*

Account No: 07802
Kerr-McGee Corporation
P.O. 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 Semivolatiles cont'd								

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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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2215 Rev 5.0197





LLI Sample No. SW 2946084

Collected: 06/11/98 at 15:11 by DU

Submitted: 06/13/98

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

GE0-13/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
G13-5 SDG#: HMS06-19*

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1	06/17/98 0045	Darin P. Wagner
4688	TCL Semivolatiles	SW-846 8270C	1	07/04/98 1356	Joseph M. Gambler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	07/04/98 1356	Joseph M. Gambler
0111	Moisture	EPA 160.3 modified	1	06/17/98 1823	Patrick N. Ward



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LLI Sample No. 2946084

GEO-13/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619182
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 Semivolatiles		Batch: 98168SLA026									
1185	phenol										
67.	ug/kg	N.D.		89	96	8	82			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		93	94	1	82			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		89	92	4	84			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		95	98	3	78			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		94	97	3	79			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		95	99	3	83			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		88	89	1	83			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		98	101	4	87			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		85	88	4	78			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		82	87	6	77			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		92	96	4	73			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		94	99	5	86			56	110
3759	isophorone										
33.	ug/kg	N.D.		97	100	3	90			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		95	97	2	88			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		91	95	4	81			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		92	96	4	84			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		94	97	4	87			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		101	102	1	87			57	104
3761	naphthalene										
33.	ug/kg	N.D.		111	93	15	83			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		54	55	2	84			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		109	112	2	88			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		88	91	4	84			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		130	92	26	84			60	102



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2215 04/13/05





LLI Sample No. 2946084

GEO-13/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619182
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		35	46	26	67			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		99	105	5	93			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		96	101	5	94			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		96	101	5	93			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		82	88	7	82			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		91	96	5	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		92	92	0	83			62	101

4689	TCL Semivolatiles cont'd	Batch: 98168SLA026									
4697	3-nitroaniline										
67.	ug/kg	N.D.		54	62	14	83			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		91	91	0	84			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		53	50	5	46			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	96	2	88			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		98	98	0	90			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		97	101	4	93			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		94	97	3	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		90	94	5	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		80	83	4	76			52	110
3768	fluorene										
33.	ug/kg	N.D.		81	73	8	76			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		79	81	2	89			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		60	55	9	68			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		98	100	2	84			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		102	100	1	90			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		116	116	0	100			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		99	100	1	85			42	108



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2010 Rev. 11.17





LLI Sample No. 2946084

GEO-13/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619182
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.		206	99	35	89			62	107
3776	anthracene										
	33. ug/kg	N.D.		115	104	8	90			62	105
4702	carbazole										
	33. ug/kg	N.D.		97	96	0	88			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		111	107	4	89			59	114
3778	fluoranthene										
	33. ug/kg	N.D.		163	103	25	89			58	110
1195	pyrene										
	33. ug/kg	N.D.		163	87	28	83			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		85	87	2	86			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		27	33	22	82			15	94
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		113	95	11	85			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		89	101	11	76			8	158
3782	chrysene										
	33. ug/kg	N.D.		151	126	12	102			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		93	95	3	76			54	127
3786	benzo (b) fluoranthene										
	33. ug/kg	N.D.		92	78	10	63			59	105
3787	benzo (k) fluoranthene										
	33. ug/kg	N.D.		98	90	7	75			63	108
3788	benzo (a) pyrene										
	33. ug/kg	N.D.		143	120	12	81			61	107
3789	indeno (1,2,3-cd) pyrene										
	33. ug/kg	N.D.		148	125	12	90			55	111
3790	dibenz (a,h) anthracene										
	33. ug/kg	N.D.		136	128	5	85			60	117
3791	benzo (ghi) perylene										
	33. ug/kg	N.D.		138	111	15	91			52	113
0111	Moisture										
	0.080 % by wt.	Batch: 981680199820002A	4				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2946084

GEO-13/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 619182
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	92	39	108
		2-Flphenol	99	35	108
		2,4,6-TBP	119	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	91	31	126
		2-Fbiphenyl	98	45	113
		Tphenyl14	125	37	130



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2014 Sep 14 11:11





LLI Sample No. WW 3018865
Collected: 10/14/98 at 09:25 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
Discard: 12/10/98

MW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W03-- SDG#: HMS07-01

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
1861	PAH's in Water			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 Data Package Group

ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
20:47:45 D 0002 18 129915 636359
232 0.00 00049700 ASR000



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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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LLI Sample No. WW 3018865

Collected: 10/14/98 at 09:25 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W03-- SDG#: HMS07-01

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.78	ug/l
3281	Acenaphthylene	N.D.	0.78	ug/l
3282	Acenaphthene	N.D.	0.78	ug/l
3283	Fluorene	0.99	0.16	ug/l
3284	Phenanthrene	2.14	0.045	ug/l
3285	Anthracene	0.178 J	0.030	ug/l
3286	Fluoranthene	0.38	0.019	ug/l
3287	Pyrene	N.D.	0.17	ug/l
3288	Benzo(a)anthracene	1.31	0.017	ug/l
3289	Chrysene	3.90	0.057	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.034	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	N.D.	0.021	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.046	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.096	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.062	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

Respectfully Submitted
Jennifer E. Hess, B.S.
Group Leader Pesticides/PCBs

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LLI Sample No. WW 3018865

Collected: 10/14/98 at 09:25 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W03-- SDG#: HMS07-01

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION	LIMIT UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis(2-chloroethyl)ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'-oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

32

Respectfully Submitted
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Group Leader, GC/MS SVOA



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2216 Rev. 8/4/97





LLI Sample No. WW 3018865

Collected: 10/14/98 at 09:25 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W03-- SDG#: HMS07-01

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethylphthalate	N.D.	2.	ug/l
3957	4-chlorophenylphenylether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenylphenylether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	2.	J 1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butylphthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butylbenzylphthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo(a)anthracene	N.D.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octylphthalate	N.D.	2.	ug/l
3975	benzo(b)fluoranthene	N.D.	1.	ug/l
3976	benzo(k)fluoranthene	N.D.	1.	ug/l
3977	benzo(a)pyrene	N.D.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.	ug/l
3979	dibenz(a,h)anthracene	N.D.	1.	ug/l
3980	benzo(ghi)perylene	N.D.	1.	ug/l

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



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LLI Sample No. WW 3018865

Collected: 10/14/98 at 09:25 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W03-- SDG#: HMS07-01

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rei.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300

34



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 3018866

Collected: 10/14/98 at 09:10 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-01 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W01-- SDG#: HMS07-02

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		LIMIT UNITS
		RESULTS	METHOD DETECTION	
1861	PAH's in Water			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 Data Package Group

ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
20:49:41 D 0002 18 129915 636359
232 0.00 00049700 ASR000

35

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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 8/4/97





LLI Sample No. WW 3018866

Collected: 10/14/98 at 09:10 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-01 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

W01-- SDG#: HMS07-02

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION	LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.78	ug/l
3281	Acenaphthylene	N.D.	0.78	ug/l
3282	Acenaphthene	N.D.	0.78	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.045	ug/l
3285	Anthracene	N.D.	0.030	ug/l
3286	Fluoranthene	N.D.	0.020	ug/l
3287	Pyrene	3.29	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	0.067 J	0.058	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.034	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.026	ug/l
3292	Benzo(a)pyrene	N.D.	0.021	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.046	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.097	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.063	ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

36

Respectfully Submitted
 Jenifer E. Hess, B.S.
 Group Leader Pesticides/PCBs



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. 8/4/97





LLI Sample No. WW 3018866

Collected: 10/14/98 at 09:10 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-01 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W01-- SDG#: HMS07-02

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION	LIMIT UNITS
TCL Semivolatiles				
3925	pheno1	N.D.	1.	ug/l
3936	bis(2-chloroethyl)ether	N.D.	1.	ug/l
3924	2-chloropheno1	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylpheno1	N.D.	1.	ug/l
4681	2,2'oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylpheno1	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylpheno1	N.D.	1.	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichloropheno1	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylpheno1	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichloropheno1	N.D.	2.	ug/l
3922	2,4,5-trichloropheno1	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

37

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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. WW 3018866

Collected: 10/14/98 at 09:10 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-01 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

W01-- SDG#: HMS07-02

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethylphthalate	N.D.	2.	ug/l
3957	4-chlorophenylphenylether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenylphenylether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butylphthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butylbenzylphthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo(a)anthracene	N.D.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octylphthalate	N.D.	2.	ug/l
3975	benzo(b)fluoranthene	N.D.	1.	ug/l
3976	benzo(k)fluoranthene	N.D.	1.	ug/l
3977	benzo(a)pyrene	N.D.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.	ug/l
3979	dibenz(a,h)anthracene	N.D.	1.	ug/l
3980	benzo(ghi)perylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA

38



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





LLI Sample No. WW 3018866

Collected: 10/14/98 at 09:10 by OU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-01 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W01-- SDG#: HMS07-02

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA

39



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. WW 3018867

Collected: 10/14/98 at 11:00 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-05 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W05-- SDG#: HMS07-03

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		LIMIT	UNITS
		RESULTS	METHOD DETECTION		
1861	PAH's in Water			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 Data Package Group

ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
20:51:23 D 0002 18 129915 636359
232 0.00 00049700 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

40



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





LLI Sample No. WW 3018867

Collected: 10/14/98 at 11:00 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-05 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W05-- SDG#: HMS07-03

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.80	ug/l
3281	Acenaphthylene	N.D.	0.80	ug/l
3282	Acenaphthene	N.D.	0.80	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.046	ug/l
3285	Anthracene	N.D.	0.031	ug/l
3286	Fluoranthene	0.074 J	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	0.018 J	0.018	ug/l
3289	Chrysene	N.D.	0.059	ug/l
3290	Benzo(b)fluoranthene	0.047 J	0.035	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	0.032 J	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.047	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.099	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.064	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

41

Respectfully Submitted
Jennifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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. WW 3018867

Collected: 10/14/98 at 11:00 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-05 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W05-- SDG#: HMS07-03

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis(2-chloroethyl)ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

42





LLI Sample No. WW 3018867
 Collected: 10/14/98 at 11:00 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
 Discard: 12/10/98

MW-05 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
 W05-- SDG#: HMS07-03

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethylphthalate	N.D.	2.	ug/l
3957	4-chlorophenylphenylether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenylphenylether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butylphthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butylbenzylphthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo(a)anthracene	N.D.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octylphthalate	N.D.	2.	ug/l
3975	benzo(b)fluoranthene	N.D.	1.	ug/l
3976	benzo(k)fluoranthene	N.D.	1.	ug/l
3977	benzo(a)pyrene	N.D.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.	ug/l
3979	dibenz(a,h)anthracene	N.D.	1.	ug/l
3980	benzo(ghi)perylene -	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA

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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. WW 3018867

Collected: 10/14/98 at 11:00 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-05 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W05-- SDG#: HMS07-03

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

AS RECEIVED

METHOD

CAT
NO. ANALYSIS NAME

RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

44



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





LLI Sample No. WW 3018868

Collected: 10/13/98 at 16:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W09-- SDG#: HMS07-04

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		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 Data Package Group

ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
20:53:08 D 0002 18 129915 636359
232 0.00 00049700 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

45



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





LLI Sample No. WW 3018868

Collected: 10/13/98 at 16:30 by OU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W09-- SDG#: HMS07-04

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
PAH's in Water				
3280	Naphthalene	2,200.	40.	ug/l
3281	Acenaphthylene	197.	0.80	ug/l
3282	Acenaphthene	230.	0.80	ug/l
3283	Fluorene	N.D.	8.5	ug/l
3284	Phenanthrene	50.	2.3	ug/l
3285	Anthracene	4.17	0.031	ug/l
3286	Fluoranthene	6.32	0.020	ug/l
3287	Pyrene	5.15	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	0.224 J	0.059	ug/l
3290	Benzo(b)fluoranthene	0.041 J	0.035	ug/l
3291	Benzo(k)fluoranthene	0.037 J	0.027	ug/l
3292	Benzo(a)pyrene	N.D.	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.047	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.099	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.064	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

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LLI Sample No. WW 3018868

Collected: 10/13/98 at 16:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W09-- SDG#: HMS07-04

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis(2-chloroethyl)ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'-oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	2,100.	20.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	430.	20.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	7. J	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

47

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/4/97





LLI Sample No. WW 3018868

Collected: 10/13/98 at 16:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W09-- SDG#: HMS07-04

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	190.	J 20.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	120.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethylphthalate	N.D.	2.	ug/l
3957	4-chlorophenylphenylether	N.D.	1.	ug/l
3956	fluorene	93.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenylphenylether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	52.	1.	ug/l
3964	anthracene	5.	J 1.	ug/l
4684	carbazole	110.	1.	ug/l
3965	di-n-butylphthalate	N.D.	2.	ug/l
3966	fluoranthene	7.	J 1.	ug/l
3967	pyrene	4.	J 1.	ug/l
3969	butylbenzylphthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo(a)anthracene	N.D.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octylphthalate	N.D.	2.	ug/l
3975	benzo(b)fluoranthene	N.D.	1.	ug/l
3976	benzo(k)fluoranthene	N.D.	1.	ug/l
3977	benzo(a)pyrene	N.D.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.	ug/l
3979	dibenz(a,h)anthracene	N.D.	1.	ug/l
3980	benzo(ghi)perylene -	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 3018868

Collected: 10/13/98 at 16:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

W09-- SDG#: HMS07-04

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

AS RECEIVED

CAT

NO. ANALYSIS NAME

RESULTS METHOD
DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300

Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA

49



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
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717-656-2300 Fax: 717-656-2631

See reverse side for explanation of symbols and abbreviations.

2215 Rev 8/4/97





LLI Sample No. WW 3018869

Collected: 10/13/98 at 16:55 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-19 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W19-- SOG#: HMS07-05

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
1861	PAH's in Water			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 Data Package Group

ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
20:54:41 D 0002 18 129915 636359
232 0.00 00049700 ASR000



Lancaster Laboratories
2425 New Holland Pike
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717-656-2300 Fax: 717-656-2681

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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LLI Sample No. WW 3018869
Collected: 10/13/98 at 16:55 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
Discard: 12/10/98

MW-19 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W19-- SDG#: HMS07-05

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	DETECTION LIMIT	UNITS
PAH's in Water					
3280	Naphthalene	1,810.		40.	ug/l
3281	Acenaphthylene	191.		0.80	ug/l
3282	Acenaphthene	220.		0.80	ug/l
3283	Fluorene	78.		8.5	ug/l
3284	Phenanthrene	41.		2.3	ug/l
3285	Anthracene	3.90		0.031	ug/l
3286	Fluoranthene	4.93		0.020	ug/l
3287	Pyrene	3.95		0.18	ug/l
3288	Benzo(a)anthracene	0.186		0.018	ug/l
3289	Chrysene	0.128	J	0.059	ug/l
3290	Benzo(b)fluoranthene	N.D.		0.035	ug/l
3291	Benzo(k)fluoranthene	N.D.		0.027	ug/l
3292	Benzo(a)pyrene	0.038	J	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.		0.047	ug/l
3294	Benzo(g,h,i)perylene	N.D.		0.099	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.		0.064	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

51

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. WW 3018869

Collected: 10/13/98 at 16:55 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-19 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W19-- SDG#: HMS07-05

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis(2-chloroethyl)ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'-oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	2,400.	30.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	500.	30.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	8.	J 1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

52

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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. 8/4/97





LLI Sample No. WW 3018869

Collected: 10/13/98 at 16:55 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-19 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W19-- SDG#: HMS07-05

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	210.	J 30.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	140.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethylphthalate	N.D.	2.	ug/l
3957	4-chlorophenylphenylether	N.D.	1.	ug/l
3956	fluorene	100.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenylphenylether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	58.	1.	ug/l
3964	anthracene	5.	J 1.	ug/l
4684	carbazole	120.	1.	ug/l
3965	di-n-butylphthalate	N.D.	2.	ug/l
3966	fluoranthene	7.	J 1.	ug/l
3967	pyrene	4.	J 1.	ug/l
3969	butylbenzylphthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo(a)anthracene	N.D.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octylphthalate	N.D.	2.	ug/l
3975	benzo(b)fluoranthene	N.D.	1.	ug/l
3976	benzo(k)fluoranthene	N.D.	1.	ug/l
3977	benzo(a)pyrene	N.D.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.	ug/l
3979	dibenz(a,h)anthracene	N.D.	1.	ug/l
3980	benzo(ghi)perylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

53

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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





LLI Sample No. WW 3018869

Collected: 10/13/98 at 16:55 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-19 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W19-- SDG#: HMS07-05

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT	AS RECEIVED	METHOD
NO.	RESULTS	DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300



Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

54





LLI Sample No. WW 3018870

Collected: 10/13/98 at 17:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W08-- SDG#: HMS07-06

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		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 Data Package Group

ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
20:56:25 D 0002 18 129915 636359
232 0.00 00049700 ASR000



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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

55





LLI Sample No. WW 3018870

Collected: 10/13/98 at 17:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W08-- SDG#: HMS07-06

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.81	ug/l
3281	Acenaphthylene	N.D.	0.81	ug/l
3282	Acenaphthene	N.D.	0.81	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.047	ug/l
3285	Anthracene	N.D.	0.031	ug/l
3286	Fluoranthene	N.D.	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.060	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.036	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	N.D.	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.048	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.10	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.065	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

56

Respectfully Submitted
Jennifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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. 8/4/97





LLI Sample No. WW 3018870

Collected: 10/13/98 at 17:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W08-- SDG#: HMS07-06

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis(2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2' oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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





LLI Sample No. WW 3018870
 Collected: 10/13/98 at 17:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
 Discard: 12/10/98

MW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
 W08-- SDG#: HMS07-06

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethylphthalate	N.D.	2.	ug/l
3957	4-chlorophenylphenylether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenylphenylether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butylphthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butylbenzylphthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo(a)anthracene	N.D.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octylphthalate	N.D.	2.	ug/l
3975	benzo(b)fluoranthene	N.D.	1.	ug/l
3976	benzo(k)fluoranthene	N.D.	1.	ug/l
3977	benzo(a)pyrene	N.D.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.	ug/l
3979	dibenz(a,h)anthracene	N.D.	1.	ug/l
3980	benzo(ghi)perylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA

59



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





LLI Sample No. WW 3018870

Collected: 10/13/98 at 17:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W08-- SDG#: HMS07-06

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT		AS RECEIVED	
NO.	ANALYSIS NAME	RESULTS	METHOD DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300

59

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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





Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. WW 3018871

Collected: 10/14/98 at 10:50 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-04 Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W04-- SDG#: HMS07-07BKG

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		METHOD	LIMIT UNITS
		RESULTS	DETECTION		
1861	PAH's in Water				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 Data Package Group

ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
20:58:01 D 0002 18 129915 636359
232 0.00 00049700 ASR000

60

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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





LLI Sample No. WW 3018871

Collected: 10/14/98 at 10:50 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-04 Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W04-- SDG#: HMS07-07BKG

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.		0.79 ug/l
3281	Acenaphthylene	N.D.		0.79 ug/l
3282	Acenaphthene	N.D.		0.79 ug/l
3283	Fluorene	N.D.		0.17 ug/l
3284	Phenanthrene	N.D.		0.045 ug/l
3285	Anthracene	0.031	J	0.030 ug/l
3286	Fluoranthene	N.D.		0.020 ug/l
3287	Pyrene	10.4		0.18 ug/l
3288	Benzo(a)anthracene	N.D.		0.018 ug/l
3289	Chrysene	0.063	J	0.058 ug/l
3290	Benzo(b)fluoranthene	N.D.		0.034 ug/l
3291	Benzo(k)fluoranthene	N.D.		0.027 ug/l
3292	Benzo(a)pyrene	N.D.		0.022 ug/l
3293	Dibenzo(a,h)anthracene	N.D.		0.046 ug/l
3294	Benzo(g,h,i)perylene	N.D.		0.097 ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.		0.063 ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

61

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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 8/4/97





LLI Sample No. WW 3018871

Collected: 10/14/98 at 10:50 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MM-04 Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W04-- SDG#: HMS07-07BKG

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis(2-chloroethyl)ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'-oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 3018871

Collected: 10/14/98 at 10:50 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-04 Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W04-- SDG#: HMS07-07BKG

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethylphthalate	N.D.	2.	ug/l
3957	4-chlorophenylphenylether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenylphenylether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butylphthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butylbenzylphthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo(a)anthracene	N.D.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octylphthalate	N.D.	2.	ug/l
3975	benzo(b)fluoranthene	N.D.	1.	ug/l
3976	benzo(k)fluoranthene	N.D.	1.	ug/l
3977	benzo(a)pyrene	N.D.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.	ug/l
3979	dibenz(a,h)anthracene	N.D.	1.	ug/l
3980	benzo(ghi)perylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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. 8/4/97

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



LLI Sample No. WW 3018871

Collected: 10/14/98 at 10:50 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-04 Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W04-- SDG#: HMS07-07BKG

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

AS RECEIVED

CAT	ANALYSIS NAME	RESULTS	METHOD	DETECTION LIMIT	UNITS
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TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

64



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





LLI Sample No. WW 3018872

Collected: 10/14/98 at 10:51 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-04 Matrix Spike Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W04-- SDG#: HMS07-07MS

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		DETECTION LIMIT UNITS
		RESULTS	METHOD	
1861	PAH's in Water			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 Data Package Group

ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
20:59:57 D 0002 18 129915 636359
232 0.00 00049700 ASR000

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVQA

65



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





LLI Sample No. **WW 3018872**
 Collected: 10/14/98 at 10:51 by DU
 Submitted: 10/15/98 Reported: 11/ 9/98
 Discard: 12/10/98

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

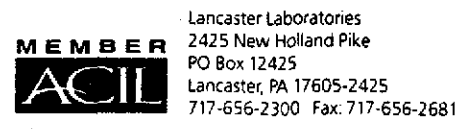
P.O. HATTIESBURG, MS
 Rel.

MW-04 Matrix Spike Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS
 W04-- SDG#: HMS07-07MS

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	172.	0.80	ug/l
3281	Acenaphthylene	183.	0.80	ug/l
3282	Acenaphthene	180.	0.80	ug/l
3283	Fluorene	19.1	0.17	ug/l
3284	Phenanthrene	5.58	0.046	ug/l
3285	Anthracene	2.43	0.031	ug/l
3286	Fluoranthene	2.86	0.020	ug/l
3287	Pyrene	19.8	0.18	ug/l
3288	Benzo(a)anthracene	1.41	0.018	ug/l
3289	Chrysene	5.89	0.059	ug/l
3290	Benzo(b)fluoranthene	1.17	0.035	ug/l
3291	Benzo(k)fluoranthene	1.13	0.027	ug/l
3292	Benzo(a)pyrene	1.47	0.022	ug/l
3293	Dibenzo(a,h)anthracene	2.88	0.047	ug/l
3294	Benzo(g,h,i)perylene	12.5	0.099	ug/l
3295	Indeno(1,2,3-cd)pyrene	6.23	0.064	ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

Respectfully Submitted
 Jenifer E. Hess, B.S.
 Group Leader Pesticides/PCBs





LLI Sample No. **WW 3018872**
 Collected: 10/14/98 at 10:51 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
 Discard: 12/10/98

MW-04 Matrix Spike Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
 W04-- SDG#: HMS07-07MS

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	DETECTION LIMIT	UNITS
TCL Semivolatiles					
3925	phenol	44.	1.		ug/l
3936	bis(2-chloroethyl)ether	94.	1.		ug/l
3924	2-chlorophenol	90.	1.		ug/l
3937	1,3-dichlorobenzene	97.	1.		ug/l
3938	1,4-dichlorobenzene	99.	1.		ug/l
3939	1,2-dichlorobenzene	100.	1.		ug/l
4680	2-methylphenol	79.	1.		ug/l
4681	2,2'oxybis(1-chloropropane)	110.	2.		ug/l
4682	4-methylphenol	80.	3.		ug/l
3942	N-nitrosodi-n-propylamine	98.	1.		ug/l
3941	hexachloroethane	93.	1.		ug/l
3943	nitrobenzene	110.	1.		ug/l
3944	isophorone	110.	1.		ug/l
3926	2-nitrophenol	98.	1.		ug/l
3927	2,4-dimethylphenol	85.	1.		ug/l
3945	bis(2-chloroethoxy)methane	96.	1.		ug/l
3928	2,4-dichlorophenol	91.	1.		ug/l
3946	1,2,4-trichlorobenzene	98.	1.		ug/l
3947	naphthalene	89.	1.		ug/l
3871	4-chloroaniline	60.	1.		ug/l
3948	hexachlorobutadiene	90.	2.		ug/l
3929	4-chloro-3-methylphenol	93.	1.		ug/l
3905	2-methylnaphthalene	91.	1.		ug/l
3949	hexachlorocyclopentadiene	150.	5.		ug/l
3930	2,4,6-trichlorophenol	99.	2.		ug/l
3922	2,4,5-trichlorophenol	100.	2.		ug/l
3950	2-chloronaphthalene	110.	1.		ug/l
3907	2-nitroaniline	100.	2.		ug/l
3952	dimethylphthalate	73.	2.		ug/l
3951	acenaphthylene	93.	1.		ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA

67



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





LLI Sample No. WW 3018872

Collected: 10/14/98 at 10:51 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-04 Matrix Spike Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W04-- SDG#: HMS07-07MS

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	60.	2.	ug/l
3954	acenaphthene	92.	1.	ug/l
3931	2,4-dinitrophenol	85.	15.	ug/l
3932	4-nitrophenol	52.	10.	ug/l
3879	dibenzofuran	96.	1.	ug/l
3955	2,4-dinitrotoluene	110.	1.	ug/l
3953	2,6-dinitrotoluene	120.	2.	ug/l
3958	diethylphthalate	91.	2.	ug/l
3957	4-chlorophenylphenylether	99.	1.	ug/l
3956	fluorene	97.	1.	ug/l
3909	4-nitroaniline	94.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	91.	5.	ug/l
3960	N-nitrosodiphenylamine	97.	1.	ug/l
3961	4-bromophenylphenylether	99.	2.	ug/l
3962	hexachlorobenzene	110.	2.	ug/l
3934	pentachlorophenol	87.	3.	ug/l
3963	phenanthrene	97.	1.	ug/l
3964	anthracene	97.	1.	ug/l
4684	carbazole	100.	1.	ug/l
3965	di-n-butylphthalate	99.	2.	ug/l
3966	fluoranthene	97.	1.	ug/l
3967	pyrene	93.	1.	ug/l
3969	butylbenzylphthalate	92.	2.	ug/l
3972	3,3'-dichlorobenzidine	64.	2.	ug/l
3970	benzo(a)anthracene	93.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	96.	2.	ug/l
3971	chrysene	93.	1.	ug/l
3974	di-n-octylphthalate	100.	2.	ug/l
3975	benzo(b)fluoranthene	88.	1.	ug/l
3976	benzo(k)fluoranthene	96.	1.	ug/l
3977	benzo(a)pyrene	94.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	94.	1.	ug/l
3979	dibenz(a,h)anthracene	96.	1.	ug/l
3980	benzo(ghi)perylene	94.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

63



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





LLI Sample No. WW 3018872

Collected: 10/14/98 at 10:51 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-04 Matrix Spike Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W04-- SDG#: HMS07-07MS

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT

NO. ANALYSIS NAME

AS RECEIVED

RESULTS

METHOD

DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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





LLI Sample No. WW 3018873

Collected: 10/14/98 at 10:52 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-04 Matrix Spike Duplicate Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

W04-- SDG#: HMS07-07MSD

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
4678	TCL Semivolatiles		See Page 3
4679	TCL Semivolatiles cont'd		See Page 4

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1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
21:01:29 D 0002 18 129915 636359
232 0.00 00049700 ASR000

70



Lancaster Laboratories
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 3018873

Collected: 10/14/98 at 10:52 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
Discard: 12/10/98

MW-04 Matrix Spike Duplicate Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W04-- SDG#: HMS07-07MSD

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
PAH's in Water				
3280	Naphthalene	167.	0.79	ug/l
3281	Acenaphthylene	176.	0.79	ug/l
3282	Acenaphthene	180.	0.79	ug/l
3283	Fluorene	18.4	0.17	ug/l
3284	Phenanthrene	5.37	0.046	ug/l
3285	Anthracene	2.34	0.031	ug/l
3286	Fluoranthene	2.76	0.020	ug/l
3287	Pyrene	19.2	0.18	ug/l
3288	Benzo(a)anthracene	1.35	0.018	ug/l
3289	Chrysene	5.59	0.058	ug/l
3290	Benzo(b)fluoranthene	1.12	0.035	ug/l
3291	Benzo(k)fluoranthene	1.10	0.027	ug/l
3292	Benzo(a)pyrene	1.41	0.022	ug/l
3293	Dibenzo(a,h)anthracene	2.79	0.047	ug/l
3294	Benzo(g,h,i)perylene	11.9	0.098	ug/l
3295	Indeno(1,2,3-cd)pyrene	5.98	0.063	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

71

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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Page: 3 of 11

LLI Sample No. WW 3018873

Collected: 10/14/98 at 10:52 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-04 Matrix Spike Duplicate Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

W04-- SDG#: HMS07-07MSD

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION	LIMIT UNITS
TCL Semivolatiles				
3925	phenol	36.	1.	ug/l
3936	bis(2-chloroethyl)ether	75.	1.	ug/l
3924	2-chlorophenol	72.	1.	ug/l
3937	1,3-dichlorobenzene	77.	1.	ug/l
3938	1,4-dichlorobenzene	79.	1.	ug/l
3939	1,2-dichlorobenzene	81.	1.	ug/l
4680	2-methylphenol	63.	1.	ug/l
4681	2,2'-oxybis(1-chloropropane)	85.	2.	ug/l
4682	4-methylphenol	64.	3.	ug/l
3942	N-nitrosodi-n-propylamine	78.	1.	ug/l
3941	hexachloroethane	76.	1.	ug/l
3943	nitrobenzene	85.	1.	ug/l
3944	isophorone	89.	1.	ug/l
3926	2-nitrophenol	76.	1.	ug/l
3927	2,4-dimethylphenol	66.	1.	ug/l
3945	bis(2-chloroethoxy)methane	75.	1.	ug/l
3928	2,4-dichlorophenol	70.	1.	ug/l
3946	1,2,4-trichlorobenzene	76.	1.	ug/l
3947	naphthalene	68.	1.	ug/l
3871	4-chloroaniline	50.	1.	ug/l
3948	hexachlorobutadiene	73.	2.	ug/l
3929	4-chloro-3-methylphenol	74.	1.	ug/l
3905	2-methylnaphthalene	72.	1.	ug/l
3949	hexachlorocyclopentadiene	120.	5.	ug/l
3930	2,4,6-trichlorophenol	77.	2.	ug/l
3922	2,4,5-trichlorophenol	80.	2.	ug/l
3950	2-chloronaphthalene	83.	1.	ug/l
3907	2-nitroaniline	83.	2.	ug/l
3952	dimethylphthalate	59.	2.	ug/l
3951	acenaphthylene	73.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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LLI Sample No. WW 3018873

Collected: 10/14/98 at 10:52 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-04 Matrix Spike Duplicate Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

W04-- SDG#: HMS07-07MSD

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	55.	2.	ug/l
3954	acenaphthene	74.	1.	ug/l
3931	2,4-dinitrophenol	68.	15.	ug/l
3932	4-nitrophenol	43.	J 10.	ug/l
3879	dibenzofuran	77.	1.	ug/l
3955	2,4-dinitrotoluene	91.	1.	ug/l
3953	2,6-dinitrotoluene	90.	2.	ug/l
3958	diethylphthalate	74.	2.	ug/l
3957	4-chlorophenylphenylether	78.	1.	ug/l
3956	fluorene	77.	1.	ug/l
3909	4-nitroaniline	76.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	72.	5.	ug/l
3960	N-nitrosodiphenylamine	77.	1.	ug/l
3961	4-bromophenylphenylether	78.	2.	ug/l
3962	hexachlorobenzene	87.	2.	ug/l
3934	pentachlorophenol	69.	3.	ug/l
3963	phenanthrene	77.	1.	ug/l
3964	anthracene	77.	1.	ug/l
4684	carbazole	81.	1.	ug/l
3965	di-n-butylphthalate	80.	2.	ug/l
3966	fluoranthene	78.	1.	ug/l
3967	pyrene	73.	1.	ug/l
3969	butylbenzylphthalate	74.	2.	ug/l
3972	3,3'-dichlorobenzidine	53.	2.	ug/l
3970	benzo(a)anthracene	73.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	77.	2.	ug/l
3971	chrysene	74.	1.	ug/l
3974	di-n-octylphthalate	82.	2.	ug/l
3975	benzo(b)fluoranthene	69.	1.	ug/l
3976	benzo(k)fluoranthene	74.	1.	ug/l
3977	benzo(a)pyrene	74.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	77.	1.	ug/l
3979	dibenz(a,h)anthracene	79.	1.	ug/l
3980	benzo(ghi)perylene -	77.	1.	ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

73

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



Lancaster Laboratories
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LLI Sample No. WW 3018873

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Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-04 Matrix Spike Duplicate Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

W04-- SDG#: HMS07-07MSD

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT		AS RECEIVED	
NO.	ANALYSIS NAME	RESULTS	METHOD DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300

74

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



Lancaster Laboratories
2425 New Holland Pike
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717-656-2300 Fax: 717-656-2681





LLI Sample No. WW 3018874

Collected: 10/13/98 at 14:20 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W12-- SDG#: HMS07-08

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		METHOD	LIMIT UNITS
		RESULTS	DETECTION		
6291	TCL Volatiles			See Page	2
1861	PAH's in Water			See Page	3
4678	TCL Semivolatiles			See Page	4
4679	TCL Semivolatiles cont'd			See Page	5

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ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
21:03:02 D 0002 18 129915 636359
232 0.00 00065300 ASR000

75

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. WW 3018874

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MW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W12-- SDG#: HMS07-08

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

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CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Volatiles				
5385	Chloromethane	N.D.	3.	ug/l
5387	Bromomethane	N.D.	3.	ug/l
5386	Vinyl Chloride	N.D.	2.	ug/l
5388	Chloroethane	N.D.	3.	ug/l
5391	Methylene Chloride	N.D.	2.	ug/l
6302	Acetone	N.D.	6.	ug/l
6303	Carbon Disulfide	N.D.	3.	ug/l
5390	1,1-Dichloroethene	N.D.	1.	ug/l
5393	1,1-Dichloroethane	N.D.	2.	ug/l
5396	Chloroform	N.D.	1.	ug/l
5402	1,2-Dichloroethane	N.D.	2.	ug/l
6305	2-Butanone	N.D.	3.	ug/l
5398	1,1,1-Trichloroethane	N.D.	1.	ug/l
5399	Carbon Tetrachloride	N.D.	1.	ug/l
5406	Bromodichloromethane	N.D.	1.	ug/l
5421	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
5404	1,2-Dichloropropane	N.D.	1.	ug/l
6306	trans-1,3-Dichloropropene	N.D.	1.	ug/l
5403	Trichloroethene	N.D.	1.	ug/l
5411	Dibromochloromethane	N.D.	2.	ug/l
5408	1,1,2-Trichloroethane	N.D.	2.	ug/l
5401	Benzene	N.D.	1.	ug/l
6307	cis-1,3-Dichloropropene	N.D.	1.	ug/l
5419	Bromoform	N.D.	1.	ug/l
6308	4-Methyl-2-pentanone	N.D.	5.	ug/l
6309	2-Hexanone	N.D.	7.	ug/l
5409	Tetrachloroethene	N.D.	1.	ug/l
5407	Toluene	N.D.	2.	ug/l
5413	Chlorobenzene	N.D.	1.	ug/l
5415	Ethylbenzene	N.D.	2.	ug/l
5418	Styrene	N.D.	1.	ug/l
6310	Xylene (Total)	4. J	1.	ug/l
5392	trans-1,2-Dichloroethene	N.D.	2.	ug/l
5395	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

76

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.





LLI Sample No. WW 3018874

Collected: 10/13/98 at 14:20 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W12-- SDG#: HMS07-08

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED			
		RESULTS		METHOD DETECTION LIMIT	UNITS
PAH's in Water					
3280	Naphthalene	106.		0.82	ug/l
3281	Acenaphthylene	6.56	J	0.82	ug/l
3282	Acenaphthene	3.3	J	0.82	ug/l
3283	Fluorene	1.34		0.17	ug/l
3284	Phenanthrene	0.40		0.047	ug/l
3285	Anthracene	0.042	J	0.032	ug/l
3286	Fluoranthene	N.D.		0.021	ug/l
3287	Pyrene	2.77		0.19	ug/l
3288	Benzo(a)anthracene	N.D.		0.019	ug/l
3289	Chrysene	N.D.		0.061	ug/l
3290	Benzo(b)fluoranthene	N.D.		0.036	ug/l
3291	Benzo(k)fluoranthene	N.D.		0.028	ug/l
3292	Benzo(a)pyrene	N.D.		0.023	ug/l
3293	Dibenzo(a,h)anthracene	N.D.		0.048	ug/l
3294	Benzo(g,h,i)perylene	N.D.		0.10	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.		0.066	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

77





LLI Sample No. WW 3018874

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Discard: 12/10/98

MW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W12-- SDG#: HMS07-08

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis(2-chloroethyl)ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.O.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	10.	J	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	72.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	4.	J	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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Respectfully Submitted
Charles J. Nestlund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 3018874
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Submitted: 10/15/98 Reported: 11/ 9/98
Discard: 12/10/98

MW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W12-- SDG#: HMS07-08

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		METHOD	DETECTION LIMIT	UNITS
		RESULTS				
TCL Semivolatiles cont'd						
3908	3-nitroaniline	N.D.		2.		ug/l
3954	acenaphthene	3.	J	1.		ug/l
3931	2,4-dinitrophenol	N.D.		15.		ug/l
3932	4-nitrophenol	N.D.		10.		ug/l
3879	dibenzofuran	4.	J	1.		ug/l
3955	2,4-dinitrotoluene	N.D.		1.		ug/l
3953	2,6-dinitrotoluene	N.D.		2.		ug/l
3958	diethylphthalate	N.D.		2.		ug/l
3957	4-chlorophenylphenylether	N.D.		1.		ug/l
3956	fluorene	1.	J	1.		ug/l
3909	4-nitroaniline	N.D.		2.		ug/l
3933	4,6-dinitro-2-methylphenol	N.D.		5.		ug/l
3960	N-nitrosodiphenylamine	N.D.		1.		ug/l
3961	4-bromophenylphenylether	N.D.		2.		ug/l
3962	hexachlorobenzene	N.D.		2.		ug/l
3934	pentachlorophenol	N.D.		3.		ug/l
3963	phenanthrene	N.D.		1.		ug/l
3964	anthracene	N.D.		1.		ug/l
4684	carbazole	4.	J	1.		ug/l
3965	di-n-butylphthalate	N.D.		2.		ug/l
3966	fluoranthene	N.D.		1.		ug/l
3967	pyrene	N.D.		1.		ug/l
3969	butylbenzylphthalate	N.D.		2.		ug/l
3972	3,3'-dichlorobenzidine	N.D.		2.		ug/l
3970	benzo(a)anthracene	N.D.		1.		ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.		2.		ug/l
3971	chrysene	N.D.		1.		ug/l
3974	di-n-octylphthalate	N.D.		2.		ug/l
3975	benzo(b)fluoranthene	N.D.		1.		ug/l
3976	benzo(k)fluoranthene	N.D.		1.		ug/l
3977	benzo(a)pyrene	N.D.		1.		ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.		1.		ug/l
3979	dibenz(a,h)anthracene	N.D.		1.		ug/l
3980	benzo(ghi)perylene	N.D.		1.		ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

79

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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





LLI Sample No. WW 3018874

Collected: 10/13/98 at 14:20 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W12-- SDG#: HMS07-08

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 3018875

Collected: 10/13/98 at 13:20 by DU

Submitted: 10/15/98 Reported: 11/10/98
Discard: 12/11/98

MW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W10-- SDG#: HMS07-09

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
6291	TCL Volatiles		See Page 2
1861	PAH's in Water		See Page 3
4678	TCL Semivolatiles		See Page 4
4679	TCL Semivolatiles cont'd		See Page 5

1 COPY TO Kerr-McGee Corporation
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
20:23:49 D 0002 18 REP 129915 636359
288 0.00 00065300 ASR000

81

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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

81



LLI Sample No. **WW 3018875**
 Collected: 10/13/98 at 13:20 by DU

Submitted: 10/15/98 Reported: 11/10/98
 Discard: 12/11/98

MW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
 W10-- SDG#: HMS07-09

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Volatiles				
5385	Chloromethane	N.D.	3.	ug/l
5387	Bromomethane	N.D.	3.	ug/l
5386	Vinyl Chloride	N.D.	2.	ug/l
5388	Chloroethane	N.D.	3.	ug/l
5391	Methylene Chloride	N.D.	2.	ug/l
6302	Acetone	N.D.	6.	ug/l
6303	Carbon Disulfide	N.D.	3.	ug/l
5390	1,1-Dichloroethene	N.D.	1.	ug/l
5393	1,1-Dichloroethane	N.D.	2.	ug/l
5396	Chloroform	N.D.	1.	ug/l
5402	1,2-Dichloroethane	N.D.	2.	ug/l
6305	2-Butanone	N.D.	3.	ug/l
5398	1,1,1-Trichloroethane	N.D.	1.	ug/l
5399	Carbon Tetrachloride	N.D.	1.	ug/l
5406	Bromodichloromethane	N.D.	1.	ug/l
5421	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
5404	1,2-Dichloropropane	N.D.	1.	ug/l
6306	trans-1,3-Dichloropropene	N.D.	1.	ug/l
5403	Trichloroethene	N.D.	1.	ug/l
5411	Dibromochloromethane	N.D.	2.	ug/l
5408	1,1,2-Trichloroethane	N.D.	2.	ug/l
5401	Benzene	N.D.	1.	ug/l
6307	cis-1,3-Dichloropropene	N.D.	1.	ug/l
5419	Bromoform	N.D.	1.	ug/l
6308	4-Methyl-2-pentanone	N.D.	5.	ug/l
6309	2-Hexanone	N.D.	7.	ug/l
5409	Tetrachloroethene	N.D.	1.	ug/l
5407	Toluene	N.D.	2.	ug/l
5413	Chlorobenzene	N.D.	1.	ug/l
5415	Ethylbenzene	N.D.	2.	ug/l
5418	Styrene	N.D.	1.	ug/l
6310	Xylene (Total)	N.D.	1.	ug/l
5392	trans-1,2-Dichloroethene	N.D.	2.	ug/l
5395	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

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



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 717-656-2300 Fax 717-656-2681



LLI Sample No. WW 3018875

Collected: 10/13/98 at 13:20 by DU

Submitted: 10/15/98 Reported: 11/10/98

Discard: 12/11/98

MW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W10-- SDG#: HMS07-09

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	DETECTION LIMIT	UNITS
PAH's in Water					
3280	Naphthalene	N.D.	0.82		ug/l
3281	Acenaphthylene	N.D.	0.82		ug/l
3282	Acenaphthene	N.D.	0.82		ug/l
3283	Fluorene	N.D.	0.17		ug/l
3284	Phenanthrene	N.D.	0.047		ug/l
3285	Anthracene	N.D.	0.032		ug/l
3286	Fluoranthene	N.D.	0.021		ug/l
3287	Pyrene	1.84	0.18		ug/l
3288	Benzo(a)anthracene	N.D.	0.018		ug/l
3289	Chrysene	N.D.	0.061		ug/l
3290	Benzo(b)fluoranthene	N.D.	0.036		ug/l
3291	Benzo(k)fluoranthene	N.D.	0.028		ug/l
3292	Benzo(a)pyrene	N.D.	0.023		ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.048		ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.10		ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.066		ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

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Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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LLI Sample No. WW 3018875

Collected: 10/13/98 at 13:20 by DU

Submitted: 10/15/98 Reported: 11/10/98

Discard: 12/11/98

MW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W10-- SDG#: HMS07-09

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis(2-chloroethyl)ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'-oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



Lancaster Laboratories
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717-656-2300 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations

2210 Rev. 8.1.97

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

84



LLI Sample No. WW 3018875

Collected: 10/13/98 at 13:20 by DU

Submitted: 10/15/98 Reported: 11/10/98

Discard: 12/11/98

MW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W10-- SDG#: HMS07-09

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd					
3908	3-nitroaniline	N.D.	2.		ug/l
3954	acenaphthene	N.D.	1.		ug/l
3931	2,4-dinitrophenol	N.D.	15.		ug/l
3932	4-nitrophenol	N.D.	10.		ug/l
3879	dibenzofuran	N.D.	1.		ug/l
3955	2,4-dinitrotoluene	N.D.	1.		ug/l
3953	2,6-dinitrotoluene	N.D.	2.		ug/l
3958	diethylphthalate	N.D.	2.		ug/l
3957	4-chlorophenylphenylether	N.D.	1.		ug/l
3956	fluorene	N.D.	1.		ug/l
3909	4-nitroaniline	N.D.	2.		ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.		ug/l
3960	N-nitrosodiphenylamine	N.D.	1.		ug/l
3961	4-bromophenylphenylether	N.D.	2.		ug/l
3962	hexachlorobenzene	N.D.	2.		ug/l
3934	pentachlorophenol	N.D.	3.		ug/l
3963	phenanthrene	N.D.	1.		ug/l
3964	anthracene	N.D.	1.		ug/l
4684	carbazole	N.D.	1.		ug/l
3965	di-n-butylphthalate	N.D.	2.		ug/l
3966	fluoranthene	N.D.	1.		ug/l
3967	pyrene	N.D.	1.		ug/l
3969	butylbenzylphthalate	N.D.	2.		ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.		ug/l
3970	benzo(a)anthracene	N.D.	1.		ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.	2.		ug/l
3971	chrysene	N.D.	1.		ug/l
3974	di-n-octylphthalate	N.D.	2.		ug/l
3975	benzo(b)fluoranthene	N.D.	1.		ug/l
3976	benzo(k)fluoranthene	N.D.	1.		ug/l
3977	benzo(a)pyrene	N.D.	1.		ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.		ug/l
3979	dibenz(a,h)anthracene	N.D.	1.		ug/l
3980	benzo(ghi)perylene	N.D.	1.		ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVQA



LLI Sample No. WW 3018875
Collected: 10/13/98 at 13:20 by DU

Submitted: 10/15/98 Reported: 11/10/98
Discard: 12/11/98

MW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W10-- SDG#: HMS07-09

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Ref.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300

86

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

2215 Rev. 3/4/97



LLI Sample No. **ww 3018876**

Collected: 10/13/98 at 15:50 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W06-- SDG#: HMS07-10

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		See Page 2
4678	TCL Semivolatiles		See Page 3
4679	TCL Semivolatiles cont'd		See Page 4

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ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
21:06:55 D 0002 18 129915 636359
232 0.00 00049700 ASR000



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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

87



LLI Sample No. WW 3018876
Collected: 10/13/98 at 15:50 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
Discard: 12/10/98

MW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W06-- SDG#: HMS07-10

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	680.	16.	ug/l
3281	Acenaphthylene	26.0	0.81	ug/l
3282	Acenaphthene	26.	0.81	ug/l
3283	Fluorene	15.5	3.4	ug/l
3284	Phenanthrene	9.28	0.047	ug/l
3285	Anthracene	0.75	0.031	ug/l
3286	Fluoranthene	0.52	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.060	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.035	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	N.D.	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.048	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.10	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.065	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

88





LLI Sample No. WW 3018876

Collected: 10/13/98 at 15:50 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

W06-- SDG#: HMS07-10

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		METHOD	DETECTION LIMIT	UNITS
		RESULTS				
TCL Semivolatiles						
3925	phenol	8.	J	1.		ug/l
3936	bis(2-chloroethyl)ether	N.D.		1.		ug/l
3924	2-chlorophenol	N.D.		1.		ug/l
3937	1,3-dichlorobenzene	N.D.		1.		ug/l
3938	1,4-dichlorobenzene	N.D.		1.		ug/l
3939	1,2-dichlorobenzene	N.D.		1.		ug/l
4680	2-methylphenol	35.		1.		ug/l
4681	2,2'oxybis(1-chloropropane)	N.D.		2.		ug/l
4682	4-methylphenol	9.	J	3.		ug/l
3942	N-nitrosodi-n-propylamine	N.D.		1.		ug/l
3941	hexachloroethane	N.D.		1.		ug/l
3943	nitrobenzene	N.D.		1.		ug/l
3944	isophorone	N.D.		1.		ug/l
3926	2-nitrophenol	N.D.		1.		ug/l
3927	2,4-dimethylphenol	48.		1.		ug/l
3945	bis(2-chloroethoxy)methane	N.D.		1.		ug/l
3928	2,4-dichlorophenol	N.D.		1.		ug/l
3946	1,2,4-trichlorobenzene	N.D.		1.		ug/l
3947	naphthalene	800.		10.		ug/l
3871	4-chloroaniline	N.D.		1.		ug/l
3948	hexachlorobutadiene	N.D.		2.		ug/l
3929	4-chloro-3-methylphenol	N.D.		1.		ug/l
3905	2-methylnaphthalene	33.		1.		ug/l
3949	hexachlorocyclopentadiene	N.D.		5.		ug/l
3930	2,4,6-trichlorophenol	N.D.		2.		ug/l
3922	2,4,5-trichlorophenol	N.D.		2.		ug/l
3950	2-chloronaphthalene	N.D.		1.		ug/l
3907	2-nitroaniline	N.D.		2.		ug/l
3952	dimethylphthalate	N.D.		2.		ug/l
3951	acenaphthylene	N.D.		1.		ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

89

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

2216 Rev. 8/4/97





LLI Sample No. WW 3018876

Collected: 10/13/98 at 15:50 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W06-- SDG#: HMS07-10

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD DETECTION	LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	23.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	43.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethylphthalate	N.D.	2.	ug/l
3957	4-chlorophenylphenylether	N.D.	1.	ug/l
3956	fluorene	19.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenylphenylether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	13.	1.	ug/l
3964	anthracene	1.	J 1.	ug/l
4684	carbazole	25.	1.	ug/l
3965	di-n-butylphthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butylbenzylphthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo(a)anthracene	N.D.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octylphthalate	N.D.	2.	ug/l
3975	benzo(b)fluoranthene	N.D.	1.	ug/l
3976	benzo(k)fluoranthene	N.D.	1.	ug/l
3977	benzo(a)pyrene	N.D.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.	ug/l
3979	dibenz(a,h)anthracene	N.D.	1.	ug/l
3980	benzo(ghi)perylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

90



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 3018876

Collected: 10/13/98 at 15:50 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W06-- SDG#: HMS07-10

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

91





LLI Sample No. WW 3018877

Collected: 10/13/98 at 17:40 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
Discard: 12/10/98

MW-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W07-- SDG#: HMS07-11

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
1861	PAH's in Water		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 Data Package Group
ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
21:08:35 D 0002 18 129915 636359
232 0.00 00049700 ASR000

92

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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 3018877

Collected: 10/13/98 at 17:40 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W07-- SDG#: HMS07-11

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.83	ug/l
3281	Acenaphthylene	N.D.	0.83	ug/l
3282	Acenaphthene	N.D.	0.83	ug/l
3283	Fluorene	N.D.	0.18	ug/l
3284	Phenanthrene	N.D.	0.048	ug/l
3285	Anthracene	N.D.	0.032	ug/l
3286	Fluoranthene	N.D.	0.021	ug/l
3287	Pyrene	1.42	0.19	ug/l
3288	Benzo(a)anthracene	N.D.	0.019	ug/l
3289	Chrysene	N.D.	0.061	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.036	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.028	ug/l
3292	Benzo(a)pyrene	N.D.	0.023	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.049	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.10	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.066	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

93

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs



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

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 3-4-97





LLI Sample No. **WW 3018877**
 Collected: 10/13/98 at 17:40 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
 Discard: 12/10/98

MM-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
 W07-- SDG#: HMS07-11

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis(2-chloroethyl)ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'-oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

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Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA



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



LLI Sample No. **WW 3018877**
 Collected: 10/13/98 at 17:40 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
 Discard: 12/10/98

MW-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
 W07-- SDG#: HMS07-11

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethylphthalate	N.D.	2.	ug/l
3957	4-chlorophenylphenylether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenylphenylether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butylphthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butylbenzylphthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo(a)anthracene	N.D.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	4.	J 2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octylphthalate	N.D.	2.	ug/l
3975	benzo(b)fluoranthene	N.D.	1.	ug/l
3976	benzo(k)fluoranthene	N.D.	1.	ug/l
3977	benzo(a)pyrene	N.D.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.	ug/l
3979	dibenz(a,h)anthracene	N.D.	1.	ug/l
3980	benzo(ghi)perylene -	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300



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

Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA





LLI Sample No. WW 3018877

Collected: 10/13/98 at 17:40 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W07-- SDG#: HMS07-11

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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LLI Sample No. WW 3018878
Collected: 10/14/98 at 14:00 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
Discard: 12/10/98

MW-13 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W13-- SDG#: HMS07-12

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
6291	TCL Volatiles		See Page 2
1861	PAH's in Water		See Page 3
4678	TCL Semivolatiles		See Page 4
4679	TCL Semivolatiles cont'd		See Page 5

1 COPY TO Kerr-McGee Corporation
1 COPY TO Data Package Group
ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
21:10:21 D 0002 18 129915 636359
232 0.00 00065300 ASR000

MEMBER
ACIL
Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

97





LLI Sample No. WW 3018878

Collected: 10/14/98 at 14:00 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-13 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W13-- SDG#: HMS07-12

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Volatiles				
5385	Chloromethane	N.D.	3.	ug/l
5387	Bromomethane	N.D.	3.	ug/l
5386	Vinyl Chloride	N.D.	2.	ug/l
5388	Chloroethane	N.D.	3.	ug/l
5391	Methylene Chloride	N.D.	2.	ug/l
6302	Acetone	N.D.	6.	ug/l
6303	Carbon Disulfide	N.D.	3.	ug/l
5390	1,1-Dichloroethene	N.D.	1.	ug/l
5393	1,1-Dichloroethane	N.D.	2.	ug/l
5396	Chloroform	N.D.	1.	ug/l
5402	1,2-Dichloroethane	N.D.	2.	ug/l
6305	2-Butanone	N.D.	3.	ug/l
5398	1,1,1-Trichloroethane	N.D.	1.	ug/l
5399	Carbon Tetrachloride	N.D.	1.	ug/l
5406	Bromodichloromethane	N.D.	1.	ug/l
5421	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
5404	1,2-Dichloropropane	N.D.	1.	ug/l
6306	trans-1,3-Dichloropropene	N.D.	1.	ug/l
5403	Trichloroethene	N.D.	1.	ug/l
5411	Dibromochloromethane	N.D.	2.	ug/l
5408	1,1,2-Trichloroethane	N.D.	2.	ug/l
5401	Benzene	N.D.	1.	ug/l
6307	cis-1,3-Dichloropropene	N.D.	1.	ug/l
5419	Bromoform	N.D.	1.	ug/l
6308	4-Methyl-2-pentanone	N.D.	5.	ug/l
6309	2-Hexanone	N.D.	7.	ug/l
5409	Tetrachloroethene	N.D.	1.	ug/l
5407	Toluene	N.D.	2.	ug/l
5413	Chlorobenzene	N.D.	1.	ug/l
5415	Ethylbenzene	N.D.	2.	ug/l
5418	Styrene	N.D.	1.	ug/l
6310	Xylene (Total)	N.D.	1.	ug/l
5392	trans-1,2-Dichloroethene	N.D.	2.	ug/l
5395	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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

98





LLI Sample No. WW 3018878

Collected: 10/14/98 at 14:00 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-13 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W13-- SDG#: HMS07-12

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.80	ug/l
3281	Acenaphthylene	N.D.	0.80	ug/l
3282	Acenaphthene	N.D.	0.8	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.046	ug/l
3285	Anthracene	N.D.	0.031	ug/l
3286	Fluoranthene	N.D.	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.059	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.035	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	N.D.	0.022	ug/l
3293	Dibenzo(a, h)anthracene	N.D.	0.047	ug/l
3294	Benzo(g, h, i)perylene	N.D.	0.099	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.064	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs

99



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





LLI Sample No. **WW 3018878**

Collected: 10/14/98 at 14:00 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-13 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W13-- SDG#: HMS07-12

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION	LIMIT UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis(2-chloroethyl)ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'-oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

100



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





LLI Sample No. WW 3018878
Collected: 10/14/98 at 14:00 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
Discard: 12/10/98

MW-13 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W13-- SDG#: HMS07-12

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethylphthalate	N.D.	2.	ug/l
3957	4-chlorophenylphenylether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenylphenylether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butylphthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butylbenzylphthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo(a)anthracene	N.D.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octylphthalate	N.D.	2.	ug/l
3975	benzo(b)fluoranthene	N.D.	1.	ug/l
3976	benzo(k)fluoranthene	N.D.	1.	ug/l
3977	benzo(a)pyrene	N.D.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.	ug/l
3979	dibenz(a,h)anthracene	N.D.	1.	ug/l
3980	benzo(ghi)perylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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. 8/4/97

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

101



LLI Sample No. WW 3018878

Collected: 10/14/98 at 14:00 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-13 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

W13-- SDG#: HMS07-12

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

CAT
NO. ANALYSIS NAME

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300

102



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



LLI Sample No. WW 3018879

Collected: 10/14/98 at 13:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-23 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W23-- SDG#: HMS07-13

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD	
		RESULTS	DETECTION LIMIT UNITS
6291	TCL Volatiles		See Page 2
1861	PAH's in Water		See Page 3
4678	TCL Semivolatiles		See Page 4
4679	TCL Semivolatiles cont'd		See Page 5

1 COPY TO Kerr-McGee Corporation
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
21:12:29 D 0002 18 129915 636359
232 0.00 00065300 ASR000

103



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



LLI Sample No. WW 3018879
 Collected: 10/14/98 at 13:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
 Discard: 12/10/98

MW-23 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
 W23-- SDG#: HMS07-13

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION	LIMIT UNITS
TCL Volatiles				
5385	Chloromethane	N.D.	3.	ug/l
5387	Bromomethane	N.D.	3.	ug/l
5386	Vinyl Chloride	N.D.	2.	ug/l
5388	Chloroethane	N.D.	3.	ug/l
5391	Methylene Chloride	N.D.	2.	ug/l
6302	Acetone	N.D.	6.	ug/l
6303	Carbon Disulfide	N.D.	3.	ug/l
5390	1,1-Dichloroethene	N.D.	1.	ug/l
5393	1,1-Dichloroethane	N.D.	2.	ug/l
5396	Chloroform	N.D.	1.	ug/l
5402	1,2-Dichloroethane	N.D.	2.	ug/l
6305	2-Butanone	N.D.	3.	ug/l
5398	1,1,1-Trichloroethane	N.D.	1.	ug/l
5399	Carbon Tetrachloride	N.D.	1.	ug/l
5406	Bromodichloromethane	N.D.	1.	ug/l
5421	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
5404	1,2-Dichloropropane	N.D.	1.	ug/l
6306	trans-1,3-Dichloropropene	N.D.	1.	ug/l
5403	Trichloroethene	N.D.	1.	ug/l
5411	Dibromochloromethane	N.D.	2.	ug/l
5408	1,1,2-Trichloroethane	N.D.	2.	ug/l
5401	Benzene	N.D.	1.	ug/l
6307	cis-1,3-Dichloropropene	N.D.	1.	ug/l
5419	Bromoform	N.D.	1.	ug/l
6308	4-Methyl-2-pentanone	N.D.	5.	ug/l
6309	2-Hexanone	N.D.	7.	ug/l
5409	Tetrachloroethene	N.D.	1.	ug/l
5407	Toluene	N.D.	2.	ug/l
5413	Chlorobenzene	N.D.	1.	ug/l
5415	Ethylbenzene	N.D.	2.	ug/l
5418	Styrene	N.D.	1.	ug/l
6310	Xylene (Total)	N.D.	1.	ug/l
5392	trans-1,2-Dichloroethene	N.D.	2.	ug/l
5395	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

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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. WW 3018879

Collected: 10/14/98 at 13:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-23 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

W23-- SDG#: HMS07-13

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION	LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.80	ug/l
3281	Acenaphthylene	N.D.	0.80	ug/l
3282	Acenaphthene	N.D.	0.80	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.046	ug/l
3285	Anthracene	N.D.	0.031	ug/l
3286	Fluoranthene	N.D.	0.020	ug/l
3287	Pyrene	0.99	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.059	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.035	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	N.D.	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.047	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.100	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.064	ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

105



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

Respectfully Submitted
 Jenifer E. Hess, B.S.
 Group Leader Pesticides/PCBs





LLI Sample No. WW 3018879
Collected: 10/14/98 at 13:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
Discard: 12/10/98

MW-23 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W23-- SDG#: HMS07-13

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis(2-chloroethyl)ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'-oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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



LLI Sample No. WW 3018879

Collected: 10/14/98 at 13:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-23 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W23-- SDG#: HMS07-13

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION	LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	16.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethylphthalate	N.D.	2.	ug/l
3957	4-chlorophenylphenylether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenylphenylether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butylphthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butylbenzylphthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo(a)anthracene	N.D.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octylphthalate	N.D.	2.	ug/l
3975	benzo(b)fluoranthene	N.D.	1.	ug/l
3976	benzo(k)fluoranthene	N.D.	1.	ug/l
3977	benzo(a)pyrene	N.D.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.	ug/l
3979	dibenz(a,h)anthracene	N.D.	1.	ug/l
3980	benzo(ghi)perylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

107



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



LLI Sample No. WW 3018879

Collected: 10/14/98 at 13:30 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-23 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W23-- SDG#: HMS07-13

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Ref.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300

108



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 3018880
Collected:

Submitted: 10/15/98 Reported: 11/ 9/98
Discard: 12/10/98

Trip Blank (TB-1/101498) Water Sample

Gulf States Creosoting - Hattiesburg, MS
TB-1- SDG#: HMS07-14TB

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

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CAT
NO. ANALYSIS NAME

RESULTS METHOD
DETECTION LIMIT UNITS

6291 TCL Volatiles

See Page 2

1 COPY TO Kerr-McGee Corporation
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ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
21:14:38 D 0002 18 129915 636359
232 0.00 00015600 ASR000

109



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 3018880
Collected:

Submitted: 10/15/98 Reported: 11/ 9/98
Discard: 12/10/98

Trip Blank (TB-1/101498) Water Sample

Gulf States Creosoting - Hattiesburg, MS
TB-1- SDG#: HMS07-14TB

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Volatiles				
5385	Chloromethane	N.D.	3.	ug/l
5387	Bromomethane	N.D.	3.	ug/l
5386	Vinyl Chloride	N.D.	2.	ug/l
5388	Chloroethane	N.D.	3.	ug/l
5391	Methylene Chloride	N.D.	2.	ug/l
6302	Acetone	N.D.	6.	ug/l
6303	Carbon Disulfide	N.D.	3.	ug/l
5390	1,1-Dichloroethene	N.D.	1.	ug/l
5393	1,1-Dichloroethane	N.D.	2.	ug/l
5396	Chloroform	N.D.	1.	ug/l
5402	1,2-Dichloroethane	N.D.	2.	ug/l
6305	2-Butanone	N.D.	3.	ug/l
5398	1,1,1-Trichloroethane	N.D.	1.	ug/l
5399	Carbon Tetrachloride	N.D.	1.	ug/l
5406	Bromodichloromethane	N.D.	1.	ug/l
5421	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
5404	1,2-Dichloropropane	N.D.	1.	ug/l
6306	trans-1,3-Dichloropropene	N.D.	1.	ug/l
5403	Trichloroethene	N.D.	1.	ug/l
5411	Dibromochloromethane	N.D.	2.	ug/l
5408	1,1,2-Trichloroethane	N.D.	2.	ug/l
5401	Benzene	N.D.	1.	ug/l
6307	cis-1,3-Dichloropropene	N.D.	1.	ug/l
5419	Bromoform	N.D.	1.	ug/l
6308	4-Methyl-2-pentanone	N.D.	5.	ug/l
6309	2-Hexanone	N.D.	7.	ug/l
5409	Tetrachloroethene	N.D.	1.	ug/l
5407	Toluene	N.D.	2.	ug/l
5413	Chlorobenzene	N.D.	1.	ug/l
5415	Ethylbenzene	N.D.	2.	ug/l
5418	Styrene	N.D.	1.	ug/l
6310	Xylene (Total)	N.D.	1.	ug/l
5392	trans-1,2-Dichloroethene	N.D.	2.	ug/l
5395	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

110

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. WW 3018881

Collected: 10/14/98 at 15:20 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

RB-1/101498 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

RB1-- SDG#: HMS07-15

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD DETECTION LIMIT UNITS
6291	TCL Volatiles		See Page 2
1861	PAH's in Water		See Page 3
4678	TCL Semivolatiles		See Page 4
4679	TCL Semivolatiles cont'd		See Page 5

1 COPY TO Kerr-McGee Corporation
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
21:15:31 D 0002 18 129915 636359
232 0.00 00065300 ASR000



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

111





LLI Sample No. WW 3018881

Collected: 10/14/98 at 15:20 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

RB-1/101498 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

RB1-- SDG#: HMS07-15

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Volatiles				
5385	Chloromethane	N.D.	3.	ug/l
5387	Bromomethane	N.D.	3.	ug/l
5386	Vinyl Chloride	N.D.	2.	ug/l
5388	Chloroethane	N.D.	3.	ug/l
5391	Methylene Chloride	N.D.	2.	ug/l
6302	Acetone	N.D.	6.	ug/l
6303	Carbon Disulfide	N.D.	3.	ug/l
5390	1,1-Dichloroethene	N.D.	1.	ug/l
5393	1,1-Dichloroethane	N.D.	2.	ug/l
5396	Chloroform	N.D.	1.	ug/l
5402	1,2-Dichloroethane	N.D.	2.	ug/l
6305	2-Butanone	N.D.	3.	ug/l
5398	1,1,1-Trichloroethane	N.D.	1.	ug/l
5399	Carbon Tetrachloride	N.D.	1.	ug/l
5406	Bromodichloromethane	N.D.	1.	ug/l
5421	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
5404	1,2-Dichloropropane	N.D.	1.	ug/l
6306	trans-1,3-Dichloropropene	N.D.	1.	ug/l
5403	Trichloroethene	N.D.	1.	ug/l
5411	Dibromochloromethane	N.D.	2.	ug/l
5408	1,1,2-Trichloroethane	N.D.	2.	ug/l
5401	Benzene	N.D.	1.	ug/l
6307	cis-1,3-Dichloropropene	N.D.	1.	ug/l
5419	Bromoform	N.D.	1.	ug/l
6308	4-Methyl-2-pentanone	N.D.	5.	ug/l
6309	2-Hexanone	N.D.	7.	ug/l
5409	Tetrachloroethene	N.D.	1.	ug/l
5407	Toluene	N.D.	2.	ug/l
5413	Chlorobenzene	N.D.	1.	ug/l
5415	Ethylbenzene	N.D.	2.	ug/l
5418	Styrene	N.D.	1.	ug/l
6310	Xylene (Total)	N.D.	1.	ug/l
5392	trans-1,2-Dichloroethene	N.D.	2.	ug/l
5395	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

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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. WW 3018881

Collected: 10/14/98 at 15:20 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

RB-1/101498 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

RBI-- SDG#: HMS07-15

Account No: 07802
 Kerr-McGee Corporation
 P.O. Box 25861
 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
 Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.81	ug/l
3281	Acenaphthylene	N.D.	0.81	ug/l
3282	Acenaphthene	N.D.	0.81	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.046	ug/l
3285	Anthracene	N.D.	0.031	ug/l
3286	Fluoranthene	N.D.	0.020	ug/l
3287	Pyrene	N.D.	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	N.D.	0.060	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.035	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	N.D.	0.022	ug/l
3293	Dibenzo(a,h)anthracene	N.D.	0.047	ug/l
3294	Benzo(g,h,i)perylene	N.D.	0.10	ug/l
3295	Indeno(1,2,3-cd)pyrene	N.D.	0.065	ug/l

Questions? Contact your Client Services Representative
 Donald J. Nazario at (717) 656-2300

113

Respectfully Submitted
 Jenifer E. Hess, B.S.
 Group Leader Pesticides/PCBs



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 8/01





LLI Sample No. WW 3018881
Collected: 10/14/98 at 15:20 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
Discard: 12/10/98

RB-1/101498 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RBI-- SDG#: HMS07-15

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis(2-chloroethyl)ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'-oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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. 8/4/97

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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LLI Sample No. WW 3018881

Collected: 10/14/98 at 15:20 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

RB-1/101498 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB1-- SDG#: HMS07-15

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethylphthalate	N.D.	2.	ug/l
3957	4-chlorophenylphenylether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenylphenylether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butylphthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butylbenzylphthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo(a)anthracene	N.D.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octylphthalate	N.D.	2.	ug/l
3975	benzo(b)fluoranthene	N.D.	1.	ug/l
3976	benzo(k)fluoranthene	N.D.	1.	ug/l
3977	benzo(a)pyrene	N.D.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.	ug/l
3979	dibenz(a,h)anthracene	N.D.	1.	ug/l
3980	benzo(ghi)perylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVDA





LLI Sample No. WW 3018881

Collected: 10/14/98 at 15:20 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

RB-1/101498 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

RB1-- SDG#: HMS07-15

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

AS RECEIVED

CAT
NO. ANALYSIS NAME

RESULTS METHOD
DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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
Donald J. Nazario at (717) 656-2300

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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 3018882

Collected: 10/14/98 at 14:35 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W11-- SDG#: HMS07-16*

Account No: 07802 Kerr-McGee Corporation P.O. Box 25861 Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
6291	TCL Volatiles			See Page 2
1861	PAH's in Water			See Page 3
4678	TCL Semivolatiles			See Page 4
4679	TCL Semivolatiles cont'd			See Page 5

1 COPY TO Kerr-McGee Corporation
1 COPY TO Data Package Group

ATTN: Garet Van de Steeg, PhD

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300
21:17:39 D 0002 18 129915 636359
232 0.00 00065300 ASR000

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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 3018882

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Discard: 12/10/98

MW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W11-- SDG#: HMS07-16*

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Volatiles				
5385	Chloromethane	N.D.	3.	ug/l
5387	Bromomethane	N.D.	3.	ug/l
5386	Vinyl Chloride	N.D.	2.	ug/l
5388	Chloroethane	N.D.	3.	ug/l
5391	Methylene Chloride	N.D.	2.	ug/l
6302	Acetone	N.D.	6.	ug/l
6303	Carbon Disulfide	N.D.	3.	ug/l
5390	1,1-Dichloroethene	N.D.	1.	ug/l
5393	1,1-Dichloroethane	N.D.	2.	ug/l
5396	Chloroform	N.D.	1.	ug/l
5402	1,2-Dichloroethane	N.D.	2.	ug/l
6305	2-Butanone	N.D.	3.	ug/l
5398	1,1,1-Trichloroethane	N.D.	1.	ug/l
5399	Carbon Tetrachloride	N.D.	1.	ug/l
5406	Bromodichloromethane	N.D.	1.	ug/l
5421	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
5404	1,2-Dichloropropane	N.D.	1.	ug/l
6306	trans-1,3-Dichloropropene	N.D.	1.	ug/l
5403	Trichloroethene	N.D.	1.	ug/l
5411	Dibromochloromethane	N.D.	2.	ug/l
5408	1,1,2-Trichloroethane	N.D.	2.	ug/l
5401	Benzene	N.D.	1.	ug/l
6307	cis-1,3-Dichloropropene	N.D.	1.	ug/l
5419	Bromoform	N.D.	1.	ug/l
6308	4-Methyl-2-pentanone	N.D.	5.	ug/l
6309	2-Hexanone	N.D.	7.	ug/l
5409	Tetrachloroethene	N.D.	1.	ug/l
5407	Toluene	N.D.	2.	ug/l
5413	Chlorobenzene	N.D.	1.	ug/l
5415	Ethylbenzene	N.D.	2.	ug/l
5418	Styrene	N.D.	1.	ug/l
6310	Xylene (Total)	N.D.	1.	ug/l
5392	trans-1,2-Dichloroethene	N.D.	2.	ug/l
5395	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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.

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

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LLI Sample No. ww 3018882

Collected: 10/14/98 at 14:35 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W11-- SDG#: HMS07-16*

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
PAH's in Water				
3280	Naphthalene	N.D.	0.80	ug/l
3281	Acenaphthylene	N.D.	0.80	ug/l
3282	Acenaphthene	N.D.	0.80	ug/l
3283	Fluorene	N.D.	0.17	ug/l
3284	Phenanthrene	N.D.	0.046	ug/l
3285	Anthracene	N.D.	0.031	ug/l
3286	Fluoranthene	N.D.	0.020	ug/l
3287	Pyrene	1.54	0.18	ug/l
3288	Benzo(a)anthracene	N.D.	0.018	ug/l
3289	Chrysene	0.117 J	0.059	ug/l
3290	Benzo(b)fluoranthene	N.D.	0.035	ug/l
3291	Benzo(k)fluoranthene	N.D.	0.027	ug/l
3292	Benzo(a)pyrene	0.024 J	0.022	ug/l
3293	Dibenzo(a, h)anthracene	N.D.	0.047	ug/l
3294	Benzo(g, h, i)perylene	N.D.	0.098	ug/l
3295	Indeno(1, 2, 3-cd)pyrene	N.D.	0.064	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300

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

Respectfully Submitted
Jenifer E. Hess, B.S.
Group Leader Pesticides/PCBs





LLI Sample No. WW 3018882

Collected: 10/14/98 at 14:35 by DU

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MW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W11-- SDG#: HMS07-16*

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis(2-chloroethyl)ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis(1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis(2-chloroethoxy)methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethylphthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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LLI Sample No. WW 3018882
Collected: 10/14/98 at 14:35 by DU

Submitted: 10/15/98 Reported: 11/ 9/98
Discard: 12/10/98

MW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W11-- SDG#: HMS07-16*

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethylphthalate	N.D.	2.	ug/l
3957	4-chlorophenylphenylether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenylphenylether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butylphthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butylbenzylphthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo(a)anthracene	N.D.	1.	ug/l
3973	bis(2-ethylhexyl)phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octylphthalate	N.D.	2.	ug/l
3975	benzo(b)fluoranthene	N.D.	1.	ug/l
3976	benzo(k)fluoranthene	N.D.	1.	ug/l
3977	benzo(a)pyrene	N.D.	1.	ug/l
3978	indeno(1,2,3-cd)pyrene	N.D.	1.	ug/l
3979	dibenz(a,h)anthracene	N.D.	1.	ug/l
3980	benzo(ghi)perylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
Donald J. Nazario at (717) 656-2300



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.

Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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LLI Sample No. WW 3018882

Collected: 10/14/98 at 14:35 by DU

Submitted: 10/15/98 Reported: 11/ 9/98

Discard: 12/10/98

MW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
W11.. SDG#: HMS07-16*

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. HATTIESBURG, MS
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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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