

Appendix B
Ground Water Screening Laboratory Reports
Former Gulf States Creosoting Site
Hattiesburg, Mississippi



LLI Sample No. WW 2932449

Collected: 5/20/98 at 08:50 by RZ

Submitted: 5/21/98 Reported: 6/18/98

Discard: 7/19/98

CPT-07-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT07 SDG#: HMS01-01

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

CAT NO.	ANALYSIS NAME
4678	TCL Semivolatiles
4679	TCL Semivolatiles cont'd

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
21:09:16 D 0003 8 129915 615946
050 0.00 00029700 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





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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	8.	J 1.	ug/l
4681	2,2'-oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	18.	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	1.	J 1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	63.	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	11,000.	95.	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	710.	J 95.	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	26.	2.	ug/l

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TCL Semivolatiles cont'd

3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	220.	J 95.	ug/l
3931	2,4-dinitrophenol	N.D.	14.	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	6.	J 2.	ug/l
3958	diethyl phthalate	4.	J 2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	1.	ug/l
3956	fluorene	110.	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	67.	1.	ug/l
3964	anthracene	7.	J 1.	ug/l
4684	carbazole	370.	J 95.	ug/l
3965	di-n-butyl phthalate	4.	J 2.	ug/l
3966	fluoranthene	1.	J 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.	5.	ug/l
3970	benzo (a) anthracene	N.D.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	3.	J 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

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CAT
NO. ANALYSIS NAME

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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.

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.

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CPT07 SDG#: HMS01-01

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL	ID DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	05/26/97 2110	Lee L. Munro
4678	TCL Semivolatiles	SW-846 8270C	1	06/03/98 2250	Linda M. Hartenstine
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/03/98 2250	Linda M. Hartenstine



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QUALITY CONTROL REPORT



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LLI Sample No. 2932449

CPT-07-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
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: 98146WAE026									
3925	phenol	N.D.		45	46	3	45	44	2	5	83
	1. ug/l										
3936	bis (2-chloroethyl) ether	N.D.		91	88	3	82	80	3	66	106
	1. ug/l										
3924	2-chlorophenol	N.D.		88	88	0	91	90	1	62	107
	1. ug/l										
3937	1,3-dichlorobenzene	N.D.		84	80	4	67	63	5	45	91
	1. ug/l										
3938	1,4-dichlorobenzene	N.D.		84	81	4	67	64	5	45	94
	1. ug/l										
3939	1,2-dichlorobenzene	N.D.		89	85	4	73	69	5	52	97
	1. ug/l										
4680	2-methylphenol	N.D.		83	84	1	85	81	5	55	96
	1. ug/l										
	2,2'-oxybis (1-chloropropane)	N.D.		103	100	3	92	89	3	43	118
	2. ug/l										
4682	4-methylphenol	N.D.		71	74	4	77	75	2	48	99
	3. ug/l										
3942	N-nitrosodi-n-propylamine	N.D.		93	88	5	86	83	3	62	118
	1. ug/l										
3941	hexachloroethane	N.D.		80	78	3	60	58	3	40	84
	1. ug/l										
3943	nitrobenzene	N.D.		93	89	4	86	83	4	61	113
	1. ug/l										
3944	isophorone	N.D.		98	95	3	94	90	4	66	113
	1. ug/l										
3926	2-nitrophenol	N.D.		92	90	2	93	92	1	67	104
	1. ug/l										
3927	2,4-dimethylphenol	N.D.		73	74	2	75	71	5	52	99
	1. ug/l										
3945	bis (2-chloroethoxy) methane	N.D.		91	88	3	85	82	3	64	103
	1. ug/l										
3928	2,4-dichlorophenol	N.D.		87	55	45	90	87	3	65	98
	1. ug/l										
3946	1,2,4-trichlorobenzene	N.D.		87	84	4	73	69	5	52	93
	1. ug/l										
3947	naphthalene	N.D.		89	96	6	76	73	4	60	97
	95. ug/l										
3871	4-chloroaniline	N.D.		78	69	13	74	78	4	34	101
	1. ug/l										
3948	hexachlorobutadiene	N.D.		82	79	4	60	58	3	24	86
	2. ug/l										
3929	4-chloro-3-methylphenol	N.D.		89	88	1	93	91	2	60	111
	1. ug/l										
3905	2-methylnaphthalene	N.D.		87	84	3	76	73	4	62	98
	95. ug/l										



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SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3949	hexachlorocyclopentadiene										
5.	ug/l	N.D.		58	53	9	43	43	1	17	80
3930	2,4,6-trichlorophenol										
2.	ug/l	N.D.		88	86	3	90	89	1	66	105
3922	2,4,5-trichlorophenol										
2.	ug/l	N.D.		92	89	4	91	91	0	67	103
3950	2-chloronaphthalene										
1.	ug/l	N.D.		89	84	5	79	75	5	61	103
3907	2-nitroaniline										
2.	ug/l	N.D.		99	97	2	93	89	4	58	112
3952	dimethyl phthalate										
2.	ug/l	N.D.		52	45	15	20	18	11	1	90
3951	acenaphthylene										
2.	ug/l	N.D.		86	83	4	80	76	5	64	100

4679	TCL Semivolatiles cont'd	Batch: 98146WAE026									
3.	3-nitroaniline										
2.	ug/l	N.D.		85	84	2	78	80	2	40	108
3954	acenaphthene										
95.	ug/l	N.D.		85	83	3	78	75	5	61	100
3931	2,4-dinitrophenol										
14.	ug/l	N.D.		64	66	2	58	61	5	25	124
3932	4-nitrophenol										
10.	ug/l	N.D.		45	47	4	46	45	2	3	83
3879	dibenzofuran										
1.	ug/l	N.D.		87	85	2	80	76	5	67	99
3955	2,4-dinitrotoluene										
1.	ug/l	N.D.		93	90	4	89	84	6	64	112
3953	2,6-dinitrotoluene										
2.	ug/l	N.D.		101	99	3	94	90	4	66	113
3958	diethyl phthalate										
2.	ug/l	N.D.		78	73	7	56	53	6	30	99
3957	4-chlorophenyl phenyl ether										
1.	ug/l	N.D.		83	80	4	78	73	6	62	104
3956	fluorene										
1.	ug/l	N.D.		91	89	3	86	80	6	61	108
3909	4-nitroaniline										
2.	ug/l	N.D.		98	90	8	91	88	3	55	116
3933	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		73	72	2	71	73	3	43	120
3960	N-nitrosodiphenylamine										
1.	ug/l	N.D.		83	81	3	78	76	3	64	103
3961	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		83	81	3	80	77	5	69	102
3962	hexachlorobenzene										
2.	ug/l	N.D.		84	82	2	82	78	4	62	109
3934	pentachlorophenol										
3.	ug/l	N.D.		66	68	2	68	68	1	46	114



QUALITY CONTROL REPORT



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Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3963 phenanthrene											
1. ug/l		N.D.		85	86	0	82	80	3	68	102
3964 anthracene											
1. ug/l		N.D.		87	84	3	83	80	3	66	101
4684 carbazole											
95. ug/l		N.D.		91	89	2	84	82	3	66	110
3965 di-n-butyl phthalate											
2. ug/l		N.D.		88	85	3	79	76	4	61	105
3966 fluoranthene											
1. ug/l		N.D.		85	82	4	82	79	3	66	106
3967 pyrene											
1. ug/l		N.D.		89	88	1	85	81	4	58	112
3969 butyl benzyl phthalate											
2. ug/l		N.D.		89	84	5	79	78	2	48	105
3972 3,3'-dichlorobenzidine											
5. ug/l		N.D.		70	71	2	57	68	18	37	104
3970 benzo (a) anthracene											
1. ug/l		N.D.		87	84	4	85	82	4	69	101
bis (2-ethylhexyl) phthalate											
2. ug/l		N.D.		84	79	6	85	80	5	64	113
3971 chrysene											
1. ug/l		N.D.		80	78	3	77	75	3	67	101
3974 di-n-octyl phthalate											
2. ug/l		N.D.		100	94	6	99	93	6	59	118
3975 benzo (b) fluoranthene											
1. ug/l		N.D.		88	87	1	84	81	3	64	101
3976 benzo (k) fluoranthene											
1. ug/l		N.D.		86	84	3	85	81	6	67	105
3977 benzo (a) pyrene											
1. ug/l		N.D.		90	88	3	87	84	4	65	101
3978 indeno (1,2,3-cd) pyrene											
1. ug/l		N.D.		86	86	1	84	81	4	59	111
3979 dibenz (a,h) anthracene											
1. ug/l		N.D.		86	84	2	83	80	4	66	117
3980 benzo (ghi) perylene											
1. ug/l		N.D.		84	81	4	80	77	4	55	115



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Group No. 615946
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SURROGATE SUMMARY			SURROGATE LIMITS	
TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	57	7	74
	Pheno1-d6	41	25	88
	2,4,6-TBP	86	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	136	47	114
	2-Fbiphenyl	86	51	106
	Tphenylid14	68	37	119



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4678	TCL Semivolatiles
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CAT NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT	UNITS
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TCL Semivolatiles

3925	phenol	4.	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
3946	2-nitrophenol	N.D.		1.	ug/l
3947	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	4.	J	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	1.	J	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.		2.	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 2932450

Collected: 5/19/98 at 17:10 by RZ

Submitted: 5/21/98 Reported: 6/18/98

Discard: 7/19/98

CPT-08-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT08 SDG#: HMS01-02

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	2.	J 1.	ug/l
3931	2,4-dinitrophenol	N.D.	14.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	2.	J 1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	5.	J 2.	ug/l
3958	diethyl phthalate	5.	J 2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	1.	ug/l
3956	fluorene	3.	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
3951	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3952	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	7.	J 1.	ug/l
3964	anthracene	2.	J 1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butyl phthalate	5.	J 2.	ug/l
3966	fluoranthene	6.	J 1.	ug/l
3967	pyrene	6.	J 1.	ug/l
3969	butyl benzyl phthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	5.	ug/l
3970	benzo (a) anthracene	2.	J 1.	ug/l
3973	bis (2-ethylhexyl) phthalate	42.	2.	ug/l
3971	chrysene	1.	J 1.	ug/l
3974	di-n-octyl phthalate	6.	J 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	1.	J 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

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Page: 4 of 9

LLI Sample No. WW 2932450

Collected: 5/19/98 at 17:10 by RZ

Submitted: 5/21/98 Reported: 6/18/98
Discard: 7/19/98

CPT-08-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT08 SDG#: HMS01-02

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

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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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LLI Sample No. WW 2932450

Collected: 05/19/98 at 17:10 by RZ

Submitted: 05/21/98

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Oklahoma City OK 73125

CPT-08-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT08 SDG#: HMS01-02

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL	ID DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	05/26/97 2110	Lee L. Munro
4678	TCL Semivolatiles	SW-846 8270C	1	06/03/98 2342	Linda M. Hartenstine
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/03/98 2342	Linda M. Hartenstine



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QUALITY CONTROL REPORT



Page: 6 of 9

LLI Sample No. 2932450

CPT-08-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
4678 TCL Semivolatiles		Batch: 98146WAE026									
3925	phenol										
1.	ug/l	N.D.		45	46	3	45	44	2	5	83
3936	bis (2-chloroethyl) ether										
1.	ug/l	N.D.		91	88	3	82	80	3	66	106
3924	2-chlorophenol										
1.	ug/l	N.D.		88	88	0	91	90	1	62	107
3937	1,3-dichlorobenzene										
1.	ug/l	N.D.		84	80	4	67	63	5	45	91
3938	1,4-dichlorobenzene										
1.	ug/l	N.D.		84	81	4	67	64	5	45	94
3939	1,2-dichlorobenzene										
1.	ug/l	N.D.		89	85	4	73	69	5	52	97
4680	2-methylphenol										
1.	ug/l	N.D.		83	84	1	85	81	5	55	96
	2,2'-oxybis (1-chloropropane)										
2.	ug/l	N.D.		103	100	3	92	89	3	43	118
4682	4-methylphenol										
3.	ug/l	N.D.		71	74	4	77	75	2	48	99
3942	N-nitrosodi-n-propylamine										
1.	ug/l	N.D.		93	88	5	86	83	3	62	118
3941	hexachloroethane										
1.	ug/l	N.D.		80	78	3	60	58	3	40	84
3943	nitrobenzene										
1.	ug/l	N.D.		93	89	4	86	83	4	61	113
3944	isophorone										
1.	ug/l	N.D.		98	95	3	94	90	4	66	113
3926	2-nitrophenol										
1.	ug/l	N.D.		92	90	2	93	92	1	67	104
3927	2,4-dimethylphenol										
1.	ug/l	N.D.		73	74	2	75	71	5	52	99
3945	bis (2-chloroethoxy) methane										
1.	ug/l	N.D.		91	88	3	85	82	3	64	103
3928	2,4-dichlorophenol										
1.	ug/l	N.D.		87	55	45	90	87	3	65	98
3946	1,2,4-trichlorobenzene										
1.	ug/l	N.D.		87	84	4	73	69	5	52	93
3947	naphthalene										
1.	ug/l	N.D.		89	96	6	76	73	4	60	97
3871	4-chloroaniline										
1.	ug/l	N.D.		78	69	13	74	78	4	34	101
3948	hexachlorobutadiene										
2.	ug/l	N.D.		82	79	4	60	58	3	24	86
3929	4-chloro-3-methylphenol										
1.	ug/l	N.D.		89	88	1	93	91	2	60	111
3905	2-methylnaphthalene										
1.	ug/l	N.D.		87	84	3	76	73	4	62	98



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/4/97





LLI Sample No. 2932450

CPT-08-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3949	hexachlorocyclopentadiene										
5.	ug/l	N.D.		58	53	9	43	43	1	17	80
3930	2,4,6-trichlorophenol										
2.	ug/l	N.D.		88	86	3	90	89	1	66	105
3922	2,4,5-trichlorophenol										
2.	ug/l	N.D.		92	89	4	91	91	0	67	103
3950	2-chloronaphthalene										
1.	ug/l	N.D.		89	84	5	79	75	5	61	103
3907	2-nitroaniline										
2.	ug/l	N.D.		99	97	2	93	89	4	58	112
3952	dimethyl phthalate										
2.	ug/l	N.D.		52	45	15	20	18	11	1	90
3951	acenaphthylene										
2.	ug/l	N.D.		86	83	4	80	76	5	64	100

4679	TCL Semivolatiles cont'd	Batch: 98146WAE026									
3.	nitroaniline										
2.	ug/l	N.D.		85	84	2	78	80	2	40	108
3954	acenaphthene										
1.	ug/l	N.D.		85	83	3	78	75	5	61	100
3931	2,4-dinitrophenol										
14.	ug/l	N.D.		64	66	2	58	61	5	25	124
3932	4-nitrophenol										
10.	ug/l	N.D.		45	47	4	46	45	2	3	83
3879	dibenzofuran										
1.	ug/l	N.D.		87	85	2	80	76	5	67	99
3955	2,4-dinitrotoluene										
1.	ug/l	N.D.		93	90	4	89	84	6	64	112
3953	2,6-dinitrotoluene										
2.	ug/l	N.D.		101	99	3	94	90	4	66	113
3958	diethyl phthalate										
2.	ug/l	N.D.		78	73	7	56	53	6	30	99
3957	4-chlorophenyl phenyl ether										
1.	ug/l	N.D.		83	80	4	78	73	6	62	104
3956	fluorene										
1.	ug/l	N.D.		91	89	3	86	80	6	61	108
3909	4-nitroaniline										
2.	ug/l	N.D.		98	90	8	91	88	3	55	116
3933	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		73	72	2	71	73	3	43	120
3960	N-nitrosodiphenylamine										
1.	ug/l	N.D.		83	81	3	78	76	3	64	103
3961	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		83	81	3	80	77	5	69	102
3962	hexachlorobenzene										
2.	ug/l	N.D.		84	82	2	82	78	4	62	109
3934	pentachlorophenol										
3.	ug/l	N.D.		66	68	2	68	68	1	46	114





LLI Sample No. 2932450

CPT-08-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3963	phenanthrene										
1.	ug/l	N.D.		85	86	0	82	80	3	68	102
3964	anthracene										
1.	ug/l	N.D.		87	84	3	83	80	3	66	101
4684	carbazole										
1.	ug/l	N.D.		91	89	2	84	82	3	66	110
3965	di-n-butyl phthalate										
2.	ug/l	N.D.		88	85	3	79	76	4	61	105
3966	fluoranthene										
1.	ug/l	N.D.		85	82	4	82	79	3	66	106
3967	pyrene										
1.	ug/l	N.D.		89	88	1	85	81	4	58	112
3969	butyl benzyl phthalate										
2.	ug/l	N.D.		89	84	5	79	78	2	48	105
3972	3,3'-dichlorobenzidine										
5.	ug/l	N.D.		70	71	2	57	68	18	37	104
3970	benzo (a) anthracene										
1.	ug/l	N.D.		87	84	4	85	82	4	69	101
	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		84	79	6	85	80	5	64	113
3971	chrysene										
1.	ug/l	N.D.		80	78	3	77	75	3	67	101
3974	di-n-octyl phthalate										
2.	ug/l	N.D.		100	94	6	99	93	6	59	118
3975	benzo (b) fluoranthene										
1.	ug/l	N.D.		88	87	1	84	81	3	64	101
3976	benzo (k) fluoranthene										
1.	ug/l	N.D.		86	84	3	85	81	6	67	105
3977	benzo (a) pyrene										
1.	ug/l	N.D.		90	88	3	87	84	4	65	101
3978	indeno (1,2,3-cd) pyrene										
1.	ug/l	N.D.		86	86	1	84	81	4	59	111
3979	dibenz (a,h) anthracene										
1.	ug/l	N.D.		86	84	2	83	80	4	66	117
3980	benzo (ghi) perylene										
1.	ug/l	N.D.		84	81	4	80	77	4	55	115





LLI Sample No. 2932450
CPT-08-GW Grab Water Sample
Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	50	7	74
	Pheno1-d6	38	25	88
	2,4,6-TBP	74	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	91	47	114
	2-Fbiphenyl	85	51	106
	Tphenylid14	60	37	119



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Page: 1 of 9

LLI Sample No. WW 2932451

Collected: 5/20/98 at 10:00 by RZ

Submitted: 5/21/98 Reported: 6/18/98
Discard: 7/19/98

CPT-09-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT09 SDG#: HMS01-03

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

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METHOD

RESULTS DETECTION LIMIT UNITS

CAT NO.	ANALYSIS NAME
4678	TCL Semivolatiles
4679	TCL Semivolatiles cont'd

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
21:12:14 D 0003 8 129915 615946
050 0.00 00029700 ASR000



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Page: 2 of 9

LLI Sample No. WW 2932451

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CPT-09-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT09 SDG#: HMS01-03

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METHOD

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT	UNITS
------------	---------------	---------	-----------------	-------

TCL Semivolatiles

3925	phenol	1.	J	0.9	ug/l
3936	bis (2-chloroethyl) ether	N.D.		0.9	ug/l
3924	2-chlorophenol	N.D.		0.9	ug/l
3937	1,3-dichlorobenzene	N.D.		0.9	ug/l
3938	1,4-dichlorobenzene	N.D.		0.9	ug/l
3939	1,2-dichlorobenzene	N.D.		0.9	ug/l
4680	2-methylphenol	9.	J	0.9	ug/l
4681	2,2'-oxybis (1-chloropropane)	N.D.		2.	ug/l
4682	4-methylphenol	18.		3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.		0.9	ug/l
3941	hexachloroethane	N.D.		0.9	ug/l
3943	nitrobenzene	N.D.		0.9	ug/l
3944	isophorone	N.D.		0.9	ug/l
3926	2-nitrophenol	N.D.		0.9	ug/l
3927	2,4-dimethylphenol	60.		0.9	ug/l
3945	bis (2-chloroethoxy) methane	N.D.		0.9	ug/l
3928	2,4-dichlorophenol	N.D.		0.9	ug/l
3946	1,2,4-trichlorobenzene	N.D.		0.9	ug/l
3947	naphthalene	12,000.		95.	ug/l
3871	4-chloroaniline	N.D.		0.9	ug/l
3948	hexachlorobutadiene	N.D.		2.	ug/l
3929	4-chloro-3-methylphenol	N.D.		0.9	ug/l
3905	2-methylnaphthalene	800.	J	95.	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.		0.9	ug/l
3907	2-nitroaniline	N.D.		2.	ug/l
3952	dimethyl phthalate	N.D.		2.	ug/l
3951	acenaphthylene	29.		2.	ug/l

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



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LLI Sample No. WW 2932451
Collected: 5/20/98 at 10:00 by RZ

Submitted: 5/21/98 Reported: 6/18/98
Discard: 7/19/98

CPT-09-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT09 SDG#: HMS01-03

Account No: 07802
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Oklahoma City OK 73125

P.O. GULF STATES CREOSOT
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AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT	UNITS
---------	---------------	---------	-----------------	-------

TCL Semivolatiles cont'd

3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	250.	J 95.	ug/l
3931	2,4-dinitrophenol	N.D.	14.	ug/l
3932	4-nitrophenol	N.D.	9.	ug/l
3879	dibenzofuran	210.	J 95.	ug/l
3955	2,4-dinitrotoluene	N.D.	0.9	ug/l
3953	2,6-dinitrotoluene	2.	J 2.	ug/l
3958	diethyl phthalate	N.D.	2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	0.9	ug/l
3956	fluorene	130.	0.9	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.	0.9	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	88.	0.9	ug/l
3964	anthracene	9.	J 0.9	ug/l
4684	carbazole	360.	J 95.	ug/l
3965	di-n-butyl phthalate	3.	J 2.	ug/l
3966	fluoranthene	2.	J 0.9	ug/l
3967	pyrene	1.	J 0.9	ug/l
3969	butyl benzyl phthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	5.	ug/l
3970	benzo (a) anthracene	N.D.	0.9	ug/l
3973	bis (2-ethylhexyl) phthalate	4.	J 2.	ug/l
3971	chrysene	N.D.	0.9	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	N.D.	0.9	ug/l
3976	benzo (k) fluoranthene	N.D.	0.9	ug/l
3977	benzo (a) pyrene	N.D.	0.9	ug/l
3978	indeno (1,2,3-cd) pyrene	N.D.	0.9	ug/l
3979	dibenz (a,h) anthracene	N.D.	0.9	ug/l
3980	benzo (ghi) perylene	N.D.	0.9	ug/l

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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SV0A





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Page: 4 of 9

LLI Sample No. WW 2932451
Collected: 5/20/98 at 10:00 by RZ

Submitted: 5/21/98 Reported: 6/18/98
Discard: 7/19/98

CPT-09-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT09 SDG#: HMS01-03

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

P.O. GULF STATES CREOSOT
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. 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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See reverse side for explanation of symbols and abbreviations.

2216 Rev 8/4/97





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Page: 5 of 9

LLI Sample No. WW 2932451

Collected: 05/20/98 at 10:00 by RZ

Submitted: 05/21/98

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Oklahoma City OK 73125

CPT-09-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT09 SDG#: HMS01-03

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL	ID DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	05/26/97 2110	Lee L. Munro
4678	TCL Semivolatiles	SW-846 8270C	1	06/04/98 0820	Linda M. Hartenstine
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/04/98 0820	Linda M. Hartenstine



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LLI Sample No. 2932451

CPT-09-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
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: 98146WAE026									
3925	phenol										
	0.9 ug/l	N.D.		45	46	3	45	44	2	5	83
3936	bis (2-chloroethyl) ether										
	0.9 ug/l	N.D.		91	88	3	82	80	3	66	106
3924	2-chlorophenol										
	0.9 ug/l	N.D.		88	88	0	91	90	1	62	107
3937	1,3-dichlorobenzene										
	0.9 ug/l	N.D.		84	80	4	67	63	5	45	91
3938	1,4-dichlorobenzene										
	0.9 ug/l	N.D.		84	81	4	67	64	5	45	94
3939	1,2-dichlorobenzene										
	0.9 ug/l	N.D.		89	85	4	73	69	5	52	97
4680	2-methylphenol										
	0.9 ug/l	N.D.		83	84	1	85	81	5	55	96
	2,2'-oxybis (1-chloropropane)										
	2. ug/l	N.D.		103	100	3	92	89	3	43	118
4682	4-methylphenol										
	3. ug/l	N.D.		71	74	4	77	75	2	48	99
3942	N-nitrosodi-n-propylamine										
	0.9 ug/l	N.D.		93	88	5	86	83	3	62	118
3941	hexachloroethane										
	0.9 ug/l	N.D.		80	78	3	60	58	3	40	84
3943	nitrobenzene										
	0.9 ug/l	N.D.		93	89	4	86	83	4	61	113
3944	isophorone										
	0.9 ug/l	N.D.		98	95	3	94	90	4	66	113
3926	2-nitrophenol										
	0.9 ug/l	N.D.		92	90	2	93	92	1	67	104
3927	2,4-dimethylphenol										
	0.9 ug/l	N.D.		73	74	2	75	71	5	52	99
3945	bis (2-chloroethoxy) methane										
	0.9 ug/l	N.D.		91	88	3	85	82	3	64	103
3928	2,4-dichlorophenol										
	0.9 ug/l	N.D.		87	55	45	90	87	3	65	98
3946	1,2,4-trichlorobenzene										
	0.9 ug/l	N.D.		87	84	4	73	69	5	52	93
3947	naphthalene										
	95. ug/l	N.D.		89	96	6	76	73	4	60	97
3871	4-chloroaniline										
	0.9 ug/l	N.D.		78	69	13	74	78	4	34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		82	79	4	60	58	3	24	86
3929	4-chloro-3-methylphenol										
	0.9 ug/l	N.D.		89	88	1	93	91	2	60	111
3905	2-methylnaphthalene										
	95. ug/l	N.D.		87	84	3	76	73	4	62	98



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LLI Sample No. 2932451

CPT-09-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
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.		58	53	9	43	43	1	17	80
3930	2,4,6-trichlorophenol										
2.	ug/l	N.D.		88	86	3	90	89	1	66	105
3922	2,4,5-trichlorophenol										
2.	ug/l	N.D.		92	89	4	91	91	0	67	103
3950	2-chloronaphthalene										
0.9	ug/l	N.D.		89	84	5	79	75	5	61	103
3907	2-nitroaniline										
2.	ug/l	N.D.		99	97	2	93	89	4	58	112
3952	dimethyl phthalate										
2.	ug/l	N.D.		52	45	15	20	18	11	1	90
3951	acenaphthylene										
2.	ug/l	N.D.		86	83	4	80	76	5	64	100

4679	TCL Semivolatiles cont'd	Batch: 98146WAE026									
3-nitroaniline											
2.	ug/l	N.D.		85	84	2	78	80	2	40	108
3954	acenaphthene										
95.	ug/l	N.D.		85	83	3	78	75	5	61	100
3931	2,4-dinitrophenol										
14.	ug/l	N.D.		64	66	2	58	61	5	25	124
3932	4-nitrophenol										
9.	ug/l	N.D.		45	47	4	46	45	2	3	83
3879	dibenzofuran										
95.	ug/l	N.D.		87	85	2	80	76	5	67	99
3955	2,4-dinitrotoluene										
0.9	ug/l	N.D.		93	90	4	89	84	6	64	112
3953	2,6-dinitrotoluene										
2.	ug/l	N.D.		101	99	3	94	90	4	66	113
3958	diethyl phthalate										
2.	ug/l	N.D.		78	73	7	56	53	6	30	99
3957	4-chlorophenyl phenyl ether										
0.9	ug/l	N.D.		83	80	4	78	73	6	62	104
3956	fluorene										
0.9	ug/l	N.D.		91	89	3	86	80	6	61	108
3909	4-nitroaniline										
2.	ug/l	N.D.		98	90	8	91	88	3	55	116
3933	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		73	72	2	71	73	3	43	120
3960	N-nitrosodiphenylamine										
0.9	ug/l	N.D.		83	81	3	78	76	3	64	103
3961	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		83	81	3	80	77	5	69	102
3962	hexachlorobenzene										
2.	ug/l	N.D.		84	82	2	82	78	4	62	109
3934	pentachlorophenol										
3.	ug/l	N.D.		66	68	2	68	68	1	46	114





LLI Sample No. 2932451

CPT-09-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3963	phenanthrene										
	0.9 ug/l	N.D.		85	86	0	82	80	3	68	102
3964	anthracene										
	0.9 ug/l	N.D.		87	84	3	83	80	3	66	101
4684	carbazole										
	95 ug/l	N.D.		91	89	2	84	82	3	66	110
3965	di-n-butyl phthalate										
	2. ug/l	N.D.		88	85	3	79	76	4	61	105
3966	fluoranthene										
	0.9 ug/l	N.D.		85	82	4	82	79	3	66	106
3967	pyrene										
	0.9 ug/l	N.D.		89	88	1	85	81	4	58	112
3969	butyl benzyl phthalate										
	2. ug/l	N.D.		89	84	5	79	78	2	48	105
3972	3,3'-dichlorobenzidine										
	5. ug/l	N.D.		70	71	2	57	68	18	37	104
3970	benzo (a) anthracene										
	0.9 ug/l	N.D.		87	84	4	85	82	4	69	101
	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		84	79	6	85	80	5	64	113
3971	chrysene										
	0.9 ug/l	N.D.		80	78	3	77	75	3	67	101
3974	di-n-octyl phthalate										
	2. ug/l	N.D.		100	94	6	99	93	6	59	118
3975	benzo (b) fluoranthene										
	0.9 ug/l	N.D.		88	87	1	84	81	3	64	101
3976	benzo (k) fluoranthene										
	0.9 ug/l	N.D.		86	84	3	85	81	6	67	105
3977	benzo (a) pyrene										
	0.9 ug/l	N.D.		90	88	3	87	84	4	65	101
3978	indeno (1,2,3-cd) pyrene										
	0.9 ug/l	N.D.		86	86	1	84	81	4	59	111
3979	dibenz (a,h) anthracene										
	0.9 ug/l	N.D.		86	84	2	83	80	4	66	117
3980	benzo (ghi) perylene										
	0.9 ug/l	N.D.		84	81	4	80	77	4	55	115



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LLI Sample No. 2932451

CPT-09-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

		SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles		2-Flphenol	52	7	74
		Phenol-d6	37	25	88
		2,4,6-TBP	80	34	125
4679 TCL Semivolatiles cont'd		Nitrobz-d5	136	47	114
		2-Fbiphenyl	83	51	106
		Tphenylid14	59	37	119



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LLI Sample No. WW 2934151

Collected: 5/21/98 at 08:00 by ROC

Submitted: 5/23/98 Reported: 6/ 9/98

Discard: 7/10/98

CPT-10-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT10 SDG#: HMS01-07

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

CAT
NO.

ANALYSIS NAME

4678 TCL Semivolatiles
4679 TCL Semivolatiles cont'd

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
07:44:36 D 0003 5 129915 616297
412 0.00 00029700 ASR000



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Ref.

AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	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	1. J	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.	2.	ug/l

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CPT-10-GW Grab Water Sample

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AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	2.	J 1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	2.	J 1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	3.	J 2.	ug/l
3958	diethyl phthalate	N.D.	2.	ug/l
3957	4-chlorophenyl phenyl ether	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-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	2.	J 1.	ug/l
3965	di-n-butyl phthalate	3.	J 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.	5.	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

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Page: 4 of 9

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CPT-10-GW Grab Water Sample

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Oklahoma City OK 73125P.O. GULF STATES CREOSOT
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NO. ANALYSIS NAMEAS 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.

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2216 Rev. 8/4/97



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Collected: 05/21/98 at 08:00 by ROC

Submitted: 05/23/98

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P.O. Box 25861
Oklahoma City OK 73125

CPT-10-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT10 SDG#: HMS01-07

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL	ID DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	05/26/97 2110	Lee L. Munro
4678	TCL Semivolatiles	SW-846 8270C	1	06/04/98 0310	Linda M. Hartenstine
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/04/98 0310	Linda M. Hartenstine



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LLI Sample No. 2934151

CPT-10-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

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

4678 TCL Semivolatiles		Batch: 98146WAE026								

3925 phenol	ug/l	N.D.		45	46	3	45	44	2	5 83
3936 bis (2-chloroethyl) ether	ug/l	N.D.		91	88	3	82	80	3	66 106
3924 2-chlorophenol	ug/l	N.D.		88	88	0	91	90	1	62 107
3937 1,3-dichlorobenzene	ug/l	N.D.		84	80	4	67	63	5	45 91
3938 1,4-dichlorobenzene	ug/l	N.D.		84	81	4	67	64	5	45 94
3939 1,2-dichlorobenzene	ug/l	N.D.		89	85	4	73	69	5	52 97
4680 2-methylphenol	ug/l	N.D.		83	84	1	85	81	5	55 96
2,2'-oxybis (1-chloropropane)	ug/l	N.D.		103	100	3	92	89	3	43 118
4682 4-methylphenol	ug/l	N.D.		71	74	4	77	75	2	48 99
3942 N-nitrosodi-n-propylamine	ug/l	N.D.		93	88	5	86	83	3	62 118
3941 hexachloroethane	ug/l	N.D.		80	78	3	60	58	3	40 84
3943 nitrobenzene	ug/l	N.D.		93	89	4	86	83	4	61 113
3944 isophorone	ug/l	N.D.		98	95	3	94	90	4	66 113
3926 2-nitrophenol	ug/l	N.D.		92	90	2	93	92	1	67 104
3927 2,4-dimethylphenol	ug/l	N.D.		73	74	2	75	71	5	52 99
3945 bis (2-chloroethoxy) methane	ug/l	N.D.		91	88	3	85	82	3	64 103
3928 2,4-dichlorophenol	ug/l	N.D.		87	55	45	90	87	3	65 98
3946 1,2,4-trichlorobenzene	ug/l	N.D.		87	84	4	73	69	5	52 93
3947 naphthalene	ug/l	N.D.		89	96	6	76	73	4	60 97
3871 4-chloroaniline	ug/l	N.D.		78	69	13	74	78	4	34 101
3948 hexachlorobutadiene	ug/l	N.D.		82	79	4	60	58	3	24 86
3929 4-chloro-3-methylphenol	ug/l	N.D.		89	88	1	93	91	2	60 111
3905 2-methylnaphthalene	ug/l	N.D.		87	84	3	76	73	4	62 98



QUALITY CONTROL REPORT



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LLI Sample No. 2934151

CPT-10-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW HIGH
3949	hexachlorocyclopentadiene									
5.	ug/l	N.D.		58	53	9	43	43	1	17 80
3930	2,4,6-trichlorophenol									
2.	ug/l	N.D.		88	86	3	90	89	1	66 105
3922	2,4,5-trichlorophenol									
2.	ug/l	N.D.		92	89	4	91	91	0	67 103
3950	2-chloronaphthalene									
1.	ug/l	N.D.		89	84	5	79	75	5	61 103
3907	2-nitroaniline									
2.	ug/l	N.D.		99	97	2	93	89	4	58 112
3952	dimethyl phthalate									
2.	ug/l	N.D.		52	45	15	20	18	11	1 90
3951	acenaphthylene									
2.	ug/l	N.D.		86	83	4	80	76	5	64 100
4679 TCL Semivolatiles cont'd		Batch: 98146WAE026								
	3-nitroaniline									
2.	ug/l	N.D.		85	84	2	78	80	2	40 108
3934	acenaphthene									
1.	ug/l	N.D.		85	83	3	78	75	5	61 100
3931	2,4-dinitrophenol									
15.	ug/l	N.D.		64	66	2	58	61	5	25 124
3932	4-nitrophenol									
10.	ug/l	N.D.		45	47	4	46	45	2	3 83
3879	dibenzofuran									
1.	ug/l	N.D.		87	85	2	80	76	5	67 99
3955	2,4-dinitrotoluene									
1.	ug/l	N.D.		93	90	4	89	84	6	64 112
3953	2,6-dinitrotoluene									
2.	ug/l	N.D.		101	99	3	94	90	4	66 113
3958	diethyl phthalate									
2.	ug/l	N.D.		78	73	7	56	53	6	30 99
3957	4-chlorophenyl phenyl ether									
1.	ug/l	N.D.		83	80	4	78	73	6	62 104
3956	fluorene									
1.	ug/l	N.D.		91	89	3	86	80	6	61 108
3909	4-nitroaniline									
2.	ug/l	N.D.		98	90	8	91	88	3	55 116
3933	4,6-dinitro-2-methylphenol									
5.	ug/l	N.D.		73	72	2	71	73	3	43 120
3960	N-nitrosodiphenylamine									
1.	ug/l	N.D.		83	81	3	78	76	3	64 103
3961	4-bromophenyl phenyl ether									
2.	ug/l	N.D.		83	81	3	80	77	5	69 102
3962	hexachlorobenzene									
2.	ug/l	N.D.		84	82	2	82	78	4	62 109
3934	pentachlorophenol									
3.	ug/l	N.D.		66	68	2	68	68	1	46 114



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LLI Sample No. 2934151

CPT-10-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
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.		85	86	0	82	80	3	68	102
3964	anthracene										
1.	ug/l	N.D.		87	84	3	83	80	3	66	101
4684	carbazole										
1.	ug/l	N.D.		91	89	2	84	82	3	66	110
3965	di-n-butyl phthalate										
2.	ug/l	N.D.		88	85	3	79	76	4	61	105
3966	fluoranthene										
1.	ug/l	N.D.		85	82	4	82	79	3	66	106
3967	pyrene										
1.	ug/l	N.D.		89	88	1	85	81	4	58	112
3969	butyl benzyl phthalate										
2.	ug/l	N.D.		89	84	5	79	78	2	48	105
3972	3,3'-dichlorobenzidine										
5.	ug/l	N.D.		70	71	2	57	68	18	37	104
3970	benzo (a) anthracene										
1.	ug/l	N.D.		87	84	4	85	82	4	69	101
	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		84	79	6	85	80	5	64	113
3971	chrysene										
1.	ug/l	N.D.		80	78	3	77	75	3	67	101
3974	di-n-octyl phthalate										
2.	ug/l	N.D.		100	94	6	99	93	6	59	118
3975	benzo (b) fluoranthene										
1.	ug/l	N.D.		88	87	1	84	81	3	64	101
3976	benzo (k) fluoranthene										
1.	ug/l	N.D.		86	84	3	85	81	6	67	105
3977	benzo (a) pyrene										
1.	ug/l	N.D.		90	88	3	87	84	4	65	101
3978	indeno (1,2,3-cd) pyrene										
1.	ug/l	N.D.		86	86	1	84	81	4	59	111
3979	dibenz (a,h) anthracene										
1.	ug/l	N.D.		86	84	2	83	80	4	66	117
3980	benzo (ghi) perylene										
1.	ug/l	N.D.		84	81	4	80	77	4	55	115



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LLI Sample No. 2934151
CPT-10-GW Grab Water Sample
Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

SURROGATE SUMMARY			SURROGATE LIMITS	
TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles	2-Flphenol	53	7	74
	Phenol-d6	37	25	88
	2,4,6-TBP	76	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	83	47	114
	2-Fbiphenyl	77	51	106
	Tphenylid14	68	37	119





LLI Sample No. WW 2932452
Collected: 5/20/98 at 11:05 by RZ

Submitted: 5/21/98 Reported: 6/18/98
Discard: 7/19/98

CPT-11-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT11 SDG#: HMS01-04

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

P.O. GULF STATES CREOSOT
Re1.

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

3942
3941
3940

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
21:13:49 D 0003 8 129915 615946
050 0.00 00029700 ASR000



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LLI Sample No. WW 2932452

Collected: 5/20/98 at 11:05 by RZ

Submitted: 5/21/98 Reported: 6/18/98

Discard: 7/19/98

CPT-11-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT11 SDG#: HMS01-04

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

CAT
NO. ANALYSIS NAME

TCL Semivolatiles cont'd

3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	19.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	16.	ug/l
3932	4-nitrophenol	N.D.	11.	ug/l
3879	dibenzofuran	30.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	3. J	2.	ug/l
3958	diethyl phthalate	3. J	2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	1.	ug/l
3956	fluorene	15.	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	17.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	3. J	1.	ug/l
3965	di-n-butyl phthalate	4. J	2.	ug/l
3966	fluoranthene	1. J	1.	ug/l
3967	pyrene	1. J	1.	ug/l
3969	butyl benzyl phthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	5.	ug/l
3970	benzo (a) anthracene	N.D.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	17.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octyl phthalate	5. J	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 2932452

Collected: 5/20/98 at 11:05 by RZ

Submitted: 5/21/98 Reported: 6/18/98

Discard: 7/19/98

CPT-11-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

CPT11 SDG#: HMS01-04

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

P.O. GULF STATES CREOSOT
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
Kay G. Hower at (717) 656-2300



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



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LABORATORY CHRONICLE

Page: 5 of 9

LLI Sample No. WW 2932452

Collected: 05/20/98 at 11:05 by RZ

Submitted: 05/21/98

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

CPT-11-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT11 SDG#: HMS01-04

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
0813	BNA Water Extraction	SW-846 3510C	1		05/26/97 2110	Lee L. Munro
4678	TCL Semivolatiles	SW-846 8270C	1		06/04/98 0128	Linda M. Hartenstine
4679	TCL Semivolatiles cont'd	SW-846 8270C	1		06/04/98 0128	Linda M. Hartenstine



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LLI Sample No. 2932452

CPT-11-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
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: 98146WAE026									
3925	phenol										
1.	ug/l	N.D.		45	46	3	45	44	2	5	83
3936	bis (2-chloroethyl) ether										
1.	ug/l	N.D.		91	88	3	82	80	3	66	106
3924	2-chlorophenol										
1.	ug/l	N.D.		88	88	0	91	90	1	62	107
3937	1,3-dichlorobenzene										
1.	ug/l	N.D.		84	80	4	67	63	5	45	91
3938	1,4-dichlorobenzene										
1.	ug/l	N.D.		84	81	4	67	64	5	45	94
3939	1,2-dichlorobenzene										
1.	ug/l	N.D.		89	85	4	73	69	5	52	97
4680	2-methylphenol										
1.	ug/l	N.D.		83	84	1	85	81	5	55	96
	2,2'-oxybis (1-chloropropane)										
2.	ug/l	N.D.		103	100	3	92	89	3	43	118
4682	4-methylphenol										
3.	ug/l	N.D.		71	74	4	77	75	2	48	99
3942	N-nitrosodi-n-propylamine										
1.	ug/l	N.D.		93	88	5	86	83	3	62	118
3941	hexachloroethane										
1.	ug/l	N.D.		80	78	3	60	58	3	40	84
3943	nitrobenzene										
1.	ug/l	N.D.		93	89	4	86	83	4	61	113
3944	isophorone										
1.	ug/l	N.D.		98	95	3	94	90	4	66	113
3926	2-nitrophenol										
1.	ug/l	N.D.		92	90	2	93	92	1	67	104
3927	2,4-dimethylphenol										
1.	ug/l	N.D.		73	74	2	75	71	5	52	99
3945	bis (2-chloroethoxy) methane										
1.	ug/l	N.D.		91	88	3	85	82	3	64	103
3928	2,4-dichlorophenol										
1.	ug/l	N.D.		87	55	45	90	87	3	65	98
3946	1,2,4-trichlorobenzene										
1.	ug/l	N.D.		87	84	4	73	69	5	52	93
3947	naphthalene										
1.	ug/l	N.D.		89	96	6	76	73	4	60	97
3871	4-chloroaniline										
1.	ug/l	N.D.		78	69	13	74	78	4	34	101
3948	hexachlorobutadiene										
2.	ug/l	N.D.		82	79	4	60	58	3	24	86
3929	4-chloro-3-methylphenol										
1.	ug/l	N.D.		89	88	1	93	91	2	60	111
3905	2-methylnaphthalene										
1.	ug/l	N.D.		87	84	3	76	73	4	62	98



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QUALITY CONTROL REPORT



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LLI Sample No. 2932452

CPT-11-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3949	hexachlorocyclopentadiene										
5.	ug/l	N.D.		58	53	9	43	43	1	17	80
3930	2,4,6-trichlorophenol										
2.	ug/l	N.D.		88	86	3	90	89	1	66	105
3922	2,4,5-trichlorophenol										
2.	ug/l	N.D.		92	89	4	91	91	0	67	103
3950	2-chloronaphthalene										
1.	ug/l	N.D.		89	84	5	79	75	5	61	103
3907	2-nitroaniline										
2.	ug/l	N.D.		99	97	2	93	89	4	58	112
3952	dimethyl phthalate										
2.	ug/l	N.D.		52	45	15	20	18	11	1	90
3951	acenaphthylene										
2.	ug/l	N.D.		86	83	4	80	76	5	64	100

4679	TCL Semivolatiles cont'd	Batch: 98146WAE026									
3-nitroaniline											
2.	ug/l	N.D.		85	84	2	78	80	2	40	108
3934	acenaphthene										
1.	ug/l	N.D.		85	83	3	78	75	5	61	100
3931	2,4-dinitrophenol										
16.	ug/l	N.D.		64	66	2	58	61	5	25	124
3932	4-nitrophenol										
11.	ug/l	N.D.		45	47	4	46	45	2	3	83
3879	dibenzofuran										
1.	ug/l	N.D.		87	85	2	80	76	5	67	99
3955	2,4-dinitrotoluene										
1.	ug/l	N.D.		93	90	4	89	84	6	64	112
3953	2,6-dinitrotoluene										
2.	ug/l	N.D.		101	99	3	94	90	4	66	113
3958	diethyl phthalate										
2.	ug/l	N.D.		78	73	7	56	53	6	30	99
3957	4-chlorophenyl phenyl ether										
1.	ug/l	N.D.		83	80	4	78	73	6	62	104
3956	fluorene										
1.	ug/l	N.D.		91	89	3	86	80	6	61	108
3909	4-nitroaniline										
2.	ug/l	N.D.		98	90	8	91	88	3	55	116
3933	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		73	72	2	71	73	3	43	120
3960	N-nitrosodiphenylamine										
1.	ug/l	N.D.		83	81	3	78	76	3	64	103
3961	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		83	81	3	80	77	5	69	102
3962	hexachlorobenzene										
2.	ug/l	N.D.		84	82	2	82	78	4	62	109
3934	pentachlorophenol										
3.	ug/l	N.D.		66	68	2	68	68	1	46	114



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LLI Sample No. 2932452

CPT-11-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3963 phenanthrene											
1. ug/l		N.D.		85	86	0	82	80	3	68	102
3964 anthracene											
1. ug/l		N.D.		87	84	3	83	80	3	66	101
4684 carbazole											
1. ug/l		N.D.		91	89	2	84	82	3	66	110
3965 di-n-butyl phthalate											
2. ug/l		N.D.		88	85	3	79	76	4	61	105
3966 fluoranthene											
1. ug/l		N.D.		85	82	4	82	79	3	66	106
3967 pyrene											
1. ug/l		N.D.		89	88	1	85	81	4	58	112
3969 butyl benzyl phthalate											
2. ug/l		N.D.		89	84	5	79	78	2	48	105
3972 3,3'-dichlorobenzidine											
5. ug/l		N.D.		70	71	2	57	68	18	37	104
3970 benzo (a) anthracene											
1. ug/l		N.D.		87	84	4	85	82	4	69	101
bis (2-ethylhexyl) phthalate											
2. ug/l		N.D.		84	79	6	85	80	5	64	113
3971 chrysene											
1. ug/l		N.D.		80	78	3	77	75	3	67	101
3974 di-n-octyl phthalate											
2. ug/l		N.D.		100	94	6	99	93	6	59	118
3975 benzo (b) fluoranthene											
1. ug/l		N.D.		88	87	1	84	81	3	64	101
3976 benzo (k) fluoranthene											
1. ug/l		N.D.		86	84	3	85	81	6	67	105
3977 benzo (a) pyrene											
1. ug/l		N.D.		90	88	3	87	84	4	65	101
3978 indeno (1,2,3-cd) pyrene											
1. ug/l		N.D.		86	86	1	84	81	4	59	111
3979 dibenz (a,h) anthracene											
1. ug/l		N.D.		86	84	2	83	80	4	66	117
3980 benzo (ghi) perylene											
1. ug/l		N.D.		84	81	4	80	77	4	55	115



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Page: 9 of 9

LLI Sample No. 2932452

CPT-11-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

SURROGATE SUMMARY		SURROGATE LIMITS	
TRIAL ID	SURROGATE	LOW	HIGH
4678 TCL Semivolatiles	2-Flphenol	7	74
	Phenol-d6	25	88
	2,4,6-TBP	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	47	114
	2-Fbiphenyl	51	106
	Tphenylid14	37	119



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2216 Rev. 8/4/97





LLI Sample No. WW 2932453

Collected: 5/20/98 at 14:45 by RZ

Submitted: 5/21/98 Reported: 6/18/98

Discard: 7/19/98

CPT-12-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

CPT12 SDG#: HMS01-05

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

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METHOD

RESULTS DETECTION LIMIT UNITS

CAT
NO.

ANALYSIS NAME

4678 TCL Semivolatiles
4679 TCL Semivolatiles cont'd

See Page 2
See Page 3

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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
21:15:17 D 0003 8 129915 615946
050 0.00 00029700 ASR000



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Group Leader, GC/MS SVOA





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Page: 2 of 9

LLI Sample No. WW 2932453

Collected: 5/20/98 at 14:45 by RZ

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Discard: 7/19/98

CPT-12-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT12 SDG#: HMS01-05

Account No: 07802
Kerr-McGee Corporation
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CAT NO. ANALYSIS NAME RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles

3925	phenol	3.	J	0.9	ug/l
3936	bis (2-chloroethyl) ether	N.D.		0.9	ug/l
3924	2-chlorophenol	N.D.		0.9	ug/l
3937	1,3-dichlorobenzene	N.D.		0.9	ug/l
3938	1,4-dichlorobenzene	N.D.		0.9	ug/l
3939	1,2-dichlorobenzene	N.D.		0.9	ug/l
4680	2-methylphenol	N.D.		0.9	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.		0.9	ug/l
3941	hexachloroethane	N.D.		0.9	ug/l
3943	nitrobenzene	N.D.		0.9	ug/l
3944	isophorone	N.D.		0.9	ug/l
3945	2-nitrophenol	N.D.		0.9	ug/l
3946	2,4-dimethylphenol	N.D.		0.9	ug/l
3945	bis (2-chloroethoxy) methane	N.D.		0.9	ug/l
3928	2,4-dichlorophenol	N.D.		0.9	ug/l
3946	1,2,4-trichlorobenzene	N.D.		0.9	ug/l
3947	naphthalene	710.		5.	ug/l
3871	4-chloroaniline	N.D.		0.9	ug/l
3948	hexachlorobutadiene	N.D.		2.	ug/l
3929	4-chloro-3-methylphenol	N.D.		0.9	ug/l
3905	2-methylnaphthalene	42.		0.9	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.		0.9	ug/l
3907	2-nitroaniline	N.D.		2.	ug/l
3952	dimethyl phthalate	N.D.		2.	ug/l
3951	acenaphthylene	7.	J	2.	ug/l

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



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LLI Sample No. WW 2932453

Collected: 5/20/98 at 14:45 by RZ

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Discard: 7/19/98

CPT-12-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT12 SDG#: HMS01-05

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

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CAT NO.	ANALYSIS NAME	RESULTS	METHOD DETECTION LIMIT	UNITS
------------	---------------	---------	---------------------------	-------

TCL Semivolatiles cont'd

3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	100.	0.9	ug/l
3931	2,4-dinitrophenol	N.D.	14.	ug/l
3932	4-nitrophenol	N.D.	9.	ug/l
3879	dibenzofuran	87.	0.9	ug/l
3955	2,4-dinitrotoluene	N.D.	0.9	ug/l
3953	2,6-dinitrotoluene	4. J	2.	ug/l
3958	diethyl phthalate	6. J	2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	0.9	ug/l
3956	fluorene	46.	0.9	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.	0.9	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	57.	0.9	ug/l
3964	anthracene	6. J	0.9	ug/l
4684	carbazole	84.	0.9	ug/l
3965	di-n-butyl phthalate	4. J	2.	ug/l
3966	fluoranthene	6. J	0.9	ug/l
3967	pyrene	9.	0.9	ug/l
3969	butyl benzyl phthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	5.	ug/l
3970	benzo (a) anthracene	1. J	0.9	ug/l
3973	bis (2-ethylhexyl) phthalate	7. J	2.	ug/l
3971	chrysene	1. J	0.9	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	N.D.	0.9	ug/l
3976	benzo (k) fluoranthene	N.D.	0.9	ug/l
3977	benzo (a) pyrene	N.D.	0.9	ug/l
3978	indeno (1,2,3-cd) pyrene	N.D.	0.9	ug/l
3979	dibenz (a,h) anthracene	N.D.	0.9	ug/l
3980	benzo (ghi) perylene	N.D.	0.9	ug/l

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LLI Sample No. WW 2932453

Collected: 5/20/98 at 14:45 by RZ

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Discard: 7/19/98

CPT-12-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

CPT12 SDG#: HMS01-05

Account No: 07802
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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.

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LABORATORY CHRONICLE

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LLI Sample No. WW 2932453

Collected: 05/20/98 at 14:45 by RZ

Submitted: 05/21/98

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CPT-12-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT12 SDG#: HMS01-05

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
0813	BNA Water Extraction	SW-846 3510C	1		05/26/97 2110	Lee L. Munro
4678	TCL Semivolatiles	SW-846 8270C	1		06/04/98 0219	Linda M. Hartenstine
4679	TCL Semivolatiles cont'd	SW-846 8270C	1		06/04/98 0219	Linda M. Hartenstine



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LLI Sample No. 2932453

CPT-12-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
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: 98146WAE026									
3925	phenol	N.D.		45	46	3	45	44	2	5	83
	0.9 ug/l										
3936	bis (2-chloroethyl) ether	N.D.		91	88	3	82	80	3	66	106
	0.9 ug/l										
3924	2-chlorophenol	N.D.		88	88	0	91	90	1	62	107
	0.9 ug/l										
3937	1,3-dichlorobenzene	N.D.		84	80	4	67	63	5	45	91
	0.9 ug/l										
3938	1,4-dichlorobenzene	N.D.		84	81	4	67	64	5	45	94
	0.9 ug/l										
3939	1,2-dichlorobenzene	N.D.		89	85	4	73	69	5	52	97
	0.9 ug/l										
4680	2-methylphenol	N.D.		83	84	1	85	81	5	55	96
	0.9 ug/l										
	2,2'-oxybis (1-chloropropane)	N.D.		103	100	3	92	89	3	43	118
	2. ug/l										
4682	4-methylphenol	N.D.		71	74	4	77	75	2	48	99
	3. ug/l										
3942	N-nitrosodi-n-propylamine	N.D.		93	88	5	86	83	3	62	118
	0.9 ug/l										
3941	hexachloroethane	N.D.		80	78	3	60	58	3	40	84
	0.9 ug/l										
3943	nitrobenzene	N.D.		93	89	4	86	83	4	61	113
	0.9 ug/l										
3944	isophorone	N.D.		98	95	3	94	90	4	66	113
	0.9 ug/l										
3926	2-nitrophenol	N.D.		92	90	2	93	92	1	67	104
	0.9 ug/l										
3927	2,4-dimethylphenol	N.D.		73	74	2	75	71	5	52	99
	0.9 ug/l										
3945	bis (2-chloroethoxy) methane	N.D.		91	88	3	85	82	3	64	103
	0.9 ug/l										
3928	2,4-dichlorophenol	N.D.		87	55	45	90	87	3	65	98
	0.9 ug/l										
3946	1,2,4-trichlorobenzene	N.D.		87	84	4	73	69	5	52	93
	0.9 ug/l										
3947	naphthalene	N.D.		89	96	6	76	73	4	60	97
	5. ug/l										
3871	4-chloroaniline	N.D.		78	69	13	74	78	4	34	101
	0.9 ug/l										
3948	hexachlorobutadiene	N.D.		82	79	4	60	58	3	24	86
	2. ug/l										
3929	4-chloro-3-methylphenol	N.D.		89	88	1	93	91	2	60	111
	0.9 ug/l										
3905	2-methylnaphthalene	N.D.		87	84	3	76	73	4	62	98
	0.9 ug/l										



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LLI Sample No. 2932453

CPT-12-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3949	hexachlorocyclopentadiene										
5.	ug/l	N.D.		58	53	9	43	43	1	17	80
3930	2,4,6-trichlorophenol										
2.	ug/l	N.D.		88	86	3	90	89	1	66	105
3922	2,4,5-trichlorophenol										
2.	ug/l	N.D.		92	89	4	91	91	0	67	103
3950	2-chloronaphthalene										
0.9	ug/l	N.D.		89	84	5	79	75	5	61	103
3907	2-nitroaniline										
2.	ug/l	N.D.		99	97	2	93	89	4	58	112
3952	dimethyl phthalate										
2.	ug/l	N.D.		52	45	15	20	18	11	1	90
3951	acenaphthylene										
2.	ug/l	N.D.		86	83	4	80	76	5	64	100

4679	TCL Semivolatiles cont'd	Batch: 98146WAE026									
3-nitroaniline											
2.	ug/l	N.D.		85	84	2	78	80	2	40	108
3954	acenaphthene										
0.9	ug/l	N.D.		85	83	3	78	75	5	61	100
3931	2,4-dinitrophenol										
14.	ug/l	N.D.		64	66	2	58	61	5	25	124
3932	4-nitrophenol										
9.	ug/l	N.D.		45	47	4	46	45	2	3	83
3879	dibenzofuran										
0.9	ug/l	N.D.		87	85	2	80	76	5	67	99
3955	2,4-dinitrotoluene										
0.9	ug/l	N.D.		93	90	4	89	84	6	64	112
3953	2,6-dinitrotoluene										
2.	ug/l	N.D.		101	99	3	94	90	4	66	113
3958	diethyl phthalate										
2.	ug/l	N.D.		78	73	7	56	53	6	30	99
3957	4-chlorophenyl phenyl ether										
0.9	ug/l	N.D.		83	80	4	78	73	6	62	104
3956	fluorene										
0.9	ug/l	N.D.		91	89	3	86	80	6	61	108
3909	4-nitroaniline										
2.	ug/l	N.D.		98	90	8	91	88	3	55	116
3933	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		73	72	2	71	73	3	43	120
3960	N-nitrosodiphenylamine										
0.9	ug/l	N.D.		83	81	3	78	76	3	64	103
3961	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		83	81	3	80	77	5	69	102
3962	hexachlorobenzene										
2.	ug/l	N.D.		84	82	2	82	78	4	62	109
3934	pentachlorophenol										
3.	ug/l	N.D.		66	68	2	68	68	1	46	114





LLI Sample No. 2932453

CPT-12-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3963	phenanthrene										
	0.9 ug/l	N.D.		85	86	0	82	80	3	68	102
3964	anthracene										
	0.9 ug/l	N.D.		87	84	3	83	80	3	66	101
4684	carbazole										
	0.9 ug/l	N.D.		91	89	2	84	82	3	66	110
3965	di-n-butyl phthalate										
	2. ug/l	N.D.		88	85	3	79	76	4	61	105
3966	fluoranthene										
	0.9 ug/l	N.D.		85	82	4	82	79	3	66	106
3967	pyrene										
	0.9 ug/l	N.D.		89	88	1	85	81	4	58	112
3969	butyl benzyl phthalate										
	2. ug/l	N.D.		89	84	5	79	78	2	48	105
3972	3,3'-dichlorobenzidine										
	5. ug/l	N.D.		70	71	2	57	68	18	37	104
3970	benzo (a) anthracene										
	0.9 ug/l	N.D.		87	84	4	85	82	4	69	101
	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		84	79	6	85	80	5	64	113
3971	chrysene										
	0.9 ug/l	N.D.		80	78	3	77	75	3	67	101
3974	di-n-octyl phthalate										
	2. ug/l	N.D.		100	94	6	99	93	6	59	118
3975	benzo (b) fluoranthene										
	0.9 ug/l	N.D.		88	87	1	84	81	3	64	101
3976	benzo (k) fluoranthene										
	0.9 ug/l	N.D.		86	84	3	85	81	6	67	105
3977	benzo (a) pyrene										
	0.9 ug/l	N.D.		90	88	3	87	84	4	65	101
3978	indeno (1,2,3-cd) pyrene										
	0.9 ug/l	N.D.		86	86	1	84	81	4	59	111
3979	dibenz (a,h) anthracene										
	0.9 ug/l	N.D.		86	84	2	83	80	4	66	117
3980	benzo (ghi) perylene										
	0.9 ug/l	N.D.		84	81	4	80	77	4	55	115





LLI Sample No. 2932453

CPT-12-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	47	7	74
	Pheno1-d6	33	25	88
	2,4,6-TBP	71	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	78	47	114
	2-Fbiphenyl	74	51	106
	Tphenyl d14	55	37	119



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LLI Sample No. WW 2932454

Collected: 5/20/98 at 14:00 by RZ

Submitted: 5/21/98 Reported: 6/18/98

Discard: 7/19/98

CPT-13-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

CPT13 SDG#: HMS01-06BKG

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

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METHOD

RESULTS DETECTION LIMIT UNITS

CAT NO.	ANALYSIS NAME
4678	TCL Semivolatiles
4679	TCL Semivolatiles cont'd

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
21:16:45 D 0003 8 129915 615946
050 0.00 00029700 ASR000



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LLI Sample No. WW 2932454

Collected: 5/20/98 at 14:00 by RZ

Submitted: 5/21/98 Reported: 6/18/98

Discard: 7/19/98

CPT-13-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

CPT13 SDG#: HMS01-06BKG

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Oklahoma City OK 73125

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CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD
DETECTION LIMIT UNITS

TCL Semivolatiles

3925	phenol	1.	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	9.	J	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	2.	J	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.		2.	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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See reverse side for explanation of symbols and abbreviations.

2216 Rev 8/4/97





LLI Sample No. WW 2932454

Collected: 5/20/98 at 14:00 by RZ

Submitted: 5/21/98 Reported: 6/18/98

Discard: 7/19/98

CPT-13-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT13 SDG#: HMS01-06BKG

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

CAT
NO. ANALYSIS NAME

TCL Semivolatiles cont'd

3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	2.	J 1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	3.	J 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	3.	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-bromophenyl phenyl ether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	4.	J 1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	5.	J 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.	5.	ug/l
3970	benzo (a) anthracene	N.D.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	2.	J 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

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



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Page: 4 of 9

LLI Sample No. WW 2932454

Collected: 5/20/98 at 14:00 by RZ

Submitted: 5/21/98 Reported: 6/18/98

Discard: 7/19/98

CPT-13-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT13 SDG#: HMS01-068KG

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

P.O. GULF STATES CREOSOT
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
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. WW 2932454

Collected: 05/20/98 at 14:00 by RZ

Submitted: 05/21/98

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

CPT-13-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CPT13 SDG#: HMS01-06BKG

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
0813	BNA Water Extraction	SW-846 3510C	1		05/26/97 2110	Lee L. Munro
4678	TCL Semivolatiles	SW-846 8270C	1		06/03/98 1813	David J. Evans
4679	TCL Semivolatiles cont'd	SW-846 8270C	1		06/03/98 1813	David J. Evans



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LLI Sample No. 2932454

CPT-13-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
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: 98146WAE026									
3925 phenol	1. ug/l	N.D.		45	46	3	45	44	2	5	83
3936 bis (2-chloroethyl) ether	1. ug/l	N.D.		91	88	3	82	80	3	66	106
3924 2-chlorophenol	1. ug/l	N.D.		88	88	0	91	90	1	62	107
3937 1,3-dichlorobenzene	1. ug/l	N.D.		84	80	4	67	63	5	45	91
3938 1,4-dichlorobenzene	1. ug/l	N.D.		84	81	4	67	64	5	45	94
3939 1,2-dichlorobenzene	1. ug/l	N.D.		89	85	4	73	69	5	52	97
4680 2-methylphenol	1. ug/l	N.D.		83	84	1	85	81	5	55	96
2,2'-oxybis (1-chloropropane)	2. ug/l	N.D.		103	100	3	92	89	3	43	118
4682 4-methylphenol	3. ug/l	N.D.		71	74	4	77	75	2	48	99
3942 N-nitrosodi-n-propylamine	1. ug/l	N.D.		93	88	5	86	83	3	62	118
3941 hexachloroethane	1. ug/l	N.D.		80	78	3	60	58	3	40	84
3943 nitrobenzene	1. ug/l	N.D.		93	89	4	86	83	4	61	113
3944 isophorone	1. ug/l	N.D.		98	95	3	94	90	4	66	113
3926 2-nitrophenol	1. ug/l	N.D.		92	90	2	93	92	1	67	104
3927 2,4-dimethylphenol	1. ug/l	N.D.		73	74	2	75	71	5	52	99
3945 bis (2-chloroethoxy) methane	1. ug/l	N.D.		91	88	3	85	82	3	64	103
3928 2,4-dichlorophenol	1. ug/l	N.D.		87	55	45	90	87	3	65	98
3946 1,2,4-trichlorobenzene	1. ug/l	N.D.		87	84	4	73	69	5	52	93
3947 naphthalene	1. ug/l	N.D.		89	96	6	76	73	4	60	97
3871 4-chloroaniline	1. ug/l	N.D.		78	69	13	74	78	4	34	101
3948 hexachlorobutadiene	2. ug/l	N.D.		82	79	4	60	58	3	24	86
3929 4-chloro-3-methylphenol	1. ug/l	N.D.		89	88	1	93	91	2	60	111
3905 2-methylnaphthalene	1. ug/l	N.D.		87	84	3	76	73	4	62	98



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LLI Sample No. 2932454

CPT-13-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
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.		58	53	9	43	43	1	17	80
3930	2,4,6-trichlorophenol										
2.	ug/l	N.D.		88	86	3	90	89	1	66	105
3922	2,4,5-trichlorophenol										
2.	ug/l	N.D.		92	89	4	91	91	0	67	103
3950	2-chloronaphthalene										
1.	ug/l	N.D.		89	84	5	79	75	5	61	103
3907	2-nitroaniline										
2.	ug/l	N.D.		99	97	2	93	89	4	58	112
3952	dimethyl phthalate										
2.	ug/l	N.D.		52	45	15	20	18	11	1	90
3951	acenaphthylene										
2.	ug/l	N.D.		86	83	4	80	76	5	64	100

4679	TCL Semivolatiles cont'd	Batch: 98146WAE026									
3.	3-nitroaniline										
2.	ug/l	N.D.		85	84	2	78	80	2	40	108
3954	acenaphthene										
1.	ug/l	N.D.		85	83	3	78	75	5	61	100
3931	2,4-dinitrophenol										
15.	ug/l	N.D.		64	66	2	58	61	5	25	124
3932	4-nitrophenol										
10.	ug/l	N.D.		45	47	4	46	45	2	3	83
3879	dibenzofuran										
1.	ug/l	N.D.		87	85	2	80	76	5	67	99
3955	2,4-dinitrotoluene										
1.	ug/l	N.D.		93	90	4	89	84	6	64	112
3953	2,6-dinitrotoluene										
2.	ug/l	N.D.		101	99	3	94	90	4	66	113
3958	diethyl phthalate										
2.	ug/l	N.D.		78	73	7	56	53	6	30	99
3957	4-chlorophenyl phenyl ether										
1.	ug/l	N.D.		83	80	4	78	73	6	62	104
3956	fluorene										
1.	ug/l	N.D.		91	89	3	86	80	6	61	108
3909	4-nitroaniline										
2.	ug/l	N.D.		98	90	8	91	88	3	55	116
3933	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		73	72	2	71	73	3	43	120
3960	N-nitrosodiphenylamine										
1.	ug/l	N.D.		83	81	3	78	76	3	64	103
3961	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		83	81	3	80	77	5	69	102
3962	hexachlorobenzene										
2.	ug/l	N.D.		84	82	2	82	78	4	62	109
3934	pentachlorophenol										
3.	ug/l	N.D.		66	68	2	68	68	1	46	114





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Page: 8 of 9

LLI Sample No. 2932454

CPT-13-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3963	phenanthrene										
1.	ug/l	N.D.		85	86	0	82	80	3	68	102
3964	anthracene										
1.	ug/l	N.D.		87	84	3	83	80	3	66	101
4684	carbazole										
1.	ug/l	N.D.		91	89	2	84	82	3	66	110
3965	di-n-butyl phthalate										
2.	ug/l	N.D.		88	85	3	79	76	4	61	105
3966	fluoranthene										
1.	ug/l	N.D.		85	82	4	82	79	3	66	106
3967	pyrene										
1.	ug/l	N.D.		89	88	1	85	81	4	58	112
3969	butyl benzyl phthalate										
2.	ug/l	N.D.		89	84	5	79	78	2	48	105
3972	3,3'-dichlorobenzidine										
5.	ug/l	N.D.		70	71	2	57	68	18	37	104
3970	benzo (a) anthracene										
1.	ug/l	N.D.		87	84	4	85	82	4	69	101
	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		84	79	6	85	80	5	64	113
3971	chrysene										
1.	ug/l	N.D.		80	78	3	77	75	3	67	101
3974	di-n-octyl phthalate										
2.	ug/l	N.D.		100	94	6	99	93	6	59	118
3975	benzo (b) fluoranthene										
1.	ug/l	N.D.		88	87	1	84	81	3	64	101
3976	benzo (k) fluoranthene										
1.	ug/l	N.D.		86	84	3	85	81	6	67	105
3977	benzo (a) pyrene										
1.	ug/l	N.D.		90	88	3	87	84	4	65	101
3978	indeno (1,2,3-cd) pyrene										
1.	ug/l	N.D.		86	86	1	84	81	4	59	111
3979	dibenz (a,h) anthracene										
1.	ug/l	N.D.		86	84	2	83	80	4	66	117
3980	benzo (ghi) perylene										
1.	ug/l	N.D.		84	81	4	80	77	4	55	115



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2216 Rev. 8/4/97





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Page: 9 of 9

LLI Sample No. 2932454

CPT-13-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles	2-Flphenol	57	7	74
	Phenol-d6	40	25	88
	2,4,6-TBP	81	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	90	47	114
	2-Fbiphenyl	82	51	106
	Tphenyl14	72	37	119



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2216 Rev 6/4/97



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Page: 1 of 9

LLI Sample No. WW 2934153

Collected: 5/21/98 at 13:55 by ROC

Submitted: 5/23/98 Reported: 6/ 9/98

Discard: 7/10/98

CPT-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

CPT21 SDG#: HMS01-09

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

P.O. GULF STATES CREOSOT
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
07:47:17 D 0003 5 129915 616297
412 0.00 00029700 ASR000



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Page: 2 of 9

LLI Sample No. WW 2934153

Collected: 5/21/98 at 13:55 by ROC

Submitted: 5/23/98 Reported: 6/ 9/98

Discard: 7/10/98

CPT-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT21 SDG#: HMS01-09

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

P.O. GULF STATES CREOSOT
Ref.

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD DETECTION LIMIT UNITS
------------	---------------	---------	---------------------------------

TCL Semivolatiles

3925	phenol	1.	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.		2.	ug/l

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



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Respectfully Submitted
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Group Leader, GC/MS SVQA





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Page: 3 of 9

LLI Sample No. WW 2934153

Collected: 5/21/98 at 13:55 by ROC

Submitted: 5/23/98 Reported: 6/ 9/98

Discard: 7/10/98

CPT-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT21 SDG#: HMS01-09

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

P.O. GULF STATES CREOSOT
Ref.

		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	3.	J 2.	ug/l
3958	diethyl phthalate	2.	J 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	2.	J 1.	ug/l
3965	di-n-butyl phthalate	3.	J 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.	5.	ug/l
3970	benzo (a) anthracene	N.D.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	19.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octyl phthalate	4.	J 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





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Page: 4 of 9

LLI Sample No. WW 2934153

Collected: 5/21/98 at 13:55 by ROC

Submitted: 5/23/98 Reported: 6/ 9/98

Discard: 7/10/98

CPT-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT21 SDG#: HMS01-09

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

P.O. GULF STATES CREOSOT
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
Kay G. Hower at (717) 656-2300



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LABORATORY CHRONICLE

Page: 5 of 9

LLI Sample No. WW 2934153

Collected: 05/21/98 at 13:55 by ROC

Submitted: 05/23/98

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

CPT-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT21 SDG#: HMS01-09

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL	ID DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	05/26/97 2110	Lee L. Munro
4678	TCL Semivolatiles	SW-846 8270C	1	06/04/98 0453	Linda M. Hartenstine
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/04/98 0453	Linda M. Hartenstine



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LLI Sample No. 2934153

CPT-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
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: 98146WAE026									
3925 phenol	1. ug/l	N.D.		45	46	3	45	44	2	5	83
3936 bis (2-chloroethyl) ether	1. ug/l	N.D.		91	88	3	82	80	3	66	106
3924 2-chlorophenol	1. ug/l	N.D.		88	88	0	91	90	1	62	107
3937 1,3-dichlorobenzene	1. ug/l	N.D.		84	80	4	67	63	5	45	91
3938 1,4-dichlorobenzene	1. ug/l	N.D.		84	81	4	67	64	5	45	94
3939 1,2-dichlorobenzene	1. ug/l	N.D.		89	85	4	73	69	5	52	97
4680 2-methylphenol	1. ug/l	N.D.		83	84	1	85	81	5	55	96
2,2'-oxybis (1-chloropropane)	2. ug/l	N.D.		103	100	3	92	89	3	43	118
4682 4-methylphenol	3. ug/l	N.D.		71	74	4	77	75	2	48	99
3942 N-nitrosodi-n-propylamine	1. ug/l	N.D.		93	88	5	86	83	3	62	118
3941 hexachloroethane	1. ug/l	N.D.		80	78	3	60	58	3	40	84
3943 nitrobenzene	1. ug/l	N.D.		93	89	4	86	83	4	61	113
3944 isophorone	1. ug/l	N.D.		98	95	3	94	90	4	66	113
3926 2-nitrophenol	1. ug/l	N.D.		92	90	2	93	92	1	67	104
3927 2,4-dimethylphenol	1. ug/l	N.D.		73	74	2	75	71	5	52	99
3945 bis (2-chloroethoxy) methane	1. ug/l	N.D.		91	88	3	85	82	3	64	103
3928 2,4-dichlorophenol	1. ug/l	N.D.		87	55	45	90	87	3	65	98
3946 1,2,4-trichlorobenzene	1. ug/l	N.D.		87	84	4	73	69	5	52	93
3947 naphthalene	1. ug/l	N.D.		89	96	6	76	73	4	60	97
3871 4-chloroaniline	1. ug/l	N.D.		78	69	13	74	78	4	34	101
3948 hexachlorobutadiene	2. ug/l	N.D.		82	79	4	60	58	3	24	86
3929 4-chloro-3-methylphenol	1. ug/l	N.D.		89	88	1	93	91	2	60	111
3905 2-methylnaphthalene	1. ug/l	N.D.		87	84	3	76	73	4	62	98



QUALITY CONTROL REPORT



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LLI Sample No. 2934153

CPT-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3949	hexachlorocyclopentadiene										
5.	ug/l	N.D.		58	53	9	43	43	1	17	80
3930	2,4,6-trichlorophenol										
2.	ug/l	N.D.		88	86	3	90	89	1	66	105
3922	2,4,5-trichlorophenol										
2.	ug/l	N.D.		92	89	4	91	91	0	67	103
3950	2-chloronaphthalene										
1.	ug/l	N.D.		89	84	5	79	75	5	61	103
3907	2-nitroaniline										
2.	ug/l	N.D.		99	97	2	93	89	4	58	112
3952	dimethyl phthalate										
2.	ug/l	N.D.		52	45	15	20	18	11	1	90
3951	acenaphthylene										
2.	ug/l	N.D.		86	83	4	80	76	5	64	100

4679	TCL Semivolatiles cont'd	Batch: 98146WAE026									
3-nitroaniline											
2.	ug/l	N.D.		85	84	2	78	80	2	40	108
3934	acenaphthene										
1.	ug/l	N.D.		85	83	3	78	75	5	61	100
3931	2,4-dinitrophenol										
15.	ug/l	N.D.		64	66	2	58	61	5	25	124
3932	4-nitrophenol										
10.	ug/l	N.D.		45	47	4	46	45	2	3	83
3879	dibenzofuran										
1.	ug/l	N.D.		87	85	2	80	76	5	67	99
3955	2,4-dinitrotoluene										
1.	ug/l	N.D.		93	90	4	89	84	6	64	112
3953	2,6-dinitrotoluene										
2.	ug/l	N.D.		101	99	3	94	90	4	66	113
3958	diethyl phthalate										
2.	ug/l	N.D.		78	73	7	56	53	6	30	99
3957	4-chlorophenyl phenyl ether										
1.	ug/l	N.D.		83	80	4	78	73	6	62	104
3956	fluorene										
1.	ug/l	N.D.		91	89	3	86	80	6	61	108
3909	4-nitroaniline										
2.	ug/l	N.D.		98	90	8	91	88	3	55	116
3933	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		73	72	2	71	73	3	43	120
3960	N-nitrosodiphenylamine										
1.	ug/l	N.D.		83	81	3	78	76	3	64	103
3961	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		83	81	3	80	77	5	69	102
3962	hexachlorobenzene										
2.	ug/l	N.D.		84	82	2	82	78	4	62	109
3934	pentachlorophenol										
3.	ug/l	N.D.		66	68	2	68	68	1	46	114



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LLI Sample No. 2934153

CPT-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3963	phenanthrene										
1.	ug/l	N.D.		85	86	0	82	80	3	68	102
3964	anthracene										
1.	ug/l	N.D.		87	84	3	83	80	3	66	101
4684	carbazole										
1.	ug/l	N.D.		91	89	2	84	82	3	66	110
3965	di-n-butyl phthalate										
2.	ug/l	N.D.		88	85	3	79	76	4	61	105
3966	fluoranthene										
1.	ug/l	N.D.		85	82	4	82	79	3	66	106
3967	pyrene										
1.	ug/l	N.D.		89	88	1	85	81	4	58	112
3969	butyl benzyl phthalate										
2.	ug/l	N.D.		89	84	5	79	78	2	48	105
3972	3,3'-dichlorobenzidine										
5.	ug/l	N.D.		70	71	2	57	68	18	37	104
3970	benzo (a) anthracene										
1.	ug/l	N.D.		87	84	4	85	82	4	69	101
	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		84	79	6	85	80	5	64	113
3971	chrysene										
1.	ug/l	N.D.		80	78	3	77	75	3	67	101
3974	di-n-octyl phthalate										
2.	ug/l	N.D.		100	94	6	99	93	6	59	118
3975	benzo (b) fluoranthene										
1.	ug/l	N.D.		88	87	1	84	81	3	64	101
3976	benzo (k) fluoranthene										
1.	ug/l	N.D.		86	84	3	85	81	6	67	105
3977	benzo (a) pyrene										
1.	ug/l	N.D.		90	88	3	87	84	4	65	101
3978	indeno (1,2,3-cd) pyrene										
1.	ug/l	N.D.		86	86	1	84	81	4	59	111
3979	dibenz (a,h) anthracene										
1.	ug/l	N.D.		86	84	2	83	80	4	66	117
3980	benzo (ghi) perylene										
1.	ug/l	N.D.		84	81	4	80	77	4	55	115





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LLI Sample No. 2934153
CPT-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles	2-Flphenol	49	7	74
	Phenol-d6	36	25	88
	2,4,6-TBP	69	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	86	47	114
	2-Fbiphenyl	78	51	106
	Tphenylid14	64	37	119



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Page: 1 of 9

LLI Sample No. WW 2934154

Collected: 5/21/98 at 15:15 by ROC

Submitted: 5/23/98 Reported: 6/ 9/98
Discard: 7/10/98

CPT-22-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT22 SDG#: HMS01-10Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

CAT
NO. ANALYSIS NAME
4678 TCL Semivolatiles
4679 TCL Semivolatiles cont'dSee Page 2
See Page 31 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package GroupATTN: Garet Van de Steeg, PhD
ATTN: Mr. David UpthegroveQuestions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
07:48:43 D 0003 5 129915 616297
412 0.00 00029700 ASR000Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
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Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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Page: 2 of 9

LLI Sample No. WW 2934154

Collected: 5/21/98 at 15:15 by ROC

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CPT-22-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT22 SDG#: HMS01-10

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

P.O. GULF STATES CREOSOT
Ref.

CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD
DETECTION LIMIT UNITS

TCL Semivolatiles

3925	phenol	4.	J	0.9	ug/l
3936	bis (2-chloroethyl) ether	N.D.		0.9	ug/l
3924	2-chlorophenol	N.D.		0.9	ug/l
3937	1,3-dichlorobenzene	N.D.		0.9	ug/l
3938	1,4-dichlorobenzene	N.D.		0.9	ug/l
3939	1,2-dichlorobenzene	N.D.		0.9	ug/l
4680	2-methylphenol	N.D.		0.9	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.		0.9	ug/l
3941	hexachloroethane	N.D.		0.9	ug/l
3943	nitrobenzene	N.D.		0.9	ug/l
3944	isophorone	N.D.		0.9	ug/l
3926	2-nitrophenol	N.D.		0.9	ug/l
3927	2,4-dimethylphenol	N.D.		0.9	ug/l
3945	bis (2-chloroethoxy) methane	N.D.		0.9	ug/l
3928	2,4-dichlorophenol	N.D.		0.9	ug/l
3946	1,2,4-trichlorobenzene	N.D.		0.9	ug/l
3947	naphthalene	N.D.		0.9	ug/l
3871	4-chloroaniline	N.D.		0.9	ug/l
3948	hexachlorobutadiene	N.D.		2.	ug/l
3929	4-chloro-3-methylphenol	N.D.		0.9	ug/l
3905	2-methylnaphthalene	N.D.		0.9	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.		0.9	ug/l
3907	2-nitroaniline	N.D.		2.	ug/l
3952	dimethyl phthalate	N.D.		2.	ug/l
3951	acenaphthylene	N.D.		2.	ug/l

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



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Page: 3 of 9

LLI Sample No. WW 2934154

Collected: 5/21/98 at 15:15 by ROC

Submitted: 5/23/98 Reported: 6/ 9/98

Discard: 7/10/98

CPT-22-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT22 SDG#: HMS01-10

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT	UNITS
------------	---------------	---------	-----------------	-------

TCL Semivolatiles cont'd

3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	0.9	ug/l
3931	2,4-dinitrophenol	N.D.	14.	ug/l
3932	4-nitrophenol	N.D.	9.	ug/l
3879	dibenzofuran	1. J	0.9	ug/l
3955	2,4-dinitrotoluene	N.D.	0.9	ug/l
3953	2,6-dinitrotoluene	6. J	2.	ug/l
3958	diethyl phthalate	8. J	2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	0.9	ug/l
3956	fluorene	N.D.	0.9	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.	0.9	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.	0.9	ug/l
3964	anthracene	N.D.	0.9	ug/l
4684	carbazole	N.D.	0.9	ug/l
3965	di-n-butyl phthalate	5. J	2.	ug/l
3966	fluoranthene	N.D.	0.9	ug/l
3967	pyrene	N.D.	0.9	ug/l
3969	butyl benzyl phthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	5.	ug/l
3970	benzo (a) anthracene	N.D.	0.9	ug/l
3973	bis (2-ethylhexyl) phthalate	10.	2.	ug/l
3971	chrysene	N.D.	0.9	ug/l
3974	di-n-octyl phthalate	3. J	2.	ug/l
3975	benzo (b) fluoranthene	N.D.	0.9	ug/l
3976	benzo (k) fluoranthene	N.D.	0.9	ug/l
3977	benzo (a) pyrene	N.D.	0.9	ug/l
3978	indeno (1,2,3-cd) pyrene	N.D.	0.9	ug/l
3979	dibenz (a,h) anthracene	N.D.	0.9	ug/l
3980	benzo (ghi) perylene	N.D.	0.9	ug/l

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



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Page: 4 of 9

LLI Sample No. WW 2934154

Collected: 5/21/98 at 15:15 by ROC

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Discard: 7/10/98

CPT-22-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT22 SDG#: HMS01-10

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
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
Kay G. Hower at (717) 656-2300

Respectfully Submitted
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LLI Sample No. WW 2934154

Collected: 05/21/98 at 15:15 by ROC

Submitted: 05/23/98

Account No: 07802
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Oklahoma City OK 73125

CPT-22-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT22 SDG#: HMS01-10

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL	ID DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	05/26/97 2110	Lee L. Munro
4678	TCL Semivolatiles	SW-846 8270C	1	06/04/98 0545	Linda M. Hartenstine
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/04/98 0545	Linda M. Hartenstine



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2216 Rev. 8/4/97





LLI Sample No. 2934154

CPT-22-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
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: 98146WAE026									
3925	pheno1										
	0.9 ug/l	N.D.		45	46	3	45	44	2	5	83
3936	bis (2-chloroethyl) ether										
	0.9 ug/l	N.D.		91	88	3	82	80	3	66	106
3924	2-chloropheno1										
	0.9 ug/l	N.D.		88	88	0	91	90	1	62	107
3937	1,3-dichlorobenzene										
	0.9 ug/l	N.D.		84	80	4	67	63	5	45	91
3938	1,4-dichlorobenzene										
	0.9 ug/l	N.D.		84	81	4	67	64	5	45	94
3939	1,2-dichlorobenzene										
	0.9 ug/l	N.D.		89	85	4	73	69	5	52	97
4680	2-methylpheno1										
	0.9 ug/l	N.D.		83	84	1	85	81	5	55	96
	2,2'-oxybis (1-chloropropane)										
	2. ug/l	N.D.		103	100	3	92	89	3	43	118
4682	4-methylpheno1										
	3. ug/l	N.D.		71	74	4	77	75	2	48	99
3942	N-nitrosodi-n-propylamine										
	0.9 ug/l	N.D.		93	88	5	86	83	3	62	118
3941	hexachloroethane										
	0.9 ug/l	N.D.		80	78	3	60	58	3	40	84
3943	nitrobenzene										
	0.9 ug/l	N.D.		93	89	4	86	83	4	61	113
3944	isophorone										
	0.9 ug/l	N.D.		98	95	3	94	90	4	66	113
3926	2-nitrophenol										
	0.9 ug/l	N.D.		92	90	2	93	92	1	67	104
3927	2,4-dimethylpheno1										
	0.9 ug/l	N.D.		73	74	2	75	71	5	52	99
3945	bis (2-chloroethoxy) methane										
	0.9 ug/l	N.D.		91	88	3	85	82	3	64	103
3928	2,4-dichloropheno1										
	0.9 ug/l	N.D.		87	55	45	90	87	3	65	98
3946	1,2,4-trichlorobenzene										
	0.9 ug/l	N.D.		87	84	4	73	69	5	52	93
3947	naphthalene										
	0.9 ug/l	N.D.		89	96	6	76	73	4	60	97
3871	4-chloroaniline										
	0.9 ug/l	N.D.		78	69	13	74	78	4	34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		82	79	4	60	58	3	24	86
3929	4-chloro-3-methylpheno1										
	0.9 ug/l	N.D.		89	88	1	93	91	2	60	111
3905	2-methylnaphthalene										
	0.9 ug/l	N.D.		87	84	3	76	73	4	62	98





LLI Sample No. 2934154

CPT-22-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
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.		58	53	9	43	43	1	17	80
3930	2,4,6-trichlorophenol										
2.	ug/l	N.D.		88	86	3	90	89	1	66	105
3922	2,4,5-trichlorophenol										
2.	ug/l	N.D.		92	89	4	91	91	0	67	103
3950	2-chloronaphthalene										
0.9	ug/l	N.D.		89	84	5	79	75	5	61	103
3907	2-nitroaniline										
2.	ug/l	N.D.		99	97	2	93	89	4	58	112
3952	dimethyl phthalate										
2.	ug/l	N.D.		52	45	15	20	18	11	1	90
3951	acenaphthylene										
2.	ug/l	N.D.		86	83	4	80	76	5	64	100

4679	TCL Semivolatiles cont'd	Batch: 98146WAE026									
	3-nitroaniline										
2.	ug/l	N.D.		85	84	2	78	80	2	40	108
3954	acenaphthene										
0.9	ug/l	N.D.		85	83	3	78	75	5	61	100
3931	2,4-dinitrophenol										
14.	ug/l	N.D.		64	66	2	58	61	5	25	124
3932	4-nitrophenol										
9.	ug/l	N.D.		45	47	4	46	45	2	3	83
3879	dibenzofuran										
0.9	ug/l	N.D.		87	85	2	80	76	5	67	99
3955	2,4-dinitrotoluene										
0.9	ug/l	N.D.		93	90	4	89	84	6	64	112
3953	2,6-dinitrotoluene										
2.	ug/l	N.D.		101	99	3	94	90	4	66	113
3958	diethyl phthalate										
2.	ug/l	N.D.		78	73	7	56	53	6	30	99
3957	4-chlorophenyl phenyl ether										
0.9	ug/l	N.D.		83	80	4	78	73	6	62	104
3956	fluorene										
0.9	ug/l	N.D.		91	89	3	86	80	6	61	108
3909	4-nitroaniline										
2.	ug/l	N.D.		98	90	8	91	88	3	55	116
3933	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		73	72	2	71	73	3	43	120
3960	N-nitrosodiphenylamine										
0.9	ug/l	N.D.		83	81	3	78	76	3	64	103
3961	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		83	81	3	80	77	5	69	102
3962	hexachlorobenzene										
2.	ug/l	N.D.		84	82	2	82	78	4	62	109
3934	pentachlorophenol										
3.	ug/l	N.D.		66	68	2	68	68	1	46	114





LLI Sample No. 2934154

CPT-22-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3963	phenanthrene										
	0.9 ug/l	N.D.		85	86	0	82	80	3	68	102
3964	anthracene										
	0.9 ug/l	N.D.		87	84	3	83	80	3	66	101
4684	carbazole										
	0.9 ug/l	N.D.		91	89	2	84	82	3	66	110
3965	di-n-butyl phthalate										
	2. ug/l	N.D.		88	85	3	79	76	4	61	105
3966	fluoranthene										
	0.9 ug/l	N.D.		85	82	4	82	79	3	66	106
3967	pyrene										
	0.9 ug/l	N.D.		89	88	1	85	81	4	58	112
3969	butyl benzyl phthalate										
	2. ug/l	N.D.		89	84	5	79	78	2	48	105
3972	3,3'-dichlorobenzidine										
	5. ug/l	N.D.		70	71	2	57	68	18	37	104
3970	benzo (a) anthracene										
	0.9 ug/l	N.D.		87	84	4	85	82	4	69	101
	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		84	79	6	85	80	5	64	113
3971	chrysene										
	0.9 ug/l	N.D.		80	78	3	77	75	3	67	101
3974	di-n-octyl phthalate										
	2. ug/l	N.D.		100	94	6	99	93	6	59	118
3975	benzo (b) fluoranthene										
	0.9 ug/l	N.D.		88	87	1	84	81	3	64	101
3976	benzo (k) fluoranthene										
	0.9 ug/l	N.D.		86	84	3	85	81	6	67	105
3977	benzo (a) pyrene										
	0.9 ug/l	N.D.		90	88	3	87	84	4	65	101
3978	indeno (1,2,3-cd) pyrene										
	0.9 ug/l	N.D.		86	86	1	84	81	4	59	111
3979	dibenz (a,h) anthracene										
	0.9 ug/l	N.D.		86	84	2	83	80	4	66	117
3980	benzo (ghi) perylene										
	0.9 ug/l	N.D.		84	81	4	80	77	4	55	115



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LLI Sample No. 2934154
CPT-22-GW Grab Water Sample
Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

SURROGATE SUMMARY			SURROGATE LIMITS	
TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles	2-Flphenol	47	7	74
	Phenol-d6	33	25	88
	2,4,6-TBP	68	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	82	47	114
	2-Fbiphenyl	74	51	106
	Tphenylid14	57	37	119



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Page: 1 of 9

LLI Sample No. WW 2934152

Collected: 5/21/98 at 10:50 by ROC

Submitted: 5/23/98 Reported: 6/ 9/98
Discard: 7/10/98

CPT-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT18 SDG#: HMS01-08

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

CAT
NO. ANALYSIS NAME
4678 TCL Semivolatiles
4679 TCL Semivolatiles cont'd

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
07:45:51 D 0003 5 129915 616297
412 0.00 00029700 ASR000



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





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Page: 2 of 9

LLI Sample No. WW 2934152

Collected: 5/21/98 at 10:50 by ROC

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

P.O. GULF STATES CREOSOT
Rel.

CPT-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT18 SDG#: HMS01-08

AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	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	1.	J	1.
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.	2.	ug/l

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. WW 2934152

Collected: 5/21/98 at 10:50 by ROC

Submitted: 5/23/98 Reported: 6/ 9/98

Discard: 7/10/98

CPT-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT18 SDG#: HMS01-08

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

**CAT
NO. ANALYSIS NAME**

TCL Semivolatiles cont'd

3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	1.	J 1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	2.	J 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	2.	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-bromophenyl phenyl ether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	4.	J 1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	2.	J 1.	ug/l
3965	di-n-butyl phthalate	2.	J 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.	5.	ug/l
3970	benzo (a) anthracene	N.D.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	7.	J 2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octyl phthalate	3.	J 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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Respectfully Submitted
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Group Leader, GC/MS SVOA

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2216 Rev. 8/4/97





LLI Sample No. WW 2934152

Collected: 5/21/98 at 10:50 by ROC

Submitted: 5/23/98 Reported: 6/ 9/98

Discard: 7/10/98

CPT-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

CPT18 SDG#: HMS01-08

Account No: 07802
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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
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Respectfully Submitted
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LLI Sample No. WW 2934152

Collected: 05/21/98 at 10:50 by ROC

Submitted: 05/23/98

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

CPT-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPT18 SDG#: HMS01-08

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
0813	BNA Water Extraction	SW-846 3510C	1		05/26/97 2110	Lee L. Munro
4678	TCL Semivolatiles	SW-846 8270C	1		06/04/98 0402	Linda M. Hartenstine
4679	TCL Semivolatiles cont'd	SW-846 8270C	1		06/04/98 0402	Linda M. Hartenstine



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QUALITY CONTROL REPORT



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LLI Sample No. 2934152

CPT-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
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: 98146WAE026									
3925	phenol										
1.	ug/l	N.D.		45	46	3	45	44	2	5	83
3936	bis (2-chloroethyl) ether										
1.	ug/l	N.D.		91	88	3	82	80	3	66	106
3924	2-chlorophenol										
1.	ug/l	N.D.		88	88	0	91	90	1	62	107
3937	1,3-dichlorobenzene										
1.	ug/l	N.D.		84	80	4	67	63	5	45	91
3938	1,4-dichlorobenzene										
1.	ug/l	N.D.		84	81	4	67	64	5	45	94
3939	1,2-dichlorobenzene										
1.	ug/l	N.D.		89	85	4	73	69	5	52	97
4680	2-methylphenol										
1.	ug/l	N.D.		83	84	1	85	81	5	55	96
	2,2'-oxybis (1-chloropropane)										
2.	ug/l	N.D.		103	100	3	92	89	3	43	118
4682	4-methylphenol										
3.	ug/l	N.D.		71	74	4	77	75	2	48	99
3942	N-nitrosodi-n-propylamine										
1.	ug/l	N.D.		93	88	5	86	83	3	62	118
3941	hexachloroethane										
1.	ug/l	N.D.		80	78	3	60	58	3	40	84
3943	nitrobenzene										
1.	ug/l	N.D.		93	89	4	86	83	4	61	113
3944	isophorone										
1.	ug/l	N.D.		98	95	3	94	90	4	66	113
3926	2-nitrophenol										
1.	ug/l	N.D.		92	90	2	93	92	1	67	104
3927	2,4-dimethylphenol										
1.	ug/l	N.D.		73	74	2	75	71	5	52	99
3945	bis (2-chloroethoxy) methane										
1.	ug/l	N.D.		91	88	3	85	82	3	64	103
3928	2,4-dichlorophenol										
1.	ug/l	N.D.		87	55	45	90	87	3	65	98
3946	1,2,4-trichlorobenzene										
1.	ug/l	N.D.		87	84	4	73	69	5	52	93
3947	naphthalene										
1.	ug/l	N.D.		89	96	6	76	73	4	60	97
3871	4-chloroaniline										
1.	ug/l	N.D.		78	69	13	74	78	4	34	101
3948	hexachlorobutadiene										
2.	ug/l	N.D.		82	79	4	60	58	3	24	86
3929	4-chloro-3-methylphenol										
1.	ug/l	N.D.		89	88	1	93	91	2	60	111
3905	2-methylnaphthalene										
1.	ug/l	N.D.		87	84	3	76	73	4	62	98



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/4/97





LLI Sample No. 2934152

CPT-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
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.		58	53	9	43	43	1	17	80
3930	2,4,6-trichlorophenol										
2.	ug/l	N.D.		88	86	3	90	89	1	66	105
3922	2,4,5-trichlorophenol										
2.	ug/l	N.D.		92	89	4	91	91	0	67	103
3950	2-chloronaphthalene										
1.	ug/l	N.D.		89	84	5	79	75	5	61	103
3907	2-nitroaniline										
2.	ug/l	N.D.		99	97	2	93	89	4	58	112
3952	dimethyl phthalate										
2.	ug/l	N.D.		52	45	15	20	18	11	1	90
3951	acenaphthylene										
2.	ug/l	N.D.		86	83	4	80	76	5	64	100

4679	TCL Semivolatiles cont'd	Batch: 98146WAE026									
	3-nitroaniline										
2.	ug/l	N.D.		85	84	2	78	80	2	40	108
3954	acenaphthene										
1.	ug/l	N.D.		85	83	3	78	75	5	61	100
3931	2,4-dinitrophenol										
15.	ug/l	N.D.		64	66	2	58	61	5	25	124
3932	4-nitrophenol										
10.	ug/l	N.D.		45	47	4	46	45	2	3	83
3879	dibenzofuran										
1.	ug/l	N.D.		87	85	2	80	76	5	67	99
3955	2,4-dinitrotoluene										
1.	ug/l	N.D.		93	90	4	89	84	6	64	112
3953	2,6-dinitrotoluene										
2.	ug/l	N.D.		101	99	3	94	90	4	66	113
3958	diethyl phthalate										
2.	ug/l	N.D.		78	73	7	56	53	6	30	99
3957	4-chlorophenyl phenyl ether										
1.	ug/l	N.D.		83	80	4	78	73	6	62	104
3956	fluorene										
1.	ug/l	N.D.		91	89	3	86	80	6	61	108
3909	4-nitroaniline										
2.	ug/l	N.D.		98	90	8	91	88	3	55	116
3933	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		73	72	2	71	73	3	43	120
3960	N-nitrosodiphenylamine										
1.	ug/l	N.D.		83	81	3	78	76	3	64	103
3961	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		83	81	3	80	77	5	69	102
3962	hexachlorobenzene										
2.	ug/l	N.D.		84	82	2	82	78	4	62	109
3934	pentachlorophenol										
3.	ug/l	N.D.		66	68	2	68	68	1	46	114



QUALITY CONTROL REPORT



Page: 8 of 9

LLI Sample No. 2934152

CPT-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3963 phenanthrene											
1. ug/l		N.D.		85	86	0	82	80	3	68	102
3964 anthracene											
1. ug/l		N.D.		87	84	3	83	80	3	66	101
4684 carbazole											
1. ug/l		N.D.		91	89	2	84	82	3	66	110
3965 di-n-butyl phthalate											
2. ug/l		N.D.		88	85	3	79	76	4	61	105
3966 fluoranthene											
1. ug/l		N.D.		85	82	4	82	79	3	66	106
3967 pyrene											
1. ug/l		N.D.		89	88	1	85	81	4	58	112
3969 butyl benzyl phthalate											
2. ug/l		N.D.		89	84	5	79	78	2	48	105
3972 3,3'-dichlorobenzidine											
5. ug/l		N.D.		70	71	2	57	68	18	37	104
3973 benzo (a) anthracene											
1. ug/l		N.D.		87	84	4	85	82	4	69	101
3974 bis (2-ethylhexyl) phthalate											
2. ug/l		N.D.		84	79	6	85	80	5	64	113
3971 chrysene											
1. ug/l		N.D.		80	78	3	77	75	3	67	101
3974 di-n-octyl phthalate											
2. ug/l		N.D.		100	94	6	99	93	6	59	118
3975 benzo (b) fluoranthene											
1. ug/l		N.D.		88	87	1	84	81	3	64	101
3976 benzo (k) fluoranthene											
1. ug/l		N.D.		86	84	3	85	81	6	67	105
3977 benzo (a) pyrene											
1. ug/l		N.D.		90	88	3	87	84	4	65	101
3978 indeno (1,2,3-cd) pyrene											
1. ug/l		N.D.		86	86	1	84	81	4	59	111
3979 dibenz (a,h) anthracene											
1. ug/l		N.D.		86	84	2	83	80	4	66	117
3980 benzo (ghi) perylene											
1. ug/l		N.D.		84	81	4	80	77	4	55	115



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 8/4/97





LLI Sample No. 2934152
CPT-18-GW Grab Water Sample
Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

SURROGATE SUMMARY		SURROGATE LIMITS	
TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4678 TCL Semivolatiles	2-Flphenol	49	7 74
	Phenol-d6	36	25 88
	2,4,6-TBP	68	34 125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	88	47 114
	2-Fbiphenyl	80	51 106
	Tphenyld14	70	37 119



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LLI Sample No. WW 2946085

Collected: 6/11/98 at 09:15 by DU

Submitted: 6/13/98 Reported: 7/ 3/98
Discard: 8/ 3/98

GEO-16-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW16- SDG#: HMS03-13

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

CAT NO.	ANALYSIS NAME
6291	TCL Volatiles
4678	TCL Semivolatiles
4679	TCL Semivolatiles cont'd

See Page	2
See Page	3
See Page	4

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:22:05 D 0003 10 129915 619183
0.00 00045300 ASR000



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

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





LLI Sample No. WW 2946085

Collected: 6/11/98 at 09:15 by DU

Submitted: 6/13/98 Reported: 7/ 3/98

Discard: 8/ 3/98

GEO-16-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW16- SDG#: HMS03-13

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

P.O. GULF STATES CREOSOT
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AS RECEIVED

CAT NO.	ANALYSIS NAME	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
5409	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
Kay G. Hower at (717) 656-2300



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





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Page: 3 of 12

LLI Sample No. WW 2946085

Collected: 6/11/98 at 09:15 by DU

Submitted: 6/13/98 Reported: 7/ 3/98

Discard: 8/ 3/98

GEO-16-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW16- SDG#: HMS03-13

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	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
3945	2-nitrophenol	N.D.	1.	ug/l
3946	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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2215 Rev. 8/4/97





LLI Sample No. WW 2946085

Collected: 6/11/98 at 09:15 by DU

Submitted: 6/13/98 Reported: 7/ 3/98

Discard: 8/ 3/98

GEO-16-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW16- SDG#: HMS03-13

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	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	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 SVQA





LLI Sample No. WW 2946085

Collected: 6/11/98 at 09:15 by DU

Submitted: 6/13/98 Reported: 7/ 3/98

Discard: 8/ 3/98

GEO-16-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW16- SDG#: HMS03-13

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 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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LABORATORY CHRONICLE

Page: 6 of 12

LLI Sample No. WW 2946085
Collected: 06/11/98 at 09:15 by DU

Submitted: 06/13/98

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

GEO-16-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW16- SDG#: HMS03-13

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
6291	TCL Volatiles	SW-846 8260B	1		06/24/98 0500	Joel R. Nace
0813	BNA Water Extraction	SW-846 3510C	1		06/17/98 0830	Jay L. Stauffer, Jr.
4678	TCL Semivolatiles	SW-846 8270C	1		06/26/98 1808	Phillip R. Esbenshade
4679	TCL Semivolatiles cont'd	SW-846 8270C	1		06/26/98 1808	Phillip R. Esbenshade



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2216 Rev. 8/4/97





LLI Sample No. 2946085

GEO-16-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW HIGH
6291 TCL Volatiles		Batch: K981751AA								
5385	Chloromethane	N.D.		93	96	3	93			58 156
3.	ug/l									
5387	Bromomethane	N.D.		68	67	1	69			30 154
3.	ug/l									
5386	Vinyl Chloride	N.D.		106	105	1	107			74 134
2.	ug/l									
5388	Chloroethane	N.D.		95	94	2	99			38 142
3.	ug/l									
5391	Methylene Chloride	N.D.		110	109	1	113			4 196
2.	ug/l									
6302	Acetone	N.D.		105	105	0	99			57 117
6.	ug/l									
6303	Carbon Disulfide	N.D.		100	98	2	100			41 186
3.	ug/l									
1,1-Dichloroethene		N.D.		117	117	0	118			38 153
1.	ug/l									
5393	1,1-Dichloroethane	N.D.		113	111	1	111			59 132
2.	ug/l									
5396	Chloroform	N.D.		113	114	1	115			73 126
1.	ug/l									
5402	1,2-Dichloroethane	N.D.		117	118	0	115			68 125
2.	ug/l									
6305	2-Butanone	N.D.		105	106	1	101			63 120
3.	ug/l									
5398	1,1,1-Trichloroethane	N.D.		120	118	1	119			49 163
1.	ug/l									
5399	Carbon Tetrachloride	N.D.		120	120	0	121			61 139
1.	ug/l									
5406	Bromodichloromethane	N.D.		114	114	0	115			64 123
1.	ug/l									
5421	1,1,2,2-Tetrachloroethane	N.D.		107	106	1	101			68 118
2.	ug/l									
5404	1,2-Dichloropropane	N.D.		106	109	3	104			70 123
1.	ug/l									
6306	trans-1,3-Dichloropropene	N.D.		114	110	3	108			26 152
1.	ug/l									
5403	Trichloroethene	N.D.		114	110	4	115			67 130
1.	ug/l									
5411	Dibromochloromethane	N.D.		118	116	1	112			69 115
2.	ug/l									
5408	1,1,2-Trichloroethane	N.D.		112	112	0	109			70 112
2.	ug/l									
5401	Benzene	N.D.		108	107	0	109			58 133
1.	ug/l									
6307	cis-1,3-Dichloropropene	N.D.		108	109	0	107			66 124
1.	ug/l									





LLI Sample No. 2946085

GEO-16-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
5419	Bromoform										
1.	ug/l	N.D.		119	118	0	113			70	114
6308	4-Methyl-2-pentanone										
5.	ug/l	N.D.		100	104	4	95			73	125
6309	2-Hexanone										
7.	ug/l	N.D.		98	98	0	90			66	126
5409	Tetrachloroethene										
1.	ug/l	N.D.		125	123	2	122			45	171
5407	Toluene										
2.	ug/l	N.D.		110	110	0	106			63	143
5413	Chlorobenzene										
1.	ug/l	N.D.		112	112	0	108			74	120
5415	Ethylbenzene										
2.	ug/l	N.D.		114	112	2	110			79	128
5418	Styrene										
1.	ug/l	N.D.		112	110	2	108			74	127
5419	Xylene (Total)										
1.	ug/l	N.D.		113	112	1	110			57	138
5419	trans-1,2-Dichloroethene										
2.	ug/l	N.D.		117	116	2	114			34	148
5395	cis-1,2-Dichloroethene										
2.	ug/l	N.D.		112	112	1	114			63	130
4678 TCL Semivolatiles		Batch: 98168WAB026									
3925	phenol										
1.	ug/l	N.D.		38	40	5	41	40	2	5	83
3936	bis (2-chloroethyl) ether										
1.	ug/l	N.D.		85	71	18	74	76	4	66	106
3924	2-chlorophenol										
1.	ug/l	N.D.		85	78	9	83	87	5	62	107
3937	1,3-dichlorobenzene										
1.	ug/l	N.D.		84	68	22	64	68	6	45	91
3938	1,4-dichlorobenzene										
1.	ug/l	N.D.		84	68	22	65	68	6	45	94
3939	1,2-dichlorobenzene										
1.	ug/l	N.D.		89	70	23	68	74	8	52	97
4680	2-methylphenol										
1.	ug/l	N.D.		76	72	5	76	77	1	55	96
4681	2,2'-oxybis (1-chloropropane)										
2.	ug/l	N.D.		95	74	24	78	83	6	43	118
4682	4-methylphenol										
3.	ug/l	N.D.		71	69	3	72	73	1	48	99
3942	N-nitrosodi-n-propylamine										
1.	ug/l	N.D.		94	81	15	79	82	3	62	118
3941	hexachloroethane										
1.	ug/l	N.D.		77	61	23	55	58	7	40	84
3943	nitrobenzene										
1.	ug/l	N.D.		90	75	19	76	80	5	61	113





LLI Sample No. 2946085

GEO-16-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3944 isophorone											
1. ug/l		N.D.		92	82	12	78	81	3	66	113
3926 2-nitrophenol											
1. ug/l		N.D.		88	82	8	85	89	5	67	104
3927 2,4-dimethylphenol											
1. ug/l		N.D.		81	76	6	78	80	2	52	99
3945 bis (2-chloroethoxy) methane											
1. ug/l		N.D.		86	76	12	73	75	2	64	103
3928 2,4-dichlorophenol											
1. ug/l		N.D.		86	81	6	82	86	5	65	98
3946 1,2,4-trichlorobenzene											
1. ug/l		N.D.		85	68	22	65	70	8	52	93
3947 naphthalene											
1. ug/l		N.D.		82	66	22	67	72	8	60	97
3871 4-chloroaniline											
1. ug/l		N.D.		81	74	9	55	54	2	34	101
3929 hexachlorobutadiene											
2. ug/l		N.D.		80	65	21	53	59	10	24	86
3930 4-chloro-3-methylphenol											
1. ug/l		N.D.		88	83	6	84	87	3	60	111
3905 2-methylnaphthalene											
1. ug/l		N.D.		84	68	21	67	72	8	62	98
3949 hexachlorocyclopentadiene											
5. ug/l		N.D.		71	60	17	51	56	9	17	80
3930 2,4,6-trichlorophenol											
2. ug/l		N.D.		88	86	2	86	90	5	66	105
3922 2,4,5-trichlorophenol											
2. ug/l		N.D.		92	88	4	87	91	4	67	103
3950 2-chloronaphthalene											
1. ug/l		N.D.		87	73	18	69	76	9	61	103
3907 2-nitroaniline											
2. ug/l		N.D.		73	69	6	63	63	0	58	112
3952 dimethyl phthalate											
2. ug/l		N.D.		68	68	1	43	35	20	1	90
3951 acenaphthylene											
1. ug/l		N.D.		80	70	14	65	70	8	64	100

4679 TCL Semivolatiles cont'd		Batch: 98168WAB026									
3908 3-nitroaniline											
2. ug/l		N.D.		73	68	6	51	50	3	40	108
3954 acenaphthene											
1. ug/l		N.D.		82	71	15	68	72	6	61	100
3931 2,4-dinitrophenol											
15. ug/l		N.D.		85	86	1	87	87	1	25	124
3932 4-nitrophenol											
10. ug/l		N.D.		45	48	6	46	45	1	3	83
3879 dibenzofuran											
1. ug/l		N.D.		84	74	13	69	73	6	67	99





LLI Sample No. 2946085

GEO-16-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW HIGH
3955	2,4-dinitrotoluene									
1.	ug/l	N.D.		93	87	6	80	81	1	64 112
3953	2,6-dinitrotoluene									
2.	ug/l	N.D.		95	86	9	79	82	3	66 113
3958	diethyl phthalate									
2.	ug/l	N.D.		83	78	6	62	60	3	30 99
3957	4-chlorophenyl phenyl ether									
1.	ug/l	N.D.		90	80	12	74	77	4	62 104
3956	fluorene									
1.	ug/l	N.D.		87	78	11	73	75	4	61 108
3909	4-nitroaniline									
2.	ug/l	N.D.		83	78	6	73	70	4	55 116
3933	4,6-dinitro-2-methylphenol									
5.	ug/l	N.D.		87	83	4	83	88	6	43 120
3960	N-nitrosodiphenylamine									
1.	ug/l	N.D.		86	79	8	72	74	2	64 103
3959	4-bromophenyl phenyl ether									
2.	ug/l	N.D.		90	82	9	75	78	4	69 102
3952	hexachlorobenzene									
2.	ug/l	N.D.		96	88	10	81	83	2	62 109
3934	pentachlorophenol									
3.	ug/l	N.D.		91	89	3	88	91	4	46 114
3963	phenanthrene									
1.	ug/l	N.D.		85	78	9	73	74	1	68 102
3964	anthracene									
1.	ug/l	N.D.		89	80	10	75	76	1	66 101
4684	carbazole									
1.	ug/l	N.D.		87	80	9	73	74	2	66 110
3965	di-n-butyl phthalate									
2.	ug/l	N.D.		88	81	8	74	74	1	61 105
3966	fluoranthene									
1.	ug/l	N.D.		90	81	10	76	77	1	66 106
3967	pyrene									
1.	ug/l	N.D.		88	82	7	78	78	0	58 112
3969	butyl benzyl phthalate									
2.	ug/l	5. J ug/l		85	78	8	71	71	0	48 105
3972	3,3'-dichlorobenzidine									
2.	ug/l	N.D.		72	67	7	53	52	2	37 104
3970	benzo (a) anthracene									
1.	ug/l	N.D.		86	81	6	76	76	0	69 101
3973	bis (2-ethylhexyl) phthalate									
2.	ug/l	N.D.		83	74	12	75	75	0	64 113
3971	chrysene									
1.	ug/l	N.D.		85	78	8	74	74	0	67 101
3974	di-n-octyl phthalate									
2.	ug/l	N.D.		95	84	12	83	84	1	59 118
3975	benzo (b) fluoranthene									
1.	ug/l	N.D.		87	78	11	73	73	0	64 101
3976	benzo (k) fluoranthene									
1.	ug/l	N.D.		90	84	7	79	80	2	67 105





LLI Sample No. 2946085
GEO-16-GW Grab Water Sample
Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3977	benzo (a) pyrene										
1.	ug/l	N.D.		88	82	8	76	77	1	65	101
3978	indeno (1,2,3-cd) pyrene										
1.	ug/l	N.D.		87	80	8	76	76	1	59	111
3979	dibenz (a,h) anthracene										
1.	ug/l	N.D.		89	81	10	77	77	0	66	117
3980	benzo (ghi) perylene										
1.	ug/l	N.D.		87	79	10	75	76	0	55	115



**Lancaster Laboratories***A division of Thermo Analytical Inc.***LLI Sample No. 2946085**

GEO-16-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SURROGATE SUMMARY			SURROGATE LIMITS	
TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	53	7	74
	Pheno1-d6	33	25	88
	2,4,6-TBP	103	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	89	47	114
	2-Fbiphny1	96	51	106
	Tphenyld14	90	37	119
6291 TCL Volatiles	DBFM	110	86	118
	d4-1,2-DCA	92	80	120
	d8-toluene	92	88	110
	4-BFB	98	86	115

Lancaster Laboratories
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LLI Sample No. WW 2946086

Collected: 6/11/98 at 10:50 by DU

Submitted: 6/13/98 Reported: 7/ 3/98
Discard: 8/ 3/98

GEO-17-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW17- SDG#: HMS03-14

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD	
		RESULTS	DETECTION LIMIT UNITS
6291	TCL Volatiles	See Page	2
4678	TCL Semivolatiles	See Page	3
4679	TCL Semivolatiles cont'd	See Page	4

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:23:58 D 0003 10 129915 619183
0.00 00045300 ASR000



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





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Oklahoma City OK 73125

P.O. GULF STATES CREOSOT
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AS RECEIVED

METHOD

CAT NO. ANALYSIS NAME RESULTS DETECTION LIMIT UNITS

TCL Volatiles

5385	Chloromethane	N.D.	150.	ug/l
5387	Bromomethane	N.D.	150.	ug/l
5386	Vinyl Chloride	N.D.	100.	ug/l
5388	Chloroethane	N.D.	150.	ug/l
5391	Methylene Chloride	N.D.	100.	ug/l
6302	Acetone	N.D.	300.	ug/l
6303	Carbon Disulfide	N.D.	150.	ug/l
5390	1,1-Dichloroethene	N.D.	50.	ug/l
5393	1,1-Dichloroethane	N.D.	100.	ug/l
5396	Chloroform	N.D.	50.	ug/l
5402	1,2-Dichloroethane	N.D.	100.	ug/l
6305	2-Butanone	N.D.	150.	ug/l
5398	1,1,1-Trichloroethane	N.D.	50.	ug/l
5399	Carbon Tetrachloride	N.D.	50.	ug/l
5406	Bromodichloromethane	N.D.	50.	ug/l
5421	1,1,2,2-Tetrachloroethane	N.D.	100.	ug/l
5404	1,2-Dichloropropane	N.D.	50.	ug/l
6306	trans-1,3-Dichloropropene	N.D.	50.	ug/l
5403	Trichloroethene	N.D.	50.	ug/l
5411	Dibromochloromethane	N.D.	100.	ug/l
5408	1,1,2-Trichloroethane	N.D.	100.	ug/l
5401	Benzene	N.D.	50.	ug/l
6307	cis-1,3-Dichloropropene	N.D.	50.	ug/l
5419	Bromoform	N.D.	50.	ug/l
6308	4-Methyl-2-pentanone	N.D.	250.	ug/l
6309	2-Hexanone	N.D.	350.	ug/l
5409	Tetrachloroethene	N.D.	50.	ug/l
5407	Toluene	N.D.	100.	ug/l
5413	Chlorobenzene	N.D.	50.	ug/l
5415	Ethylbenzene	N.D.	100.	ug/l
5418	Styrene	N.D.	50.	ug/l
6310	Xylene (Total)	82.	J 50.	ug/l
5392	trans-1,2-Dichloroethene	N.D.	100.	ug/l
5395	cis-1,2-Dichloroethene	N.D.	100.	ug/l

The quantitation limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

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



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





LLI Sample No. WW 2946086

Collected: 6/11/98 at 10:50 by DU

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GEO-17-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW17- SDG#: HMS03-14

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

P.O. GULF STATES CREOSOT
Rel.

CAT NO.	ANALYSIS NAME	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	6.	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	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	8,800.	200.	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	730.	J 200.	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	16.	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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Page: 4 of 12

LLI Sample No. WW 2946086

Collected: 6/11/98 at 10:50 by DU

Submitted: 6/13/98 Reported: 7/ 3/98

Discard: 8/ 3/98

GEO-17-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW17- SDG#: HMS03-14

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	340.	J 200.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	220.	J 200.	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	220.	J 200.	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	310.	J 200.	ug/l
3964	anthracene	36.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butyl phthalate	N.D.	2.	ug/l
3966	fluoranthene	75.	1.	ug/l
3967	pyrene	48.	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	14.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3971	chrysene	10.	1.	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	7.	J 1.	ug/l
3976	benzo (k) fluoranthene	3.	J 1.	ug/l
3977	benzo (a) pyrene	5.	J 1.	ug/l
3978	indeno (1,2,3-cd) pyrene	2.	J 1.	ug/l
3979	dibenz (a,h) anthracene	N.D.	1.	ug/l
3980	benzo (ghi) perylene	2.	J 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





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Page: 5 of 12

LLI Sample No. WW 2946086
Collected: 6/11/98 at 10:50 by DU

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Discard: 8/ 3/98

GEO-17-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW17- SDG#: HMS03-14

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

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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
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





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LABORATORY CHRONICLE

Page: 6 of 12

LLI Sample No. WW 2946086

Collected: 06/11/98 at 10:50 by DU

Submitted: 06/13/98

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

GEO-17-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW17- SDG#: HMS03-14

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
6291	TCL Volatiles	SW-846 8260B	1		06/24/98 0801	Joel R. Nace
0813	BNA Water Extraction	SW-846 3510C	1		06/17/98 0830	Jay L. Stauffer, Jr.
4678	TCL Semivolatiles	SW-846 8270C	1		06/26/98 1900	Phillip R. Esbenshade
4679	TCL Semivolatiles cont'd	SW-846 8270C	1		06/26/98 1900	Phillip R. Esbenshade



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See reverse side for explanation of symbols and abbreviations.

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QUALITY CONTROL REPORT



Page: 7 of 12

LLI Sample No. 2946086

GEO-17-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
6291 TCL Volatiles		Batch: K981751AC									
5385 Chloromethane	150. ug/l	N.D.		93	96	3	93			58	156
5387 Bromomethane	150. ug/l	N.D.		68	67	1	69			30	154
5386 Vinyl Chloride	100. ug/l	N.D.		106	105	1	107			74	134
5388 Chloroethane	150. ug/l	N.D.		95	94	2	99			38	142
5391 Methylene Chloride	100. ug/l	N.D.		110	109	1	113			4	196
6302 Acetone	300. ug/l	N.D.		105	105	0	99			57	117
6303 Carbon Disulfide	150. ug/l	N.D.		100	98	2	100			41	186
5393 1,1-Dichloroethene	50. ug/l	N.D.		117	117	0	118			38	153
5393 1,1-Dichloroethane	100. ug/l	N.D.		113	111	1	111			59	132
5396 Chloroform	50. ug/l	N.D.		113	114	1	115			73	126
5402 1,2-Dichloroethane	100. ug/l	N.D.		117	118	0	115			68	125
6305 2-Butanone	150. ug/l	N.D.		105	106	1	101			63	120
5398 1,1,1-Trichloroethane	50. ug/l	N.D.		120	118	1	119			49	163
5399 Carbon Tetrachloride	50. ug/l	N.D.		120	120	0	121			61	139
5406 Bromodichloromethane	50. ug/l	N.D.		114	114	0	115			64	123
5421 1,1,2,2-Tetrachloroethane	100. ug/l	N.D.		107	106	1	101			68	118
5404 1,2-Dichloropropane	50. ug/l	N.D.		106	109	3	104			70	123
6306 trans-1,3-Dichloropropene	50. ug/l	N.D.		114	110	3	108			26	152
5403 Trichloroethene	50. ug/l	N.D.		114	110	4	115			67	130
5411 Dibromochloromethane	100. ug/l	N.D.		118	116	1	112			69	115
5408 1,1,2-Trichloroethane	100. ug/l	N.D.		112	112	0	109			70	112
5401 Benzene	50. ug/l	N.D.		108	107	0	109			58	133
6307 cis-1,3-Dichloropropene	50. ug/l	N.D.		108	109	0	107			66	124



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/4/97





LLI Sample No. 2946086

GEO-17-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
5419 Bromoform	50. ug/l	N.D.		119	118	0	113			70	114
5308 4-Methyl-2-pentanone	250. ug/l	N.D.		100	104	4	95			73	125
5309 2-Hexanone	350. ug/l	N.D.		98	98	0	90			66	126
5409 Tetrachloroethene	50. ug/l	N.D.		125	123	2	122			45	171
5407 Toluene	100. ug/l	N.D.		110	110	0	106			63	143
5413 Chlorobenzene	50. ug/l	N.D.		112	112	0	108			74	120
5415 Ethylbenzene	100. ug/l	N.D.		114	112	2	110			79	128
5418 Styrene	50. ug/l	N.D.		112	110	2	108			74	127
6210 Xylene (Total)	10. ug/l	N.D.		113	112	1	110			57	138
trans-1,2-Dichloroethene	100. ug/l	N.D.		117	116	2	114			34	148
5395 cis-1,2-Dichloroethene	100. ug/l	N.D.		112	112	1	114			63	130

4678 TCL Semivolatiles		Batch: 98168WAB026									

3925 phenol	1. ug/l	N.D.		38	40	5	41	40	2	5	83
3936 bis (2-chloroethyl) ether	1. ug/l	N.D.		85	71	18	74	76	4	66	106
3924 2-chlorophenol	1. ug/l	N.D.		85	78	9	83	87	5	62	107
3937 1,3-dichlorobenzene	1. ug/l	N.D.		84	68	22	64	68	6	45	91
3938 1,4-dichlorobenzene	1. ug/l	N.D.		84	68	22	65	68	6	45	94
3939 1,2-dichlorobenzene	1. ug/l	N.D.		89	70	23	68	74	8	52	97
4680 2-methylphenol	1. ug/l	N.D.		76	72	5	76	77	1	55	96
4681 2,2'-oxybis (1-chloropropane)	2. ug/l	N.D.		95	74	24	78	83	6	43	118
4682 4-methylphenol	3. ug/l	N.D.		71	69	3	72	73	1	48	99
3942 N-nitrosodi-n-propylamine	1. ug/l	N.D.		94	81	15	79	82	3	62	118
3941 hexachloroethane	1. ug/l	N.D.		77	61	23	55	58	7	40	84
3943 nitrobenzene	1. ug/l	N.D.		90	75	19	76	80	5	61	113



QUALITY CONTROL REPORT



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LLI Sample No. 2946086

GEO-17-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW HIGH
3944	isophorone									
1.	ug/l	N.D.		92	82	12	78	81	3	66 113
3926	2-nitrophenol									
1.	ug/l	N.D.		88	82	8	85	89	5	67 104
3927	2,4-dimethylphenol									
1.	ug/l	N.D.		81	76	6	78	80	2	52 99
3945	bis (2-chloroethoxy) methane									
1.	ug/l	N.D.		86	76	12	73	75	2	64 103
3928	2,4-dichlorophenol									
1.	ug/l	N.D.		86	81	6	82	86	5	65 98
3946	1,2,4-trichlorobenzene									
1.	ug/l	N.D.		85	68	22	65	70	8	52 93
3947	naphthalene									
200.	ug/l	N.D.		82	66	22	67	72	8	60 97
3871	4-chloroaniline									
1.	ug/l	N.D.		81	74	9	55	54	2	34 101
3929	hexachlorobutadiene									
2.	ug/l	N.D.		80	65	21	53	59	10	24 86
3928	4-chloro-3-methylphenol									
1.	ug/l	N.D.		88	83	6	84	87	3	60 111
3905	2-methylnaphthalene									
200.	ug/l	N.D.		84	68	21	67	72	8	62 98
3949	hexachlorocyclopentadiene									
5.	ug/l	N.D.		71	60	17	51	56	9	17 80
3930	2,4,6-trichlorophenol									
2.	ug/l	N.D.		88	86	2	86	90	5	66 105
3922	2,4,5-trichlorophenol									
2.	ug/l	N.D.		92	88	4	87	91	4	67 103
3950	2-chloronaphthalene									
1.	ug/l	N.D.		87	73	18	69	76	9	61 103
3907	2-nitroaniline									
2.	ug/l	N.D.		73	69	6	63	63	0	58 112
3952	dimethyl phthalate									
2.	ug/l	N.D.		68	68	1	43	35	20	1 90
3951	acenaphthylene									
1.	ug/l	N.D.		80	70	14	65	70	8	64 100
4679 TCL Semivolatiles cont'd		Batch: 98168WAB026								
3908	3-nitroaniline									
2.	ug/l	N.D.		73	68	6	51	50	3	40 108
3954	acenaphthene									
200.	ug/l	N.D.		82	71	15	68	72	6	61 100
3931	2,4-dinitrophenol									
15.	ug/l	N.D.		85	86	1	87	87	1	25 124
3932	4-nitrophenol									
10.	ug/l	N.D.		45	48	6	46	45	1	3 83
3879	dibenzofuran									
200.	ug/l	N.D.		84	74	13	69	73	6	67 99



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LLI Sample No. 2946086

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Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3955	2,4-dinitrotoluene										
1.	ug/l	N.D.		93	87	6	80	81	1	64	112
3953	2,6-dinitrotoluene										
2.	ug/l	N.D.		95	86	9	79	82	3	66	113
3958	diethyl phthalate										
2.	ug/l	N.D.		83	78	6	62	60	3	30	99
3957	4-chlorophenyl phenyl ether										
1.	ug/l	N.D.		90	80	12	74	77	4	62	104
3956	fluorene										
200.	ug/l	N.D.		87	78	11	73	75	4	61	108
3909	4-nitroaniline										
2.	ug/l	N.D.		83	78	6	73	70	4	55	116
3933	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		87	83	4	83	88	6	43	120
3960	N-nitrosodiphenylamine										
1.	ug/l	N.D.		86	79	8	72	74	2	64	103
3961	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		90	82	9	75	78	4	69	102
	hexachlorobenzene										
2.	ug/l	N.D.		96	88	10	81	83	2	62	109
3934	pentachlorophenol										
3.	ug/l	N.D.		91	89	3	88	91	4	46	114
3963	phenanthrene										
200.	ug/l	N.D.		85	78	9	73	74	1	68	102
3964	anthracene										
1.	ug/l	N.D.		89	80	10	75	76	1	66	101
4684	carbazole										
1.	ug/l	N.D.		87	80	9	73	74	2	66	110
3965	di-n-butyl phthalate										
2.	ug/l	N.D.		88	81	8	74	74	1	61	105
3966	fluoranthene										
1.	ug/l	N.D.		90	81	10	76	77	1	66	106
3967	pyrene										
1.	ug/l	N.D.		88	82	7	78	78	0	58	112
3969	butyl benzyl phthalate										
2.	ug/l	5. J ug/l		85	78	8	71	71	0	48	105
3972	3,3'-dichlorobenzidine										
2.	ug/l	N.D.		72	67	7	53	52	2	37	104
3970	benzo (a) anthracene										
1.	ug/l	N.D.		86	81	6	76	76	0	69	101
3973	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		83	74	12	75	75	0	64	113
3971	chrysene										
1.	ug/l	N.D.		85	78	8	74	74	0	67	101
3974	di-n-octyl phthalate										
2.	ug/l	N.D.		95	84	12	83	84	1	59	118
3975	benzo (b) fluoranthene										
1.	ug/l	N.D.		87	78	11	73	73	0	64	101
3976	benzo (k) fluoranthene										
1.	ug/l	N.D.		90	84	7	79	80	2	67	105



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Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3977	benzo (a) pyrene										
1.	ug/l	N.D.		88	82	8	76	77	1	65	101
3978	indeno (1,2,3-cd) pyrene										
1.	ug/l	N.D.		87	80	8	76	76	1	59	111
3979	dibenz (a,h) anthracene										
1.	ug/l	N.D.		89	81	10	77	77	0	66	117
3980	benzo (ghi) perylene										
1.	ug/l	N.D.		87	79	10	75	76	0	55	115





LLI Sample No. 2946086
GEO-17-GW Grab Water Sample
Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	54	7	74
	Pheno1-d6	39	25	88
	2,4,6-TBP	105	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	85	47	114
	2-Fbiphenyl	87	51	106
	Tphenyld14	81	37	119
6291 TCL Volatiles	DBFM	112	86	118
	d4-1,2-DCA	94	80	120
	d8-toluene	91	88	110
	4-BFB	99	86	115





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Page: 1 of 6

LLI Sample No. WW 2946087

Collected: 6/11/98 at 09:50 by DU

Submitted: 6/13/98 Reported: 7/ 3/98
Discard: 8/ 3/98

GEO-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW18- SDG#: HMS03-15

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

P.O. GULF STATES CREOSOT
Rel.

CAT
NO. ANALYSIS NAME

6291 TCL Volatiles

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

See Page 2

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:25:54 D 0003 10 129915 619183
0.00 00015600 ASR000



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



**LLI Sample No. WW 2946087**

Collected: 6/11/98 at 09:50 by DU

Submitted: 6/13/98 Reported: 7/ 3/98
Discard: 8/ 3/98

GEO-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW18- SDG#: HMS03-15Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125P.O. GULF STATES CREOSOT
Ref.

AS RECEIVED

CAT NO.	ANALYSIS NAME	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
Kay G. Hower at (717) 656-2300Lancaster Laboratories
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PO Box 12425
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717-656-2300 Fax: 717-656-2681Respectfully Submitted
Duane A. Luckenbill, B.S.
Group Leader, GC/MS Volatiles



LLI Sample No. WW 2946087

Collected: 06/11/98 at 09:50 by DU

Submitted: 06/13/98

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

GEO-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW18- SDG#: HMS03-15

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
6291	TCL Volatiles	SW-846 8260B	1	06/24/98 0835	Joe R. Nace



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LLI Sample No. 2946087

GEO-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
6291 TCL Volatiles		Batch: K981751AC									
5385	Chloromethane	N.D.		93	96	3	93			58	156
	3. ug/l										
5387	Bromomethane	N.D.		68	67	1	69			30	154
	3. ug/l										
5386	Vinyl Chloride	N.D.		106	105	1	107			74	134
	2. ug/l										
5388	Chloroethane	N.D.		95	94	2	99			38	142
	3. ug/l										
5391	Methylene Chloride	N.D.		110	109	1	113			4	196
	2. ug/l										
6302	Acetone	N.D.		105	105	0	99			57	117
	6. ug/l										
6303	Carbon Disulfide	N.D.		100	98	2	100			41	186
	3. ug/l										
	1,1-Dichloroethene	N.D.		117	117	0	118			38	153
	1. ug/l										
5393	1,1-Dichloroethane	N.D.		113	111	1	111			59	132
	2. ug/l										
5396	Chloroform	N.D.		113	114	1	115			73	126
	1. ug/l										
5402	1,2-Dichloroethane	N.D.		117	118	0	115			68	125
	2. ug/l										
6305	2-Butanone	N.D.		105	106	1	101			63	120
	3. ug/l										
5398	1,1,1-Trichloroethane	N.D.		120	118	1	119			49	163
	1. ug/l										
5399	Carbon Tetrachloride	N.D.		120	120	0	121			61	139
	1. ug/l										
5406	Bromodichloromethane	N.D.		114	114	0	115			64	123
	1. ug/l										
5421	1,1,2,2-Tetrachloroethane	N.D.		107	106	1	101			68	118
	2. ug/l										
5404	1,2-Dichloropropane	N.D.		106	109	3	104			70	123
	1. ug/l										
6306	trans-1,3-Dichloropropene	N.D.		114	110	3	108			26	152
	1. ug/l										
5403	Trichloroethene	N.D.		114	110	4	115			67	130
	1. ug/l										
5411	Dibromochloromethane	N.D.		118	116	1	112			69	115
	2. ug/l										
5408	1,1,2-Trichloroethane	N.D.		112	112	0	109			70	112
	2. ug/l										
5401	Benzene	N.D.		108	107	0	109			58	133
	1. ug/l										
6307	cis-1,3-Dichloropropene	N.D.		108	109	0	107			66	124
	1. ug/l										





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LLI Sample No. 2946087

GEO-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
5419	Bromoform										
1.	ug/l	N.D.		119	118	0	113			70	114
6308	4-Methyl-2-pentanone										
5.	ug/l	N.D.		100	104	4	95			73	125
6309	2-Hexanone										
7.	ug/l	N.D.		98	98	0	90			66	126
5409	Tetrachloroethene										
1.	ug/l	N.D.		125	123	2	122			45	171
5407	Toluene										
2.	ug/l	N.D.		110	110	0	106			63	143
5413	Chlorobenzene										
1.	ug/l	N.D.		112	112	0	108			74	120
5415	Ethylbenzene										
2.	ug/l	N.D.		114	112	2	110			79	128
5418	Styrene										
1.	ug/l	N.D.		112	110	2	108			74	127
6210	Xylene (Total)										
1.	ug/l	N.D.		113	112	1	110			57	138
	trans-1,2-Dichloroethene										
2.	ug/l	N.D.		117	116	2	114			34	148
5395	cis-1,2-Dichloroethene										
2.	ug/l	N.D.		112	112	1	114			63	130



Lancaster Laboratories
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LLI Sample No. 2946087
GEO-18-GW Grab Water Sample
Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
6291 TCL Volatiles	DBFM	111	86	118
	d4-1,2-DCA	95	80	120
	d8-toluene	91	88	110
	4-BFB	98	86	115





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Page: 1 of 12

LLI Sample No. WW 2946088

Collected: 6/11/98 at 11:45 by DU

Submitted: 6/13/98 Reported: 7/ 3/98

Discard: 8/ 3/98

GEO-19-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW19- SDG#: HMS03-16

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

CAT NO.	ANALYSIS NAME
6291	TCL Volatiles
4678	TCL Semivolatiles
4679	TCL Semivolatiles cont'd

See Page	2
See Page	3
See Page	4

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:26:47 D 0003 10 129915 619183
0.00 00045300 ASR000



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





LLI Sample No. WW 2946088

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GEO-19-GW Grab Water Sample

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METHOD

CAT
NO. ANALYSIS NAME

RESULTS DETECTION LIMIT UNITS

TCL Volatiles

5385	Chloromethane	N.D.	15.	ug/l
5387	Bromomethane	N.D.	15.	ug/l
5386	Vinyl Chloride	N.D.	10.	ug/l
5388	Chloroethane	N.D.	15.	ug/l
5391	Methylene Chloride	N.D.	10.	ug/l
6302	Acetone	N.D.	30.	ug/l
6303	Carbon Disulfide	N.D.	15.	ug/l
5390	1,1-Dichloroethene	N.D.	5.	ug/l
5393	1,1-Dichloroethane	N.D.	10.	ug/l
5396	Chloroform	N.D.	5.	ug/l
5402	1,2-Dichloroethane	N.D.	10.	ug/l
6305	2-Butanone	N.D.	15.	ug/l
5398	1,1,1-Trichloroethane	N.D.	5.	ug/l
5399	Carbon Tetrachloride	N.D.	5.	ug/l
5406	Bromodichloromethane	N.D.	5.	ug/l
5421	1,1,2,2-Tetrachloroethane	N.D.	10.	ug/l
5404	1,2-Dichloropropane	N.D.	5.	ug/l
6306	trans-1,3-Dichloropropene	N.D.	5.	ug/l
5403	Trichloroethene	N.D.	5.	ug/l
5411	Dibromochloromethane	N.D.	10.	ug/l
5408	1,1,2-Trichloroethane	N.D.	10.	ug/l
5401	Benzene	N.D.	5.	ug/l
6307	cis-1,3-Dichloropropene	N.D.	5.	ug/l
5419	Bromoform	N.D.	5.	ug/l
6308	4-Methyl-2-pentanone	N.D.	25.	ug/l
6309	2-Hexanone	N.D.	35.	ug/l
5409	Tetrachloroethene	N.D.	5.	ug/l
5407	Toluene	N.D.	10.	ug/l
5413	Chlorobenzene	N.D.	5.	ug/l
5415	Ethylbenzene	N.D.	10.	ug/l
5418	Styrene	N.D.	5.	ug/l
6310	Xylene (Total)	27.	5.	ug/l
5392	trans-1,2-Dichloroethene	N.D.	10.	ug/l
5395	cis-1,2-Dichloroethene	N.D.	10.	ug/l

The quantitation limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

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



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





LLI Sample No. WW 2946088

Collected: 6/11/98 at 11:45 by DU

Submitted: 6/13/98 Reported: 7/ 3/98

Discard: 8/ 3/98

GEO-19-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW19- SDG#: HMS03-16

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

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METHOD

CAT NO. ANALYSIS NAME RESULTS 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	3.	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	14.	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	1,900.	22.	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	130.	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	9.	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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Page: 4 of 12

LLI Sample No. WW 2946088

Collected: 6/11/98 at 11:45 by DU

Submitted: 6/13/98 Reported: 7/ 3/98

Discard: 8/ 3/98

GEO-19-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

GW19- SDG#: HMS03-16

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

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AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

CAT
NO. ANALYSIS NAME

TCL Semivolatiles cont'd

3908 3-nitroaniline
3954 acenaphthene
3931 2,4-dinitrophenol
3932 4-nitrophenol
3879 dibenzofuran
3955 2,4-dinitrotoluene
3953 2,6-dinitrotoluene
3958 diethyl phthalate
3957 4-chlorophenyl phenyl ether
3956 fluorene
3909 4-nitroaniline
3933 4,6-dinitro-2-methylphenol
3960 N-nitrosodiphenylamine
3961 4-bromophenyl phenyl ether
3962 hexachlorobenzene
3934 pentachlorophenol
3963 phenanthrene
3964 anthracene
4684 carbazole
3965 di-n-butyl phthalate
3966 fluoranthene
3967 pyrene
3969 butyl benzyl phthalate
3972 3,3'-dichlorobenzidine
3970 benzo (a) anthracene
3973 bis (2-ethylhexyl) phthalate
3971 chrysene
3974 di-n-octyl phthalate
3975 benzo (b) fluoranthene
3976 benzo (k) fluoranthene
3977 benzo (a) pyrene
3978 indeno (1,2,3-cd) pyrene
3979 dibenz (a,h) anthracene
3980 benzo (ghi) perylene

N.D.	2.	ug/l
140.	1.	ug/l
N.D.	16.	ug/l
N.D.	11.	ug/l
48.	1.	ug/l
N.D.	1.	ug/l
N.D.	2.	ug/l
N.D.	2.	ug/l
N.D.	1.	ug/l
67.	1.	ug/l
N.D.	2.	ug/l
N.D.	5.	ug/l
N.D.	1.	ug/l
N.D.	2.	ug/l
N.D.	2.	ug/l
N.D.	3.	ug/l
140.	1.	ug/l
26.	1.	ug/l
77.	1.	ug/l
N.D.	2.	ug/l
100.	1.	ug/l
76.	1.	ug/l
N.D.	2.	ug/l
N.D.	2.	ug/l
17.	1.	ug/l
N.D.	2.	ug/l
15.	1.	ug/l
N.D.	2.	ug/l
13.	1.	ug/l
4.	J	1.
8.	J	1.
4.	J	1.
1.	J	1.
3.	J	1.

Questions? Contact your Client Services Representative
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

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2216 Rev. 8/4/97





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Page: 5 of 12

LLI Sample No. WW 2946088

Collected: 6/11/98 at 11:45 by DU

Submitted: 6/13/98 Reported: 7/ 3/98

Discard: 8/ 3/98

GEO-19-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

GW19- SDG#: HMS03-16

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

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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
Kay G. Hower 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 2946088

Collected: 06/11/98 at 11:45 by DU

Submitted: 06/13/98

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

GEO-19-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW19- SDG#: HMS03-16

CAT NO	ANALYSIS NAME	METHOD	TRIAL ID	ANALYSIS DATE AND TIME	ANALYST
6291	TCL Volatiles	SW-846 8260B	1	06/24/98 0909	Joel R. Nace
0813	BNA Water Extraction	SW-846 3510C	1	06/17/98 0830	Jay L. Stauffer, Jr.
4678	TCL Semivolatiles	SW-846 8270C	1	06/26/98 1952	Phillip R. Esbenshade
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/26/98 1952	Phillip R. Esbenshade



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QUALITY CONTROL REPORT



Page: 7 of 12

LLI Sample No. 2946088

GEO-19-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
6291 TCL Volatiles		Batch: K981751AC									
5385	Chloromethane										
15.	ug/l	N.D.		93	96	3	93			58	156
5387	Bromomethane										
15.	ug/l	N.D.		68	67	1	69			30	154
5386	Vinyl Chloride										
10.	ug/l	N.D.		106	105	1	107			74	134
5388	Chloroethane										
15.	ug/l	N.D.		95	94	2	99			38	142
5391	Methylene Chloride										
10.	ug/l	N.D.		110	109	1	113			4	196
6302	Acetone										
30.	ug/l	N.D.		105	105	0	99			57	117
6303	Carbon Disulfide										
15.	ug/l	N.D.		100	98	2	100			41	186
5393	1,1-Dichloroethene										
5.	ug/l	N.D.		117	117	0	118			38	153
5393	1,1-Dichloroethane										
10.	ug/l	N.D.		113	111	1	111			59	132
5396	Chloroform										
5.	ug/l	N.D.		113	114	1	115			73	126
5402	1,2-Dichloroethane										
10.	ug/l	N.D.		117	118	0	115			68	125
6305	2-Butanone										
15.	ug/l	N.D.		105	106	1	101			63	120
5398	1,1,1-Trichloroethane										
5.	ug/l	N.D.		120	118	1	119			49	163
5399	Carbon Tetrachloride										
5.	ug/l	N.D.		120	120	0	121			61	139
5406	Bromodichloromethane										
5.	ug/l	N.D.		114	114	0	115			64	123
5421	1,1,2,2-Tetrachloroethane										
10.	ug/l	N.D.		107	106	1	101			68	118
5404	1,2-Dichloropropane										
5.	ug/l	N.D.		106	109	3	104			70	123
6306	trans-1,3-Dichloropropene										
5.	ug/l	N.D.		114	110	3	108			26	152
5403	Trichloroethene										
5.	ug/l	N.D.		114	110	4	115			67	130
5411	Dibromochloromethane										
10.	ug/l	N.D.		118	116	1	112			69	115
5408	1,1,2-Trichloroethane										
10.	ug/l	N.D.		112	112	0	109			70	112
5401	Benzene										
5.	ug/l	N.D.		108	107	0	109			58	133
6307	cis-1,3-Dichloropropene										
5.	ug/l	N.D.		108	109	0	107			66	124



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LLI Sample No. 2946088

GEO-19-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
5419	Bromoform										
5.	ug/l	N.D.		119	118	0	113			70	114
6308	4-Methyl-2-pentanone										
25.	ug/l	N.D.		100	104	4	95			73	125
6309	2-Hexanone										
35.	ug/l	N.D.		98	98	0	90			66	126
5409	Tetrachloroethene										
5.	ug/l	N.D.		125	123	2	122			45	171
5407	Toluene										
10.	ug/l	N.D.		110	110	0	106			63	143
5413	Chlorobenzene										
5.	ug/l	N.D.		112	112	0	108			74	120
5415	Ethylbenzene										
10.	ug/l	N.D.		114	112	2	110			79	128
5418	Styrene										
5.	ug/l	N.D.		112	110	2	108			74	127
6310	Xylene (Total)										
5.	ug/l	N.D.		113	112	1	110			57	138
	trans-1,2-Dichloroethene										
10.	ug/l	N.D.		117	116	2	114			34	148
5395	cis-1,2-Dichloroethene										
10.	ug/l	N.D.		112	112	1	114			63	130

4678	TCL Semivolatiles	Batch: 98168WAB026									

3925	phenol										
1.	ug/l	N.D.		38	40	5	41	40	2	5	83
3936	bis (2-chloroethyl) ether										
1.	ug/l	N.D.		85	71	18	74	76	4	66	106
3924	2-chlorophenol										
1.	ug/l	N.D.		85	78	9	83	87	5	62	107
3937	1,3-dichlorobenzene										
1.	ug/l	N.D.		84	68	22	64	68	6	45	91
3938	1,4-dichlorobenzene										
1.	ug/l	N.D.		84	68	22	65	68	6	45	94
3939	1,2-dichlorobenzene										
1.	ug/l	N.D.		89	70	23	68	74	8	52	97
4680	2-methylphenol										
1.	ug/l	N.D.		76	72	5	76	77	1	55	96
4681	2,2'-oxybis (1-chloropropane)										
2.	ug/l	N.D.		95	74	24	78	83	6	43	118
4682	4-methylphenol										
3.	ug/l	N.D.		71	69	3	72	73	1	48	99
3942	N-nitrosodi-n-propylamine										
1.	ug/l	N.D.		94	81	15	79	82	3	62	118
3941	hexachloroethane										
1.	ug/l	N.D.		77	61	23	55	58	7	40	84
3943	nitrobenzene										
1.	ug/l	N.D.		90	75	19	76	80	5	61	113



QUALITY CONTROL REPORT



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LLI Sample No. 2946088

GEO-19-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3944	isophorone										
1.	ug/l	N.D.		92	82	12	78	81	3	66	113
3926	2-nitrophenol										
1.	ug/l	N.D.		88	82	8	85	89	5	67	104
3927	2,4-dimethylphenol										
1.	ug/l	N.D.		81	76	6	78	80	2	52	99
3945	bis (2-chloroethoxy) methane										
1.	ug/l	N.D.		86	76	12	73	75	2	64	103
3928	2,4-dichlorophenol										
1.	ug/l	N.D.		86	81	6	82	86	5	65	98
3946	1,2,4-trichlorobenzene										
1.	ug/l	N.D.		85	68	22	65	70	8	52	93
3947	naphthalene										
22.	ug/l	N.D.		82	66	22	67	72	8	60	97
3871	4-chloroaniline										
1.	ug/l	N.D.		81	74	9	55	54	2	34	101
3948	hexachlorobutadiene										
2.	ug/l	N.D.		80	65	21	53	59	10	24	86
	4-chloro-3-methylphenol										
1.	ug/l	N.D.		88	83	6	84	87	3	60	111
3905	2-methylnaphthalene										
1.	ug/l	N.D.		84	68	21	67	72	8	62	98
3949	hexachlorocyclopentadiene										
5.	ug/l	N.D.		71	60	17	51	56	9	17	80
3930	2,4,6-trichlorophenol										
2.	ug/l	N.D.		88	86	2	86	90	5	66	105
3922	2,4,5-trichlorophenol										
2.	ug/l	N.D.		92	88	4	87	91	4	67	103
3950	2-chloronaphthalene										
1.	ug/l	N.D.		87	73	18	69	76	9	61	103
3907	2-nitroaniline										
2.	ug/l	N.D.		73	69	6	63	63	0	58	112
3952	dimethyl phthalate										
2.	ug/l	N.D.		68	68	1	43	35	20	1	90
3951	acenaphthylene										
1.	ug/l	N.D.		80	70	14	65	70	8	64	100
4679 TCL Semivolatiles cont'd		Batch: 98168WAB026									
3908	3-nitroaniline										
2.	ug/l	N.D.		73	68	6	51	50	3	40	108
3954	acenaphthene										
1.	ug/l	N.D.		82	71	15	68	72	6	61	100
3931	2,4-dinitrophenol										
16.	ug/l	N.D.		85	86	1	87	87	1	25	124
3932	4-nitrophenol										
11.	ug/l	N.D.		45	48	6	46	45	1	3	83
3879	dibenzofuran										
1.	ug/l	N.D.		84	74	13	69	73	6	67	99



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LLI Sample No. 2946088

GEO-19-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3955	2,4-dinitrotoluene										
1.	ug/l	N.D.		93	87	6	80	81	1	64	112
3953	2,6-dinitrotoluene										
2.	ug/l	N.D.		95	86	9	79	82	3	66	113
3958	diethyl phthalate										
2.	ug/l	N.D.		83	78	6	62	60	3	30	99
3957	4-chlorophenyl phenyl ether										
1.	ug/l	N.D.		90	80	12	74	77	4	62	104
3956	fluorene										
1.	ug/l	N.D.		87	78	11	73	75	4	61	108
3909	4-nitroaniline										
2.	ug/l	N.D.		83	78	6	73	70	4	55	116
3933	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		87	83	4	83	88	6	43	120
3960	N-nitrosodiphenylamine										
1.	ug/l	N.D.		86	79	8	72	74	2	64	103
3961	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		90	82	9	75	78	4	69	102
	hexachlorobenzene										
2.	ug/l	N.D.		96	88	10	81	83	2	62	109
3934	pentachlorophenol										
3.	ug/l	N.D.		91	89	3	88	91	4	46	114
3963	phenanthrene										
1.	ug/l	N.D.		85	78	9	73	74	1	68	102
3964	anthracene										
1.	ug/l	N.D.		89	80	10	75	76	1	66	101
4684	carbazole										
1.	ug/l	N.D.		87	80	9	73	74	2	66	110
3965	di-n-butyl phthalate										
2.	ug/l	N.D.		88	81	8	74	74	1	61	105
3966	fluoranthene										
1.	ug/l	N.D.		90	81	10	76	77	1	66	106
3967	pyrene										
1.	ug/l	N.D.		88	82	7	78	78	0	58	112
3969	butyl benzyl phthalate										
2.	ug/l	5. J ug/l		85	78	8	71	71	0	48	105
3972	3,3'-dichlorobenzidine										
2.	ug/l	N.D.		72	67	7	53	52	2	37	104
3970	benzo (a) anthracene										
1.	ug/l	N.D.		86	81	6	76	76	0	69	101
3973	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		83	74	12	75	75	0	64	113
3971	chrysene										
1.	ug/l	N.D.		85	78	8	74	74	0	67	101
3974	di-n-octyl phthalate										
2.	ug/l	N.D.		95	84	12	83	84	1	59	118
3975	benzo (b) fluoranthene										
1.	ug/l	N.D.		87	78	11	73	73	0	64	101
3976	benzo (k) fluoranthene										
1.	ug/l	N.D.		90	84	7	79	80	2	67	105



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LLI Sample No. 2946088

GEO-19-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3977	benzo (a) pyrene 1. ug/l	N.D.		88	82	8	76	77	1	65	101
3978	indeno (1,2,3-cd) pyrene 1. ug/l	N.D.		87	80	8	76	76	1	59	111
3979	dibenz (a,h) anthracene 1. ug/l	N.D.		89	81	10	77	77	0	66	117
3980	benzo (ghi) perylene 1. ug/l	N.D.		87	79	10	75	76	0	55	115



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LLI Sample No. 2946088

GEO-19-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4678 TCL Semivolatiles		2-Flphenol	38	7 74
		Phenol-d6	26	25 88
		2,4,6-TBP	69	34 125
4679 TCL Semivolatiles cont'd		Nitrobz-d5	85	47 114
		2-Fbiphenyl	83	51 106
		Tphenyl d14	49	37 119
6291 TCL Volatiles		DBFM	113	86 118
		d4-1,2-DCA	94	80 120
		d8-toluene	91	88 110
		4-BFB	97	86 115

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LLI Sample No. WW 2946089
Collected: 6/11/98 at 08:05 by DU

Submitted: 6/13/98 Reported: 7/ 3/98
Discard: 8/ 3/98

GEO-20-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW20- SDG#: HMS03-17BK

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT UNITS
6291	TCL Volatiles		See Page 2
4678	TCL Semivolatiles		See Page 3
4679	TCL Semivolatiles cont'd		See Page 4

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:28:31 D 0003 10 129915 619183
0.00 00045300 ASR000



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





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Page: 2 of 12

LLI Sample No. WW 2946089

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GEO-20-GW Unspiked Grab Water Sample

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GW20- SDG#: HMS03-17BK

Account No: 07802
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P.O. Box 25861
Oklahoma City OK 73125

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AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT	UNITS
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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
Kay G. Hower at (717) 656-2300



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

See reverse side for explanation of symbols and abbreviations.

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LLI Sample No. WW 2946089

Collected: 6/11/98 at 08:05 by DU

Submitted: 6/13/98 Reported: 7/ 3/98
Discard: 8/ 3/98

GEO-20-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW20- SDG#: HMS03-17BK

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

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METHOD

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT	UNITS
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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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LLI Sample No. WW 2946089

Collected: 6/11/98 at 08:05 by DU

Submitted: 6/13/98 Reported: 7/ 3/98

Discard: 8/ 3/98

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

P.O. GULF STATES CREOSOT
Ref.

GE0-20-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW20- SDG#: HMS03-17BK

AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	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	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
3963	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
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Respectfully Submitted
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Group Leader, GC/MS SVOA





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LLI Sample No. WW 2946089

Collected: 6/11/98 at 08:05 by DU

Submitted: 6/13/98 Reported: 7/ 3/98
Discard: 8/ 3/98

GEO-20-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW20- SDG#: HMS03-17BK

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
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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Group Leader, GC/MS SVOA



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LLI Sample No. WW 2946089

Collected: 06/11/98 at 08:05 by DU

Submitted: 06/13/98

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Oklahoma City OK 73125

GEO-20-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW20- SDG#: HMS03-17BK

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			ANALYST
			TRIAL	ID	DATE AND TIME	
6291	TCL Volatiles	SW-846 8260B	1		06/24/98 0027	Joel R. Nace
0813	BNA Water Extraction	SW-846 3510C	1		06/17/98 0830	Jay L. Stauffer, Jr.
4678	TCL Semivolatiles	SW-846 8270C	1		06/23/98 0531	Phillip R. Esbenshade
4679	TCL Semivolatiles cont'd	SW-846 8270C	1		06/23/98 0531	Phillip R. Esbenshade



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QUALITY CONTROL REPORT



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LLI Sample No. 2946089

GEO-20-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
6291 TCL Volatiles		Batch: K981751AA									
5385	Chloromethane										
3.	ug/l	N.D.		93	96	3	93			58	156
5387	Bromomethane										
3.	ug/l	N.D.		68	67	1	69			30	154
5386	Vinyl Chloride										
2.	ug/l	N.D.		106	105	1	107			74	134
5388	Chloroethane										
3.	ug/l	N.D.		95	94	2	99			38	142
5391	Methylene Chloride										
2.	ug/l	N.D.		110	109	1	113			4	196
6302	Acetone										
6.	ug/l	N.D.		105	105	0	99			57	117
6303	Carbon Disulfide										
3.	ug/l	N.D.		100	98	2	100			41	186
5390	1,1-Dichloroethene										
1.	ug/l	N.D.		117	117	0	118			38	153
5390	1,1-Dichloroethane										
2.	ug/l	N.D.		113	111	1	111			59	132
5396	Chloroform										
1.	ug/l	N.D.		113	114	1	115			73	126
5402	1,2-Dichloroethane										
2.	ug/l	N.D.		117	118	0	115			68	125
6305	2-Butanone										
3.	ug/l	N.D.		105	106	1	101			63	120
5398	1,1,1-Trichloroethane										
1.	ug/l	N.D.		120	118	1	119			49	163
5399	Carbon Tetrachloride										
1.	ug/l	N.D.		120	120	0	121			61	139
5406	Bromodichloromethane										
1.	ug/l	N.D.		114	114	0	115			64	123
5421	1,1,2,2-Tetrachloroethane										
2.	ug/l	N.D.		107	106	1	101			68	118
5404	1,2-Dichloropropane										
1.	ug/l	N.D.		106	109	3	104			70	123
6306	trans-1,3-Dichloropropene										
1.	ug/l	N.D.		114	110	3	108			26	152
5403	Trichloroethene										
1.	ug/l	N.D.		114	110	4	115			67	130
5411	Dibromochloromethane										
2.	ug/l	N.D.		118	116	1	112			69	115
5408	1,1,2-Trichloroethane										
2.	ug/l	N.D.		112	112	0	109			70	112
5401	Benzene										
1.	ug/l	N.D.		108	107	0	109			58	133
6307	cis-1,3-Dichloropropene										
1.	ug/l	N.D.		108	109	0	107			66	124



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Page: 8 of 12

LLI Sample No. 2946089

GEO-20-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
5419	Bromoform										
1.	ug/l	N.D.		119	118	0	113			70	114
6308	4-Methyl-2-pentanone										
5.	ug/l	N.D.		100	104	4	95			73	125
6309	2-Hexanone										
7.	ug/l	N.D.		98	98	0	90			66	126
5409	Tetrachloroethene										
1.	ug/l	N.D.		125	123	2	122			45	171
5407	Toluene										
2.	ug/l	N.D.		110	110	0	106			63	143
5413	Chlorobenzene										
1.	ug/l	N.D.		112	112	0	108			74	120
5415	Ethylbenzene										
2.	ug/l	N.D.		114	112	2	110			79	128
5418	Styrene										
1.	ug/l	N.D.		112	110	2	108			74	127
6310	Xylene (Total)										
1.	ug/l	N.D.		113	112	1	110			57	138
	trans-1,2-Dichloroethene										
2.	ug/l	N.D.		117	116	2	114			34	148
5395	cis-1,2-Dichloroethene										
2.	ug/l	N.D.		112	112	1	114			63	130

678	TCL Semivolatiles	Batch: 98168WAB026									

3925	phenol										
1.	ug/l	N.D.		38	40	5	41	40	2	5	83
3936	bis (2-chloroethyl) ether										
1.	ug/l	N.D.		85	71	18	74	76	4	66	106
3924	2-chlorophenol										
1.	ug/l	N.D.		85	78	9	83	87	5	62	107
3937	1,3-dichlorobenzene										
1.	ug/l	N.D.		84	68	22	64	68	6	45	91
3938	1,4-dichlorobenzene										
1.	ug/l	N.D.		84	68	22	65	68	6	45	94
3939	1,2-dichlorobenzene										
1.	ug/l	N.D.		89	70	23	68	74	8	52	97
4680	2-methylphenol										
1.	ug/l	N.D.		76	72	5	76	77	1	55	96
4681	2,2'-oxybis (1-chloropropane)										
2.	ug/l	N.D.		95	74	24	78	83	6	43	118
4682	4-methylphenol										
3.	ug/l	N.D.		71	69	3	72	73	1	48	99
3942	N-nitrosodi-n-propylamine										
1.	ug/l	N.D.		94	81	15	79	82	3	62	118
3941	hexachloroethane										
1.	ug/l	N.D.		77	61	23	55	58	7	40	84
3943	nitrobenzene										
1.	ug/l	N.D.		90	75	19	76	80	5	61	113



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LLI Sample No. **2946089**
GEO-20-GW Unspiked Grab Water Sample
Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3944	isophorone										
1.	ug/l	N.D.		92	82	12	78	81	3	66	113
3926	2-nitrophenol										
1.	ug/l	N.D.		88	82	8	85	89	5	67	104
3927	2,4-dimethylphenol										
1.	ug/l	N.D.		81	76	6	78	80	2	52	99
3945	bis (2-chloroethoxy) methane										
1.	ug/l	N.D.		86	76	12	73	75	2	64	103
3928	2,4-dichlorophenol										
1.	ug/l	N.D.		86	81	6	82	86	5	65	98
3946	1,2,4-trichlorobenzene										
1.	ug/l	N.D.		85	68	22	65	70	8	52	93
3947	naphthalene										
1.	ug/l	N.D.		82	66	22	67	72	8	60	97
3871	4-chloroaniline										
1.	ug/l	N.D.		81	74	9	55	54	2	34	101
3948	hexachlorobutadiene										
2.	ug/l	N.D.		80	65	21	53	59	10	24	86
	4-chloro-3-methylphenol										
1.	ug/l	N.D.		88	83	6	84	87	3	60	111
3905	2-methylnaphthalene										
1.	ug/l	N.D.		84	68	21	67	72	8	62	98
3949	hexachlorocyclopentadiene										
5.	ug/l	N.D.		71	60	17	51	56	9	17	80
3930	2,4,6-trichlorophenol										
2.	ug/l	N.D.		88	86	2	86	90	5	66	105
3922	2,4,5-trichlorophenol										
2.	ug/l	N.D.		92	88	4	87	91	4	67	103
3950	2-chloronaphthalene										
1.	ug/l	N.D.		87	73	18	69	76	9	61	103
3907	2-nitroaniline										
2.	ug/l	N.D.		73	69	6	63	63	0	58	112
3952	dimethyl phthalate										
2.	ug/l	N.D.		68	68	1	43	35	20	1	90
3951	acenaphthylene										
1.	ug/l	N.D.		80	70	14	65	70	8	64	100
4679 TCL Semivolatiles cont'd		Batch: 98168WAB026									
3908	3-nitroaniline										
2.	ug/l	N.D.		73	68	6	51	50	3	40	108
3954	acenaphthene										
1.	ug/l	N.D.		82	71	15	68	72	6	61	100
3931	2,4-dinitrophenol										
15.	ug/l	N.D.		85	86	1	87	87	1	25	124
3932	4-nitrophenol										
10.	ug/l	N.D.		45	48	6	46	45	1	3	83
3879	dibenzofuran										
1.	ug/l	N.D.		84	74	13	69	73	6	67	99



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LLI Sample No. 2946089

GEO-20-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3955	2,4-dinitrotoluene										
1.	ug/l	N.D.		93	87	6	80	81	1	64	112
3953	2,6-dinitrotoluene										
2.	ug/l	N.D.		95	86	9	79	82	3	66	113
3958	diethyl phthalate										
2.	ug/l	N.D.		83	78	6	62	60	3	30	99
3957	4-chlorophenyl phenyl ether										
1.	ug/l	N.D.		90	80	12	74	77	4	62	104
3956	fluorene										
1.	ug/l	N.D.		87	78	11	73	75	4	61	108
3909	4-nitroaniline										
2.	ug/l	N.D.		83	78	6	73	70	4	55	116
3933	4,6-dinitro-2-methylphenol										
5.	ug/l	N.D.		87	83	4	83	88	6	43	120
3960	N-nitrosodiphenylamine										
1.	ug/l	N.D.		86	79	8	72	74	2	64	103
3961	4-bromophenyl phenyl ether										
2.	ug/l	N.D.		90	82	9	75	78	4	69	102
	hexachlorobenzene										
2.	ug/l	N.D.		96	88	10	81	83	2	62	109
3934	pentachlorophenol										
3.	ug/l	N.D.		91	89	3	88	91	4	46	114
3963	phenanthrene										
1.	ug/l	N.D.		85	78	9	73	74	1	68	102
3964	anthracene										
1.	ug/l	N.D.		89	80	10	75	76	1	66	101
4684	carbazole										
1.	ug/l	N.D.		87	80	9	73	74	2	66	110
3965	di-n-butyl phthalate										
2.	ug/l	N.D.		88	81	8	74	74	1	61	105
3966	fluoranthene										
1.	ug/l	N.D.		90	81	10	76	77	1	66	106
3967	pyrene										
1.	ug/l	N.D.		88	82	7	78	78	0	58	112
3969	butyl benzyl phthalate										
2.	ug/l	5. J ug/l		85	78	8	71	71	0	48	105
3972	3,3'-dichlorobenzidine										
2.	ug/l	N.D.		72	67	7	53	52	2	37	104
3970	benzo (a) anthracene										
1.	ug/l	N.D.		86	81	6	76	76	0	69	101
3973	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		83	74	12	75	75	0	64	113
3971	chrysene										
1.	ug/l	N.D.		85	78	8	74	74	0	67	101
3974	di-n-octyl phthalate										
2.	ug/l	N.D.		95	84	12	83	84	1	59	118
3975	benzo (b) fluoranthene										
1.	ug/l	N.D.		87	78	11	73	73	0	64	101
3976	benzo (k) fluoranthene										
1.	ug/l	N.D.		90	84	7	79	80	2	67	105





LLI Sample No. 2946089
GEO-20-GW Unspiked Grab Water Sample
Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3977	benzo (a) pyrene										
1.	ug/l	N.D.		88	82	8	76	77	1	65	101
3978	indeno (1,2,3-cd) pyrene										
1.	ug/l	N.D.		87	80	8	76	76	1	59	111
3979	dibenz (a,h) anthracene										
1.	ug/l	N.D.		89	81	10	77	77	0	66	117
3980	benzo (ghi) perylene										
1.	ug/l	N.D.		87	79	10	75	76	0	55	115



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LLI Sample No. 2946089

GEO-20-GW Unspiked Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SURROGATE SUMMARY			SURROGATE LIMITS	
TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles	2-Flphenol	54	7	74
	Phenol-d6	36	25	88
	2,4,6-TBP	99	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	87	47	114
	2-Fbiphenyl	84	51	106
	Tphenylid14	87	37	119
6291 TCL Volatiles	DBFM	109	86	118
	d4-1,2-DCA	94	80	120
	d8-toluene	90	88	110
	4-BFB	97	86	115

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LLI Sample No. WW 2946092
Collected: 6/11/98 at 12:50 by DUSubmitted: 6/13/98 Reported: 7/ 3/98
Discard: 8/ 3/98

GEO-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW21- SDG#: HMS03-18Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

METHOD

RESULTS DETECTION LIMIT UNITS

CAT
NO.

ANALYSIS NAME

6291 TCL Volatiles
4678 TCL Semivolatiles
4679 TCL Semivolatiles cont'dSee Page 2
See Page 3
See Page 41 COPY TO Kerr-McGee Corporation
1 COPY TO Michael Pisani & Associates
1 COPY TO Data Package GroupATTN: Garet Van de Steeg, PhD
ATTN: Mr. David UpthegroveQuestions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:33:58 D 0003 10 129915 619183
0.00 00045300 ASR000Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOALancaster Laboratories
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LLI Sample No. WW 2946092

Collected: 6/11/98 at 12:50 by DU

Submitted: 6/13/98 Reported: 7/ 3/98

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

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GEO-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW21- SDG#: HMS03-18

AS RECEIVED

METHOD

CAT NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT	UNITS
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TCL Volatiles

5385	Chloromethane	N.D.	150.	ug/l
5387	Bromomethane	N.D.	150.	ug/l
5386	Vinyl Chloride	N.D.	100.	ug/l
5388	Chloroethane	N.D.	150.	ug/l
5391	Methylene Chloride	N.D.	100.	ug/l
6302	Acetone	N.D.	300.	ug/l
6303	Carbon Disulfide	N.D.	150.	ug/l
5390	1,1-Dichloroethene	N.D.	50.	ug/l
5393	1,1-Dichloroethane	N.D.	100.	ug/l
5396	Chloroform	N.D.	50.	ug/l
5402	1,2-Dichloroethane	N.D.	100.	ug/l
6305	2-Butanone	N.D.	150.	ug/l
5398	1,1,1-Trichloroethane	N.D.	50.	ug/l
5399	Carbon Tetrachloride	N.D.	50.	ug/l
5406	Bromodichloromethane	N.D.	50.	ug/l
5421	1,1,2,2-Tetrachloroethane	N.D.	100.	ug/l
5404	1,2-Dichloropropane	N.D.	50.	ug/l
6306	trans-1,3-Dichloropropene	N.D.	50.	ug/l
5403	Trichloroethene	N.D.	50.	ug/l
5411	Dibromochloromethane	N.D.	100.	ug/l
5408	1,1,2-Trichloroethane	N.D.	100.	ug/l
5401	Benzene	N.D.	50.	ug/l
6307	cis-1,3-Dichloropropene	N.D.	50.	ug/l
5419	Bromoform	N.D.	50.	ug/l
6308	4-Methyl-2-pentanone	N.D.	250.	ug/l
6309	2-Hexanone	N.D.	350.	ug/l
5409	Tetrachloroethene	N.D.	50.	ug/l
5407	Toluene	N.D.	100.	ug/l
5413	Chlorobenzene	N.D.	50.	ug/l
5415	Ethylbenzene	N.D.	100.	ug/l
5418	Styrene	N.D.	50.	ug/l
6310	Xylene (Total)	57. J	50.	ug/l
5392	trans-1,2-Dichloroethene	N.D.	100.	ug/l
5395	cis-1,2-Dichloroethene	N.D.	100.	ug/l

The quantitation limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

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



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





LLI Sample No. WW 2946092
Collected: 6/11/98 at 12:50 by DU

Submitted: 6/13/98 Reported: 7/ 3/98
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GEO-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW21- SDG#: HMS03-18

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

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METHOD

CAT NO. ANALYSIS NAME RESULTS 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	1.	J 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	11.	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	5,500.	97.	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	590.	J 97.	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	15.	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 2946092**

Collected: 6/11/98 at 12:50 by DU

Submitted: 6/13/98 Reported: 7/ 3/98

Discard: 8/ 3/98

GEO-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

GW21- SDG#: HMS03-18

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

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METHOD

RESULTS DETECTION LIMIT UNITS

CAT
NO.

ANALYSIS NAME

TCL Semivolatiles cont'd

3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	320.	J 97.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	220.	J 97.	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	200.	J 97.	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
3963	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	280.	J 97.	ug/l
3964	anthracene	30.	1.	ug/l
4684	carbazole	200.	J 97.	ug/l
3965	di-n-butyl phthalate	N.D.	2.	ug/l
3966	fluoranthene	47.	1.	ug/l
3967	pyrene	30.	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	7.	J 1.	ug/l
3973	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3971	chrysene	5.	J 1.	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	4.	J 1.	ug/l
3976	benzo (k) fluoranthene	2.	J 1.	ug/l
3977	benzo (a) pyrene	3.	J 1.	ug/l
3978	indeno (1,2,3-cd) pyrene	1.	J 1.	ug/l
3979	dibenz (a,h) anthracene	N.D.	1.	ug/l
3980	benzo (ghi) perylene	1.	J 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 2946092

Collected: 6/11/98 at 12:50 by DU

Submitted: 6/13/98 Reported: 7/ 3/98
Discard: 8/ 3/98

GEO-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW21- SDG#: HMS03-18

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

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CAT
NO. ANALYSIS NAME

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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
Kay G. Hower at (717) 656-2300

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



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LABORATORY CHRONICLE

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LLI Sample No. WW 2946092

Collected: 06/11/98 at 12:50 by DU

Submitted: 06/13/98

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

GEO-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
GW21- SDG#: HMS03-18

CAT NO	ANALYSIS NAME	METHOD	TRIAL ID	ANALYSIS DATE AND TIME	ANALYST
6291	TCL Volatiles	SW-846 8260B	1	06/24/98 0943	Joel R. Nace
0813	BNA Water Extraction	SW-846 3510C	1	06/17/98 0830	Jay L. Stauffer, Jr.
4678	TCL Semivolatiles	SW-846 8270C	1	06/26/98 2233	Phillip R. Esbenshade
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/26/98 2233	Phillip R. Esbenshade



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LLI Sample No. 2946092

GEO-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW HIGH
6291 TCL Volatiles		Batch: K981751AC								
5385 Chloromethane										
150. ug/l		N.D.		93	96	3	93			58 156
5387 Bromomethane										
150. ug/l		N.D.		68	67	1	69			30 154
5386 Vinyl Chloride										
100. ug/l		N.D.		106	105	1	107			74 134
5388 Chloroethane										
150. ug/l		N.D.		95	94	2	99			38 142
5391 Methylene Chloride										
100. ug/l		N.D.		110	109	1	113			4 196
6302 Acetone										
300. ug/l		N.D.		105	105	0	99			57 117
6303 Carbon Disulfide										
150. ug/l		N.D.		100	98	2	100			41 186
1,1-Dichloroethene										
100. ug/l		N.D.		117	117	0	118			38 153
1,1-Dichloroethane										
100. ug/l		N.D.		113	111	1	111			59 132
5396 Chloroform										
50. ug/l		N.D.		113	114	1	115			73 126
5402 1,2-Dichloroethane										
100. ug/l		N.D.		117	118	0	115			68 125
6305 2-Butanone										
150. ug/l		N.D.		105	106	1	101			63 120
5398 1,1,1-Trichloroethane										
50. ug/l		N.D.		120	118	1	119			49 163
5399 Carbon Tetrachloride										
50. ug/l		N.D.		120	120	0	121			61 139
5406 Bromodichloromethane										
50. ug/l		N.D.		114	114	0	115			64 123
5421 1,1,2,2-Tetrachloroethane										
100. ug/l		N.D.		107	106	1	101			68 118
5404 1,2-Dichloropropane										
50. ug/l		N.D.		106	109	3	104			70 123
6306 trans-1,3-Dichloropropene										
50. ug/l		N.D.		114	110	3	108			26 152
5403 Trichloroethene										
50. ug/l		N.D.		114	110	4	115			67 130
5411 Dibromochloromethane										
100. ug/l		N.D.		118	116	1	112			69 115
5408 1,1,2-Trichloroethane										
100. ug/l		N.D.		112	112	0	109			70 112
5401 Benzene										
50. ug/l		N.D.		108	107	0	109			58 133
6307 cis-1,3-Dichloropropene										
50. ug/l		N.D.		108	109	0	107			66 124





LLI Sample No. 2946092

GEO-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
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SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW HIGH
5419 Bromoform										
50. ug/l		N.D.		119	118	0	113			70 114
6308 4-Methyl-2-pentanone										
250. ug/l		N.D.		100	104	4	95			73 125
6309 2-Hexanone										
350. ug/l		N.D.		98	98	0	90			66 126
5409 Tetrachloroethene										
50. ug/l		N.D.		125	123	2	122			45 171
5407 Toluene										
100. ug/l		N.D.		110	110	0	106			63 143
5413 Chlorobenzene										
50. ug/l		N.D.		112	112	0	108			74 120
5415 Ethylbenzene										
100. ug/l		N.D.		114	112	2	110			79 128
5418 Styrene										
50. ug/l		N.D.		112	110	2	108			74 127
6310 Xylene (Total)										
50. ug/l		N.D.		113	112	1	110			57 138
trans-1,2-Dichloroethene										
100. ug/l		N.D.		117	116	2	114			34 148
5395 cis-1,2-Dichloroethene										
100. ug/l		N.D.		112	112	1	114			63 130

4578 TCL Semivolatiles		Batch: 98168WAB026								

3925 phenol										
1. ug/l		N.D.		38	40	5	41	40	2	5 83
3936 bis (2-chloroethyl) ether										
1. ug/l		N.D.		85	71	18	74	76	4	66 106
3924 2-chlorophenol										
1. ug/l		N.D.		85	78	9	83	87	5	62 107
3937 1,3-dichlorobenzene										
1. ug/l		N.D.		84	68	22	64	68	6	45 91
3938 1,4-dichlorobenzene										
1. ug/l		N.D.		84	68	22	65	68	6	45 94
3939 1,2-dichlorobenzene										
1. ug/l		N.D.		89	70	23	68	74	8	52 97
4680 2-methylphenol										
1. ug/l		N.D.		76	72	5	76	77	1	55 96
4681 2,2'-oxybis (1-chloropropane)										
2. ug/l		N.D.		95	74	24	78	83	6	43 118
4682 4-methylphenol										
3. ug/l		N.D.		71	69	3	72	73	1	48 99
3942 N-nitrosodi-n-propylamine										
1. ug/l		N.D.		94	81	15	79	82	3	62 118
3941 hexachloroethane										
1. ug/l		N.D.		77	61	23	55	58	7	40 84
3943 nitrobenzene										
1. ug/l		N.D.		90	75	19	76	80	5	61 113





LLI Sample No. 2946092

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Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
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SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3944	isophorone										
1.	ug/l	N.D.		92	82	12	78	81	3	66	113
3926	2-nitrophenol										
1.	ug/l	N.D.		88	82	8	85	89	5	67	104
3927	2,4-dimethylphenol										
1.	ug/l	N.D.		81	76	6	78	80	2	52	99
3945	bis (2-chloroethoxy) methane										
1.	ug/l	N.D.		86	76	12	73	75	2	64	103
3928	2,4-dichlorophenol										
1.	ug/l	N.D.		86	81	6	82	86	5	65	98
3946	1,2,4-trichlorobenzene										
1.	ug/l	N.D.		85	68	22	65	70	8	52	93
3947	naphthalene										
97.	ug/l	N.D.		82	66	22	67	72	8	60	97
3871	4-chloroaniline										
1.	ug/l	N.D.		81	74	9	55	54	2	34	101
3948	hexachlorobutadiene										
2.	ug/l	N.D.		80	65	21	53	59	10	24	86
	4-chloro-3-methylphenol										
1.	ug/l	N.D.		88	83	6	84	87	3	60	111
3905	2-methylnaphthalene										
97.	ug/l	N.D.		84	68	21	67	72	8	62	98
3949	hexachlorocyclopentadiene										
5.	ug/l	N.D.		71	60	17	51	56	9	17	80
3930	2,4,6-trichlorophenol										
2.	ug/l	N.D.		88	86	2	86	90	5	66	105
3922	2,4,5-trichlorophenol										
2.	ug/l	N.D.		92	88	4	87	91	4	67	103
3950	2-chloronaphthalene										
1.	ug/l	N.D.		87	73	18	69	76	9	61	103
3907	2-nitroaniline										
2.	ug/l	N.D.		73	69	6	63	63	0	58	112
3952	dimethyl phthalate										
2.	ug/l	N.D.		68	68	1	43	35	20	1	90
3951	acenaphthylene										
1.	ug/l	N.D.		80	70	14	65	70	8	64	100
4679 TCL Semivolatiles cont'd		Batch: 98168WAB026									
3908	3-nitroaniline										
2.	ug/l	N.D.		73	68	6	51	50	3	40	108
3954	acenaphthene										
97.	ug/l	N.D.		82	71	15	68	72	6	61	100
3931	2,4-dinitrophenol										
15.	ug/l	N.D.		85	86	1	87	87	1	25	124
3932	4-nitrophenol										
10.	ug/l	N.D.		45	48	6	46	45	1	3	83
3879	dibenzofuran										
97.	ug/l	N.D.		84	74	13	69	73	6	67	99





L/LI Sample No. 2946092

GEO-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW HIGH
3955	2,4-dinitrotoluene									
1.	ug/l	N.D.		93	87	6	80	81	1	64 112
3953	2,6-dinitrotoluene									
2.	ug/l	N.D.		95	86	9				113
3958	diethyl phthalate									
2.	ug/l	N.D.		83	78	6				99
3957	4-chlorophenyl phenyl ether									
1.	ug/l	N.D.		90	80	12				104
3956	fluorene									
97.	ug/l	N.D.		87	78	11	73	75	4	61 108
3909	4-nitroaniline									
2.	ug/l	N.D.		83	78	6	73	70	4	55 116
3933	4,6-dinitro-2-methylphenol									
5.	ug/l	N.D.		87	83	4	83	88	6	43 120
3960	N-nitrosodiphenylamine									
1.	ug/l	N.D.		86	79	8	72	74	2	64 103
3961	4-bromophenyl phenyl ether									
2.	ug/l	N.D.		90	82	9	75	78	4	69 102
	hexachlorobenzene									
2.	ug/l	N.D.		96	88	10	81	83	2	62 109
3934	pentachlorophenol									
3.	ug/l	N.D.		91	89	3	88	91	4	46 114
3963	phenanthrene									
97.	ug/l	N.D.		85	78	9	73	74	1	68 102
3964	anthracene									
1.	ug/l	N.D.		89	80	10	75	76	1	66 101
4684	carbazole									
97.	ug/l	N.D.		87	80	9	73	74	2	66 110
3965	di-n-butyl phthalate									
2.	ug/l	N.D.		88	81	8	74	74	1	61 105
3966	fluoranthene									
1.	ug/l	N.D.		90	81	10	76	77	1	66 106
3967	pyrene									
1.	ug/l	N.D.		88	82	7	78	78	0	58 112
3969	butyl benzyl phthalate									
2.	ug/l	5. J ug/l		85	78	8	71	71	0	48 105
3972	3,3'-dichlorobenzidine									
2.	ug/l	N.D.		72	67	7	53	52	2	37 104
3970	benzo (a) anthracene									
1.	ug/l	N.D.		86	81	6	76	76	0	69 101
3973	bis (2-ethylhexyl) phthalate									
2.	ug/l	N.D.		83	74	12	75	75	0	64 113
3971	chrysene									
1.	ug/l	N.D.		85	78	8	74	74	0	67 101
3974	di-n-octyl phthalate									
2.	ug/l	N.D.		95	84	12	83	84	1	59 118
3975	benzo (b) fluoranthene									
1.	ug/l	N.D.		87	78	11	73	73	0	64 101
3976	benzo (k) fluoranthene									
1.	ug/l	N.D.		90	84	7	79	80	2	67 105



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LLI Sample No. 2946092

GEO-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3977	benzo (a) pyrene										
1.	ug/l	N.D.		88	82	8	76	77	1	65	101
3978	indeno (1,2,3-cd) pyrene										
1.	ug/l	N.D.		87	80	8	76	76	1	59	111
3979	dibenz (a,h) anthracene										
1.	ug/l	N.D.		89	81	10	77	77	0	66	117
3980	benzo (ghi) perylene										
1.	ug/l	N.D.		87	79	10	75	76	0	55	115



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LLI Sample No. 2946092

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Group No. 619183
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flphenol	54	7	74
	Phenol-d6	37	25	88
	2,4,6-TBP	108	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	96	47	114
	2-Fbiphenyl	91	51	106
	Tphenylid14	82	37	119
6291 TCL Volatiles	DBFM	112	86	118
	d4-1,2-DCA	94	80	120
	d8-toluene	92	88	110
	4-BFB	97	86	115

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