

Appendix F

**Laboratory Analytical Reports
(Volume 1 of 2)**

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



LLI Sample No. WW 2932455

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

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

Discard: 7/19/98

CPT-13-GW Matrix Spike Grab Water Sample

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

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
4678	TCL Semivolatiles		See Page 2
4679	TCL Semivolatiles cont'd		See Page 3

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
21:18:18 D 0003 8 129915 615946
050 0.00 00029700 ASR000

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Lancaster, PA 17605-2425
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 2932455
 Collected: 5/20/98 at 14:00 by RZ
 Submitted: 5/21/98 Reported: 6/18/98
 Discard: 7/19/98

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

CPT-13-GW Matrix Spike Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS
 CPT13 SDG#: HMS01-06MS

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	46.	1.	ug/l
3936	bis (2-chloroethyl) ether	91.	1.	ug/l
3924	2-chlorophenol	88.	1.	ug/l
3937	1,3-dichlorobenzene	84.	1.	ug/l
3938	1,4-dichlorobenzene	84.	1.	ug/l
3939	1,2-dichlorobenzene	89.	1.	ug/l
4680	2-methylphenol	83.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	100.	2.	ug/l
4682	4-methylphenol	71.	3.	ug/l
3942	N-nitrosodi-n-propylamine	93.	1.	ug/l
3941	hexachloroethane	80.	1.	ug/l
3943	nitrobenzene	93.	1.	ug/l
3944	isophorone	98.	1.	ug/l
3926	2-nitrophenol	92.	1.	ug/l
3927	2,4-dimethylphenol	73.	1.	ug/l
3945	bis (2-chloroethoxy) methane	91.	1.	ug/l
3928	2,4-dichlorophenol	87.	1.	ug/l
3946	1,2,4-trichlorobenzene	87.	1.	ug/l
3947	naphthalene	98.	1.	ug/l
3871	4-chloroaniline	78.	1.	ug/l
3948	hexachlorobutadiene	82.	2.	ug/l
3929	4-chloro-3-methylphenol	89.	1.	ug/l
3905	2-methylnaphthalene	89.	1.	ug/l
3949	hexachlorocyclopentadiene	120.	5.	ug/l
3930	2,4,6-trichlorophenol	88.	2.	ug/l
3922	2,4,5-trichlorophenol	92.	2.	ug/l
3950	2-chloronaphthalene	89.	1.	ug/l
3907	2-nitroaniline	99.	2.	ug/l
3952	dimethyl phthalate	52.	2.	ug/l
3951	acenaphthylene	86.	2.	ug/l

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

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Respectfully Submitted
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Oklahoma City OK 73125

P.O. GULF STATES CREOSOT
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	85.	2.	ug/l
3954	acenaphthene	87.	1.	ug/l
3931	2,4-dinitrophenol	64.	15.	ug/l
3932	4-nitrophenol	45.	J 10.	ug/l
3879	dibenzofuran	89.	1.	ug/l
3955	2,4-dinitrotoluene	93.	1.	ug/l
3953	2,6-dinitrotoluene	100.	2.	ug/l
3958	diethyl phthalate	78.	2.	ug/l
3957	4-chlorophenyl phenyl ether	83.	1.	ug/l
3956	fluorene	94.	1.	ug/l
3909	4-nitroaniline	98.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	73.	5.	ug/l
3960	N-nitrosodiphenylamine	83.	1.	ug/l
3961	4-bromophenyl phenyl ether	83.	2.	ug/l
3962	hexachlorobenzene	84.	2.	ug/l
3934	pentachlorophenol	66.	3.	ug/l
3963	phenanthrene	89.	1.	ug/l
3964	anthracene	87.	1.	ug/l
4684	carbazole	96.	1.	ug/l
3965	di-n-butyl phthalate	88.	2.	ug/l
3966	fluoranthene	85.	1.	ug/l
3967	pyrene	89.	1.	ug/l
3969	butyl benzyl phthalate	89.	2.	ug/l
3972	3,3'-dichlorobenzidine	70.	5.	ug/l
3970	benzo (a) anthracene	87.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	86.	2.	ug/l
3971	chrysene	80.	1.	ug/l
3974	di-n-octyl phthalate	100.	2.	ug/l
3975	benzo (b) fluoranthene	88.	1.	ug/l
3976	benzo (k) fluoranthene	86.	1.	ug/l
3977	benzo (a) pyrene	90.	1.	ug/l
3978	indeno (1,2,3-cd) pyrene	86.	1.	ug/l
3979	dibenz (a,h) anthracene	86.	1.	ug/l
3980	benzo (ghi) perylene	84.	1.	ug/l

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Group Leader, GC/MS SVOA





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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.

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See reverse side for explanation of symbols and abbreviations.





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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL 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 1904	David J. Evans
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/03/98 1904	David J. Evans



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LLI Sample No. 2932455
 CPT-13-GW Matrix Spike 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
4681	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. 2932455
 CPT-13-GW Matrix Spike 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									

3908	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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See reverse side for explanation of symbols and abbreviations.

2216 Rev 8/2/97





LLI Sample No. 2932455
 CPT-13-GW Matrix Spike 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
3973	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 1-1-97





LLI Sample No. 2932455
 CPT-13-GW Matrix Spike Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
 Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	56	7	74
	Pheno1-d6	40	25	88
	2,4,6-TBP	83	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	96	47	114
	2-Fbiphny1	88	51	106
	Tpheny1d14	77	37	119

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

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Discard: 7/19/98

CPT-13-GW Matrix Spike Dup. Grab Water Sample

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

Account No: 07802
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Ref.

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

1 COPY TO 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
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050 0.00 00029700 ASR000



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P.O. GULF STATES CREOSOT
 Re1.

CPT-13-GW Matrix Spike Dup. Grab Water Sample

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

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION	LIMIT UNITS
TCL Semivolatiles				
3925	phenol	47.	1.	ug/l
3936	bis (2-chloroethyl) ether	88.	1.	ug/l
3924	2-chlorophenol	88.	1.	ug/l
3937	1,3-dichlorobenzene	80.	1.	ug/l
3938	1,4-dichlorobenzene	81.	1.	ug/l
3939	1,2-dichlorobenzene	85.	1.	ug/l
4680	2-methylphenol	84.	1.	ug/l
4681	2,2'-oxybis (1-chloropropane)	100.	2.	ug/l
4682	4-methylphenol	74.	3.	ug/l
3942	N-nitrosodi-n-propylamine	88.	1.	ug/l
3941	hexachloroethane	78.	1.	ug/l
3943	nitrobenzene	89.	1.	ug/l
3944	isophorone	95.	1.	ug/l
3926	2-nitrophenol	90.	1.	ug/l
3927	2,4-dimethylphenol	74.	1.	ug/l
3945	bis (2-chloroethoxy) methane	88.	1.	ug/l
3928	2,4-dichlorophenol	55.	1.	ug/l
3946	1,2,4-trichlorobenzene	84.	1.	ug/l
3947	naphthalene	100.	1.	ug/l
3871	4-chloroaniline	69.	1.	ug/l
3948	hexachlorobutadiene	79.	2.	ug/l
3929	4-chloro-3-methylphenol	88.	1.	ug/l
3905	2-methylnaphthalene	86.	1.	ug/l
3949	hexachlorocyclopentadiene	110.	5.	ug/l
3930	2,4,6-trichlorophenol	86.	2.	ug/l
3922	2,4,5-trichlorophenol	89.	2.	ug/l
3950	2-chloronaphthalene	84.	1.	ug/l
3907	2-nitroaniline	97.	2.	ug/l
3952	dimethyl phthalate	45.	2.	ug/l
3951	acenaphthylene	83.	2.	ug/l

Questions? Contact your Client Services Representative
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Collected: 5/20/98 at 14:00 by RZ

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

Discard: 7/19/98

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

P.O. GULF STATES CREOSOT
 Ref.

CPT-13-GW Matrix Spike Dup. Grab Water Sample

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

AS RECEIVED

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	
			DETECTION	LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	84.	2.	ug/l
3954	acenaphthene	85.	1.	ug/l
3931	2,4-dinitrophenol	66.	15.	ug/l
3932	4-nitrophenol	47.	J 10.	ug/l
3879	dibenzofuran	87.	1.	ug/l
3955	2,4-dinitrotoluene	90.	1.	ug/l
3953	2,6-dinitrotoluene	99.	2.	ug/l
3958	diethyl phthalate	73.	2.	ug/l
3957	4-chlorophenyl phenyl ether	80.	1.	ug/l
3956	fluorene	92.	1.	ug/l
3909	4-nitroaniline	90.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	72.	5.	ug/l
3960	N-nitrosodiphenylamine	81.	1.	ug/l
3961	4-bromophenyl phenyl ether	81.	2.	ug/l
3962	hexachlorobenzene	82.	2.	ug/l
3934	pentachlorophenol	68.	3.	ug/l
3963	phenanthrene	90.	1.	ug/l
3964	anthracene	84.	1.	ug/l
4684	carbazole	94.	1.	ug/l
3965	di-n-butyl phthalate	85.	2.	ug/l
3966	fluoranthene	82.	1.	ug/l
3967	pyrene	88.	1.	ug/l
3969	butyl benzyl phthalate	84.	2.	ug/l
3972	3,3'-dichlorobenzidine	71.	5.	ug/l
3970	benzo (a) anthracene	84.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	81.	2.	ug/l
3971	chrysene	78.	1.	ug/l
3974	di-n-octyl phthalate	94.	2.	ug/l
3975	benzo (b) fluoranthene	87.	1.	ug/l
3976	benzo (k) fluoranthene	84.	1.	ug/l
3977	benzo (a) pyrene	88.	1.	ug/l
3978	indeno (1,2,3-cd) pyrene	86.	1.	ug/l
3979	dibenz (a,h) anthracene	84.	1.	ug/l
3980	benzo (ghi) perylene	81.	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

MEMBER
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 Lancaster Laboratories
 2425 New Holland Pike
 PO Box 12425
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 717-656-2300 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations.

2216 Rev 3/4/97





LLI Sample No. WW 2932456

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

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

Discard: 7/19/98

CPT-13-GW Matrix Spike Dup. Grab Water Sample

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

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

See reverse side for explanation of symbols and abbreviations.

2215 Rev 8/94 17





LLI Sample No. WW 2932456

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 Matrix Spike Dup. Grab Water Sample

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

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 1956	David J. Evans
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/03/98 1956	David J. Evans



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LLI Sample No. 2932456
 CPT-13-GW Matrix Spike Dup. 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
4681	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.

2016 Rev. 8/2/97





LLI Sample No. 2932456
 CPT-13-GW Matrix Spike Dup. 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									

3908	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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See reverse side for explanation of symbols and abbreviations

221c Rev 5/4/97





LLI Sample No. 2932456
 CPT-13-GW Matrix Spike Dup. 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
3973	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. 8/93





LLI Sample No. 2932456
 CPT-13-GW Matrix Spike Dup. 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-Flpheno1	58	7 74
		Pheno1-d6	42	25 88
		2,4,6-TBP	80	34 125
4679 TCL Semivolatiles cont'd		Nitrobz-d5	91	47 114
		2-Fbiphnyl	82	51 106
		Tpheny1d14	70	37 119



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. WW 2934155

Collected: 5/21/98 at 15:35 by ROC

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

Discard: 7/10/98

RB-01-5/98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPTRB SDG#: HMS01-11RB

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	
RESULTS	METHOD 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
 07:50:10 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





LLI Sample No. WW 2934155

Collected: 5/21/98 at 15:35 by ROC

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

Discard: 7/10/98

RB-01-5/98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPTRB SDG#: HMS01-11RB

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		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	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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717-656-2300 Fax: 717-656-2681

Respectfully Submitted
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Group Leader, GC/MS SVOA





LLI Sample No. WW 2934155

Collected: 5/21/98 at 15:35 by ROC

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

Discard: 7/10/98

RB-01-5/98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPTRB SDG#: HMS01-11RB

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 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	N.D.	0.9	ug/l
3955	2,4-dinitrotoluene	N.D.	0.9	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.	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	N.D.	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	6.	J	2.
3971	chrysene	N.D.	0.9	ug/l
3974	di-n-octyl phthalate	3.	J	2.
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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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 2934155

Collected: 5/21/98 at 15:35 by ROC

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

Discard: 7/10/98

RB-01-5/98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPTRB SDG#: HMS01-11RB

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

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

See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8.1.97





LLI Sample No. WW 2934155

Collected: 05/21/98 at 15:35 by ROC

Submitted: 05/23/98

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

RB-01-5/98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI
CPTRB SDG#: HMS01-11RB

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	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 0636	Linda M. Hartenstine
4679	TCL Semivolatiles cont'd	SW-846 8270C	1		06/04/98 0636	Linda M. Hartenstine



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2934155
 RB-01-5/98 Rinseate Blank 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	pheno										
	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-chloropheno										
	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-methylpheno										
	0.9 ug/l	N.D.		83	84	1	85	81	5	55	96
4681	2,2'-oxybis (1-chloropropane)										
	2. ug/l	N.D.		103	100	3	92	89	3	43	118
4682	4-methylpheno										
	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-dimethylpheno										
	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-dichloropheno										
	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-methylpheno										
	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

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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2934155
 RB-01-5/98 Rinseate Blank 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-trichloropheno										
	2. ug/l	N.D.		88	86	3	90	89	1	66	105
3922	2,4,5-trichloropheno										
	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									

3908	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



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See reverse side for explanation of symbols and abbreviations.

2016 Rev. 6/24/97





LLI Sample No. 2934155
 RB-01-5/98 Rinseate Blank 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
3973	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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See reverse side for explanation of symbols and abbreviations.

2216 Rev 8/09





LLI Sample No. 2934155
RB-01-5/98 Rinseate Blank Grab Water Sample
Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	52	7	74
	Pheno1-d6	36	25	88
	2,4,6-TBP	75	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	84	47	114
	2-Fbiphny1	76	51	106
	Tpheny1d14	69	37	119



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See reverse side for explanation of symbols and abbreviations.

2210 Rev. 3/4/97





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.

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
21:09:16 D 0003 8 129915 615946
050 0.00 00029700 ASR000

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





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.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	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

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 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.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	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

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 SVOA





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.

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.

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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LABORATORY CHRONICLE

Page: 5 of 9

LLI Sample No. WW 2932449

Collected: 05/20/98 at 08:50 by RZ

Submitted: 05/21/98

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

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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See reverse side for explanation of symbols and abbreviations.

2216 Rev 8/4/97





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	pheno1										
	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-chloropheno1										
	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-methylpheno1										
	1. ug/l	N.D.		83	84	1	85	81	5	55	96
4681	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										
	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-dimethylpheno1										
	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-dichloropheno1										
	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										
	95. 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-methylpheno1										
	1. 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



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

2216 Rev. 8/4/97





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
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									

3908	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



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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
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
3973	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. 2932449
CPT-07-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			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-Fbiphny1	86	51	106
	Tphenyld14	68	37	119



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2216 Rev 9/4/97





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.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

4678 TCL Semivolatiles

See Page 2

4679 TCL Semivolatiles cont'd

See Page 3

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
21:10:45 D 0003 8 129915 615946
050 0.00 00029700 ASR000



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





LLI Sample No. WW 2932450

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CPT08 SDG#: HMS01-02

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		DETECTION LIMIT	UNITS
		RESULTS	METHOD		
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
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	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

MEMBER
ACIL
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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
 Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	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
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	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

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.

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





LLI Sample No. WW 2932450

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

Submitted: 05/21/98

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	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 2342	Linda M. Hartenstine
4679	TCL Semivolatiles cont'd	SW-846 8270C	1		06/03/98 2342	Linda M. Hartenstine



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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	
-----		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	
4681	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. 3-4-97





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									

3908	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



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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
3973	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 7/11/01 047





LLI Sample No. 2932450

CPT-08-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	50	7 74
		Phenol-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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2215 (Rev. 8/97)





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	
		RESULTS	METHOD DETECTION LIMIT UNITS
4678	TCL Semivolatiles		See Page 2
4679	TCL Semivolatiles cont'd		See Page 3

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 21:12:14 D 0003 8 129915 615946
 050 0.00 00029700 ASR000



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





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		
		RESULTS	METHOD 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
Kay G. Hower at (717) 656-2300

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





LLI Sample No. 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		
		RESULTS	METHOD	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

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





LLI Sample No. WW 2932451

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

Submitted: 05/21/98

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	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 0820	Linda M. Hartenstine
4679	TCL Semivolatiles cont'd	SW-846 8270C	1		06/04/98 0820	Linda M. Hartenstine



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L/LI 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	ECS LOW	LIMITS HIGH
-----		Batch: 98146WAE026									
4678	TCL Semivolatiles	-----									
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
4681	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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See reverse side for explanation of symbols and abbreviations





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
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									

3908	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



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/14/97





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
3973	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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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8-01





LLI Sample No. 2932451

CPT-09-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			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
	Tphenyl14	59	37	119



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2216 Rev. 8/07





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
Ref.

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
 07:44:36 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





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
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenoI	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenoI	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-methylphenoI	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenoI	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-dimethylphenoI	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenoI	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-methylphenoI	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenoI	N.D.	2.	ug/l
3922	2,4,5-trichlorophenoI	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 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 - Mattiesburg, MI

CPT10 SDG#: HMS01-07

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

P.O. GULF STATES CREOSOT
 Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	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

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

MEMBER

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





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
Re1.

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



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





LLI Sample No. WW 2934151

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

Submitted: 05/23/98

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL 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 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 LOW	LCS HIGH	
-----		Batch: 98146WAE026										
4678	TCL Semivolatiles	-----										
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	
4681	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.

2210 Rev 8/10/97





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	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									

3908	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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2216 Rev 8/2007





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	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
3973	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. 3/2/97





LLI Sample No. 2934151

CPT-10-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			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
	Tphenyl14	68	37	119



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 1-03





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
Ref.

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

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 21:13:49 D 0003 8 129915 615946
 050 0.00 00029700 ASR000

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

MEMBER
ACIL
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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8-2-97





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
 Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	8.	J	1. ug/l
3936	bis (2-chloroethyl) ether	N.D.		1. ug/l
3924	2-chlorophenol	N.D.		1. ug/l
3937	1,3-dichlorobenzene	N.D.		1. ug/l
3938	1,4-dichlorobenzene	N.D.		1. ug/l
3939	1,2-dichlorobenzene	N.D.		1. ug/l
4680	2-methylphenol	1.	J	1. ug/l
4681	2,2'-oxybis (1-chloropropane)	N.D.		2. ug/l
4682	4-methylphenol	9.	J	3. ug/l
3942	N-nitrosodi-n-propylamine	N.D.		1. ug/l
3941	hexachloroethane	N.D.		1. ug/l
3943	nitrobenzene	N.D.		1. ug/l
3944	isophorone	N.D.		1. ug/l
3926	2-nitrophenol	N.D.		1. ug/l
3927	2,4-dimethylphenol	2.	J	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	120.		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	23.		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

MEMBER

 Lancaster Laboratories
 2425 New Holland Pike
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 717-656-2300 Fax: 717-656-2681

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





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		
		RESULTS	METHOD	DETECTION LIMIT UNITS
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
at (717) 656-2300



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



**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





LLI Sample No. WW 2932452

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

Submitted: 05/21/98

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

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 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	
-----		Batch: 98146WAE026										
4678 TCL Semivolatiles												
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	
4681	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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2216 Rev. 10/97





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									

3908	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										
	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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See reverse side for explanation of symbols and abbreviations.





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
3973	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. 8/2/97





LLI Sample No. **2932452**
CPT-11-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 615946
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flphenol	39	7	74
	Phenol-d6	35	25	88
	2,4,6-TBP	48	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	79	47	114
	2-Fbiphenyl	73	51	106
	Tphenylid14	49	37	119



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2216 Rev 8/2007





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

P.O. GULF STATES CREOSOT
Rel.

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

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 21:15:17 D 0003 8 129915 615946
 050 0.00 00029700 ASR000



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Respectfully Submitted
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 Group Leader, GC/MS SVOA





LLI Sample No. WW 2932453

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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

P.O. GULF STATES CREOSOT
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		METHOD	DETECTION LIMIT UNITS
		RESULTS			
TCL Semivolatiles					
3925	pheno1	3.	J	0.9	ug/l
3936	bis (2-chloroethyl) ether	N.D.		0.9	ug/l
3924	2-chloropheno1	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-methylpheno1	N.D.		0.9	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.		2.	ug/l
4682	4-methylpheno1	N.D.		3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.		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-dimethylpheno1	N.D.		0.9	ug/l
3945	bis (2-chloroethoxy) methane	N.D.		0.9	ug/l
3928	2,4-dichloropheno1	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-methylpheno1	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-trichloropheno1	N.D.		2.	ug/l
3922	2,4,5-trichloropheno1	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

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





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

P.O. GULF STATES CREOSOT
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	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

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 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

P.O. GULF STATES CREOSOT
Re1.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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

Questions? Contact your Client Services Representative
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 2932453

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

Submitted: 05/21/98

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

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 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										
	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
4681	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										
	5. 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										
	0.9 ug/l	N.D.		87	84	3	76	73	4	62	98



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2216 Rev. 8/2007





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									

3908	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



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2216 Rev 8/4/91





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
3973	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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See reverse side for explanation of symbols and abbreviations.

2215 2-9-01





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-F1pheno1	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
	Tphenyl14	55	37	119



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2216 Rev. 3/1/99





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

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

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
21:16:45 D 0003 8 129915 615946
050 0.00 00029700 ASR000



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





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.

CAT NO.	ANALYSIS NAME	AS RECEIVED		METHOD	
		RESULTS		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



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





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.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	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

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





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



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Group Leader, GC/MS SVOA





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	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 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
4681	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



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





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
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									

3908	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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2215 Rev. 8.4.97





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
3973	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. 8/2/97





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	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	57	7	74
	Pheno1-d6	40	25	88
	2,4,6-TBP	81	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	90	47	114
	2-Fbiphnyl	82	51	106
	Tphenyld14	72	37	119



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2216 Rev. 6/24/95





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
Re1.

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

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 07:45:51 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





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

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

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	1.	J	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

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

MEMBER

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2216 Rev. 3-4-97





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
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City OK 73125

P.O. GULF STATES CREOSOT
Ref.

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

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 2934152

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

Submitted: 05/23/98

Account No: 07802
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 Oklahoma City OK 73125

CPT-18-GW Grab Water Sample

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	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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2215 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	LCS HIGH	
-----		Batch: 98146WAE026										

4678	TCL Semivolatiles											
3925	pheno1											
	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-chloropheno1											
	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-methylpheno1											
	1. ug/l	N.D.		83	84	1	85	81	5	55	96	
4681	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											
	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-dimethylpheno1											
	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-dichloropheno1											
	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-methylpheno1											
	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	





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
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									

3908	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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2216 Rev. 4/01/97





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	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
3973	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.

2215 Rev. 11/97





LLI Sample No. 2934152

CPT-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	49	7	74
	Pheno1-d6	36	25	88
	2,4,6-TBP	68	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	88	47	114
	2-Fbiphny1	80	51	106
	Tphenyld14	70	37	119



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2216 Rev. 8.4.97





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	
		RESULTS	METHOD DETECTION LIMIT UNITS
4678	TCL Semivolatiles		See Page 2
4679	TCL Semivolatiles cont'd		See Page 3

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
07:47:17 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





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.

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

CAT
NO. ANALYSIS NAME

TCL Semivolatiles

CAT NO.	ANALYSIS NAME	RESULTS	METHOD	DETECTION LIMIT UNITS
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
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA

See reverse side for explanation of symbols and abbreviations.





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		
		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
at (717) 656-2300



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

See reverse side for explanation of symbols and abbreviations.

2016 Rev. 7/10/00





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.

AS RECEIVED

CAT
NO. ANALYSIS NAME

RESULTS METHOD
DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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

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



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Respectfully Submitted
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Group Leader, GC/MS SVOA

See reverse side for explanation of symbols and abbreviations.





LLI Sample No. WW 2934153

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

Submitted: 05/23/98

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL 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 0453	Linda M. Hartenstine
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/04/98 0453	Linda M. Hartenstine



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2216 Rev 8/97





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
4681	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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2216 Rev. 8/4/97





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									

3908	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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See reverse side for explanation of symbols and abbreviations.





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
3973	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 T W 8 4 97





LLI Sample No. 2934153

CPT-21-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			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
	Tphenyl14	64	37	119



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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.

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
07:48:43 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





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.

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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Lancaster, PA 17605-2425
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





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.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	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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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





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.

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





LLI Sample No. WW 2934154

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

Submitted: 05/23/98

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

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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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	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
4681	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 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-methylphenol 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



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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

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									

3908	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



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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

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
3973	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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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2934154

CPT-22-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MI

Group No. 616297
Kerr-McGee Corporation

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	68	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	82	47	114
	2-Fbiphny1	74	51	106
	Tphenylid14	57	37	119



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2941671

Collected: 6/ 4/98 at 16:05 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-01 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD1-- SDG#: HMS02-01

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	15.1	0.080	% by wt.		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

1 COPY TO Kerr-McGee Corporation
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ATTN: Garet Van de Steeg, PhD
ATTN: Mr. David Upthegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
22:16:52 D 0003 12 129915 618146
863 0.00 00033420 ASR000



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

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





LLI Sample No. SW 2941671

Collected: 6/ 4/98 at 16:05 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-01 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD1-- SDG#: HMS02-01

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

P.O.
Rel.

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

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



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

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





LLI Sample No. SW 2941671

Collected: 6/ 4/98 at 16:05 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-01 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD1-- SDG#: HMS02-01

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION	LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	39.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	230.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	39.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	79.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	39.
3776	anthracene	N.D.	33.	ug/kg	N.D.	39.
4702	carbazole	N.D.	33.	ug/kg	N.D.	39.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3778	fluoranthene	75.	J 33.	ug/kg	89.	J 39.
1195	pyrene	96.	J 33.	ug/kg	110.	J 39.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	79.
3781	benzo (a) anthracene	52.	J 33.	ug/kg	62.	J 39.
3784	bis (2-ethylhexyl) phthalate	69.	J 67.	ug/kg	82.	J 79.
3782	chrysene	65.	J 33.	ug/kg	77.	J 39.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3786	benzo (b) fluoranthene	100.	J 33.	ug/kg	120.	J 39.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3788	benzo (a) pyrene	48.	J 33.	ug/kg	56.	J 39.
3789	indeno (1,2,3-cd) pyrene	42.	J 33.	ug/kg	49.	J 39.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	39.
3791	benzo (ghi) perylene	39.	J 33.	ug/kg	46.	J 39.

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



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





LLI Sample No. SW 2941671

Collected: 6/ 4/98 at 16:05 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-01 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

SD1-- SDG#: HMS02-01

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

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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

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

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



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See reverse side for explanation of symbols and abbreviations.

2216





LLI Sample No. SW 2941671

Collected: 06/04/98 at 16:05 by RLC

Submitted: 06/06/98

SD-01 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD1-- SOG#: HMS02-01

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	2	06/18/98 0930	Barbara A. Menold
4688	TCL Semivolatiles	SW-846 8270C	1	06/24/98 1858	David J. Evans
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/24/98 1858	David J. Evans
0111	Moisture	EPA 160.3 modified	1	06/10/98 1949	Patrick N. Ward



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2715 Rev. 6/97





LLI Sample No. 2941671

SD-01 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

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

4688	TCL Semivolatiles	Batch: 98169SLB026									

1185	phenol										
67.	ug/kg	N.D.		90	88	3	88			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		87	87	0	88			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		89	87	2	89			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		84	84	0	82			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	83	0	83			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		89	89	0	87			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		90	87	3	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		100	98	2	97			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		89	87	2	92			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		91	88	2	89			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		81	83	3	84			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		91	91	1	97			56	110
3759	isophorone										
33.	ug/kg	N.D.		95	93	2	100			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		92	90	3	91			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	87	2	90			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	93			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		88	87	1	91			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		89	88	1	91			57	104
3761	naphthalene										
33.	ug/kg	N.D.		84	84	0	89			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		46	60	28	86			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	91	1	89			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		91	90	1	97			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	87	0	93			60	102



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

See reverse side for explanation of symbols and abbreviations

1115 2004.11.17





LLI Sample No. 2941671

SD-01 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		51	65	24	82			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		93	94	1	95			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		92	96	4	97			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		92	91	1	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		93	95	2	102			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		89	89	0	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	85	2	91			62	101

4689	TCL Semivolatiles cont'd	Batch: 98169SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		67	78	15	100			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	86	1	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		73	67	8	92			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		95	98	3	101			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	89	0	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		89	91	2	110			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		90	91	1	106			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		87	89	2	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		90	90	0	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		90	89	0	92			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	86	18	103			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		76	70	9	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		87	87	0	92			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		90	89	1	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		95	91	5	93			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		103	89	14	81			42	108



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See reverse side for explanation of symbols and abbreviations.

2216 04 11 14





LLI Sample No. 2941671

SD-01 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		91	89	2	94			62	107
3776	anthracene										
33.	ug/kg	N.D.		90	88	2	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		89	89	1	94			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		91	90	1	95			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		89	89	1	95			58	110
1195	pyrene										
33.	ug/kg	N.D.		90	85	5	102			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		92	88	4	103			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		31	47	40	90			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		89	86	3	99			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		84	83	1	104			8	158
3782	chrysene										
33.	ug/kg	N.D.		87	84	3	96			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		95	92	3	122			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		87	80	8	101			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		92	90	2	108			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		90	88	3	109			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		89	86	3	111			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		90	89	2	112			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		88	85	3	110			52	113
0111	Moisture										
0.080	% by wt.	* Batch: 981610199820003A	9				100	100	0	99	101



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

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2941671

SD-01 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	88	39	108
	2-FIphenol	91	35	108
	2,4,6-TBP	95	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	93	31	126
	2-Fbiphenyl	92	45	113
	Tphenyl14	88	37	130



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2016-09-14 11:21





LLI Sample No. SW 2941672

Collected: 6/ 4/98 at 16:35 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-02 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD2-- SDG#: HMS02-02

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	34.2		0.080	1/2 by wt.	
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
22:18:35 D 0003 12 129915 618146
863 0.00 00033420 ASR000



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





LLI Sample No. SW 2941672

Collected: 6/ 4/98 at 16:35 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-02 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD2-- SDG#: HMS02-02

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

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles						
1185	phenol	N.D.	670.	ug/kg	N.D.	1,000.
3753	bis (2-chloroethyl) ether	N.D.	330.	ug/kg	N.D.	510.
1186	2-chlorophenol	N.D.	330.	ug/kg	N.D.	510.
3754	1,3-dichlorobenzene	N.D.	330.	ug/kg	N.D.	510.
1187	1,4-dichlorobenzene	N.D.	330.	ug/kg	N.D.	510.
3755	1,2-dichlorobenzene	N.D.	330.	ug/kg	N.D.	510.
4690	2-methylphenol	N.D.	330.	ug/kg	N.D.	510.
4691	2,2'-oxybis (1-chloropropane)	N.D.	330.	ug/kg	N.D.	510.
4692	3- and 4-methylphenol	N.D.	670.	ug/kg	N.D.	510.
1188	N-nitrosodi-n-propylamine	N.D.	330.	ug/kg	N.D.	1,000.
3757	hexachloroethane	N.D.	330.	ug/kg	N.D.	510.
3758	nitrobenzene	N.D.	330.	ug/kg	N.D.	510.
3759	isophorone	N.D.	330.	ug/kg	N.D.	510.
3746	2-nitrophenol	N.D.	670.	ug/kg	N.D.	1,000.
3747	2,4-dimethylphenol	960.	J 670.	ug/kg	1,500.	J1,000.
3760	bis (2-chloroethoxy) methane	N.D.	670.	ug/kg	N.D.	1,000.
3748	2,4-dichlorophenol	N.D.	670.	ug/kg	N.D.	1,000.
1189	1,2,4-trichlorobenzene	N.D.	330.	ug/kg	N.D.	510.
3761	naphthalene	2,000,000.	17,000.	ug/kg	3,000,000.	25,000.
4693	4-chloroaniline	N.D.	330.	ug/kg	N.D.	510.
3762	hexachlorobutadiene	N.D.	670.	ug/kg	N.D.	1,000.
1190	4-chloro-3-methylphenol	N.D.	670.	ug/kg	N.D.	1,000.
4694	2-methylnaphthalene	960,000.	17,000.	ug/kg	1,500,000.	25,000.
3763	hexachlorocyclopentadiene	N.D.	1,700.	ug/kg	N.D.	2,500.
3749	2,4,6-trichlorophenol	N.D.	670.	ug/kg	N.D.	1,000.
4695	2,4,5-trichlorophenol	N.D.	670.	ug/kg	N.D.	1,000.
3764	2-chloronaphthalene	N.D.	330.	ug/kg	N.D.	510.
4696	2-nitroaniline	N.D.	330.	ug/kg	N.D.	510.
3766	dimethyl phthalate	N.D.	670.	ug/kg	N.D.	1,000.
3765	acenaphthylene	23,000.	330.	ug/kg	35,000.	510.

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



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

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





LLI Sample No. SW 2941672

Collected: 6/ 4/98 at 16:35 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-02 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD2-- SDG#: HMS02-02

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

P.O.
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	670.	ug/kg	N.D.	1,000.
1191	acenaphthene	660,000.	17,000.	ug/kg	1,000,000.	25,000.
3750	2,4-dinitrophenol	N.D.	1,900.	ug/kg	N.D.	3,000.
1192	4-nitrophenol	N.D.	1,700.	ug/kg	N.D.	2,500.
4698	dibenzofuran	620,000.	17,000.	ug/kg	940,000.	25,000.
1193	2,4-dinitrotoluene	N.D.	670.	ug/kg	N.D.	1,000.
3767	2,6-dinitrotoluene	N.D.	330.	ug/kg	N.D.	510.
3770	diethyl phthalate	N.D.	670.	ug/kg	N.D.	1,000.
3769	4-chlorophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	510.
3768	fluorene	780,000.	17,000.	ug/kg	1,200,000.	25,000.
4700	4-nitroaniline	N.D.	670.	ug/kg	N.D.	1,000.
3751	4,6-dinitro-2-methylphenol	N.D.	1,700.	ug/kg	N.D.	2,500.
3772	N-nitrosodiphenylamine	N.D.	330.	ug/kg	N.D.	510.
3773	4-bromophenyl phenyl ether	N.D.	670.	ug/kg	N.D.	1,000.
3774	hexachlorobenzene	N.D.	330.	ug/kg	N.D.	510.
1194	pentachlorophenol	N.D.	1,700.	ug/kg	N.D.	2,500.
3775	phenanthrene	2,100,000.	17,000.	ug/kg	3,200,000.	25,000.
3776	anthracene	1,300,000.	17,000.	ug/kg	1,900,000.	25,000.
4702	carbazole	390,000.	17,000.	ug/kg	590,000.	25,000.
3777	di-n-butyl phthalate	N.D.	670.	ug/kg	N.D.	1,000.
3778	fluoranthene	1,100,000.	17,000.	ug/kg	1,600,000.	25,000.
1195	pyrene	690,000.	17,000.	ug/kg	1,000,000.	25,000.
3780	butyl benzyl phthalate	N.D.	670.	ug/kg	N.D.	1,000.
3783	3,3'-dichlorobenzidine	N.D.	670.	ug/kg	N.D.	1,000.
3781	benzo (a) anthracene	220,000.	17,000.	ug/kg	330,000.	25,000.
3784	bis (2-ethylhexyl) phthalate	N.D.	670.	ug/kg	N.D.	1,000.
3782	chrysene	190,000.	17,000.	ug/kg	290,000.	25,000.
3785	di-n-octyl phthalate	N.D.	670.	ug/kg	N.D.	1,000.
3786	benzo (b) fluoranthene	120,000.	J 17,000.	ug/kg	180,000.	J 25,000.
3787	benzo (k) fluoranthene	42,000.	330.	ug/kg	64,000.	510.
3788	benzo (a) pyrene	84,000.	J 17,000.	ug/kg	130,000.	J 25,000.
3789	indeno (1,2,3-cd) pyrene	31,000.	330.	ug/kg	47,000.	510.
3790	dibenz (a,h) anthracene	8,100.	330.	ug/kg	12,000.	510.
3791	benzo (ghi) perylene	24,000.	330.	ug/kg	36,000.	510.

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



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. SW 2941672

Collected: 6/ 4/98 at 16:35 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-02 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

SD2-- SDG#: HMS02-02

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT	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. The quantitation limits for the GC/MS semivolatiles compounds were raised due to the high concentration of target compounds.

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



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





LLI Sample No. SW 2941672

Collected: 06/04/98 at 16:35 by RLC

Submitted: 06/06/98

SD-02 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD2-- SDG#: HMS02-02

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

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS		ANALYST
				ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	2		06/18/98 0930	Barbara A. Menold
4688	TCL Semivolatiles	SW-846 8270C	1		06/25/98 1204	David J. Evans
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		06/25/98 1204	David J. Evans
0111	Moisture	EPA 160.3 modified	1		06/10/98 1949	Patrick N. Ward



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LLI Sample No. 2941672

SD-02 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4688 TCL Semivolatiles		Batch: 98169SLB026									
1185	phenol										
670.	ug/kg	N.D.		90	88	3	88			49	105
3753	bis (2-chloroethyl) ether										
330.	ug/kg	N.D.		87	87	0	88			53	109
1186	2-chlorophenol										
330.	ug/kg	N.D.		89	87	2	89			55	107
3754	1,3-dichlorobenzene										
330.	ug/kg	N.D.		84	84	0	82			53	103
1187	1,4-dichlorobenzene										
330.	ug/kg	N.D.		84	83	0	83			52	103
3755	1,2-dichlorobenzene										
330.	ug/kg	N.D.		89	89	0	87			56	107
4690	2-methylphenol										
330.	ug/kg	N.D.		90	87	3	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
330.	ug/kg	N.D.		100	98	2	97			38	117
4692	3- and 4-methylphenol										
670.	ug/kg	N.D.		89	87	2	92			48	116
1188	N-nitrosodi-n-propylamine										
330.	ug/kg	N.D.		91	88	2	89			50	124
3757	hexachloroethane										
330.	ug/kg	N.D.		81	83	3	84			52	108
3758	nitrobenzene										
330.	ug/kg	N.D.		91	91	1	97			56	110
3759	isophorone										
330.	ug/kg	N.D.		95	93	2	100			57	114
3746	2-nitrophenol										
670.	ug/kg	N.D.		92	90	3	91			59	107
3747	2,4-dimethylphenol										
670.	ug/kg	N.D.		88	87	2	90			39	108
3760	bis (2-chloroethoxy) methane										
670.	ug/kg	N.D.		86	85	1	93			56	103
3748	2,4-dichlorophenol										
670.	ug/kg	N.D.		88	87	1	91			59	100
1189	1,2,4-trichlorobenzene										
330.	ug/kg	N.D.		89	88	1	91			57	104
3761	naphthalene										
17,000.	ug/kg	N.D.		84	84	0	89			58	99
4693	4-chloroaniline										
330.	ug/kg	N.D.		46	60	28	86			1	102
3762	hexachlorobutadiene										
670.	ug/kg	N.D.		90	91	1	89			56	115
1190	4-chloro-3-methylphenol										
670.	ug/kg	N.D.		91	90	1	97			56	108
4694	2-methylnaphthalene										
17,000.	ug/kg	N.D.		87	87	0	93			60	102



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2215 Rev. 8.0.07





LLI Sample No. 2941672

SD-02 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
1,700.	ug/kg	N.D.		51	65	24	82			27	113
3749	2,4,6-trichlorophenol										
670.	ug/kg	N.D.		93	94	1	95			62	106
4695	2,4,5-trichlorophenol										
670.	ug/kg	N.D.		92	96	4	97			63	107
3764	2-chloronaphthalene										
330.	ug/kg	N.D.		92	91	1	97			60	106
4696	2-nitroaniline										
330.	ug/kg	N.D.		93	95	2	102			54	111
3766	dimethyl phthalate										
670.	ug/kg	N.D.		89	89	0	97			61	104
3765	acenaphthylene										
330.	ug/kg	N.D.		83	85	2	91			62	101

4689	TCL Semivolatiles cont'd	Batch: 98169SLB026									
4697	3-nitroaniline										
670.	ug/kg	N.D.		67	78	15	100			9	110
1191	acenaphthene										
17,000.	ug/kg	N.D.		87	86	1	89			61	100
3750	2,4-dinitrophenol										
1,900.	ug/kg	N.D.		73	67	8	92			29	117
1192	4-nitrophenol										
1,700.	ug/kg	N.D.		95	98	3	101			44	110
4698	dibenzofuran										
17,000.	ug/kg	N.D.		89	89	0	91			62	102
1193	2,4-dinitrotoluene										
670.	ug/kg	N.D.		89	91	2	110			58	113
3767	2,6-dinitrotoluene										
330.	ug/kg	N.D.		90	91	1	106			62	111
3770	diethyl phthalate										
670.	ug/kg	N.D.		87	89	2	96			59	104
3769	4-chlorophenyl phenyl ether										
330.	ug/kg	N.D.		90	90	0	92			52	110
3768	fluorene										
17,000.	ug/kg	N.D.		90	89	0	92			59	109
4700	4-nitroaniline										
670.	ug/kg	N.D.		72	86	18	103			37	120
3751	4,6-dinitro-2-methylphenol										
1,700.	ug/kg	N.D.		76	70	9	88			42	107
3772	N-nitrosodiphenylamine										
330.	ug/kg	N.D.		87	87	0	92			60	106
3773	4-bromophenyl phenyl ether										
670.	ug/kg	N.D.		90	89	1	89			61	110
3774	hexachlorobenzene										
330.	ug/kg	N.D.		95	91	5	93			52	123
1194	pentachlorophenol										
1,700.	ug/kg	N.D.		103	89	14	81			42	108



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See reverse side for explanation of symbols and abbreviations.

2215 REV 10/01





LLI Sample No. 2941672

SD-02 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
17,000.	ug/kg	N.D.		91	89	2	94			62	107
3776	anthracene										
17,000.	ug/kg	N.D.		90	88	2	96			62	105
4702	carbazole										
17,000.	ug/kg	N.D.		89	89	1	94			57	112
3777	di-n-butyl phthalate										
670.	ug/kg	N.D.		91	90	1	95			59	114
3778	fluoranthene										
17,000.	ug/kg	N.D.		89	89	1	95			58	110
1195	pyrene										
17,000.	ug/kg	N.D.		90	85	5	102			52	115
3780	butyl benzyl phthalate										
670.	ug/kg	N.D.		92	88	4	103			58	119
3783	3,3'-dichlorobenzidine										
670.	ug/kg	N.D.		31	47	40	90			15	94
3781	benzo (a) anthracene										
17,000.	ug/kg	N.D.		89	86	3	99			63	106
3784	bis (2-ethylhexyl) phthalate										
670.	ug/kg	N.D.		84	83	1	104			8	158
3782	chrysene										
17,000.	ug/kg	N.D.		87	84	3	96			60	107
3785	di-n-octyl phthalate										
670.	ug/kg	N.D.		95	92	3	122			54	127
3786	benzo (b) fluoranthene										
17,000.	ug/kg	N.D.		87	80	8	101			59	105
3787	benzo (k) fluoranthene										
330.	ug/kg	N.D.		92	90	2	108			63	108
3788	benzo (a) pyrene										
17,000.	ug/kg	N.D.		90	88	3	109			61	107
3789	indeno (1,2,3-cd) pyrene										
330.	ug/kg	N.D.		89	86	3	111			55	111
3790	dibenz (a,h) anthracene										
330.	ug/kg	N.D.		90	89	2	112			60	117
3791	benzo (ghi) perylene										
330.	ug/kg	N.D.		88	85	3	110			52	113
0111	Moisture										
0.080	% by wt.	* Batch: 981610199820003A	9				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations.

2210 04/17/01





LLI Sample No. **2941672**
SD-02 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	(5)	39	108
	2-F1pheno1	(5)	35	108
	2,4,6-TBP	(5)	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	(5)	31	126
	2-Fbiphnyl	(5)	45	113
	Tphenylid14	(5)	37	130

(5) Accurate surrogate recoveries could not be determined due to interferences or dilution necessary for this sample.

MEMBER
ACIL
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717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations



LLI Sample No. SW 2941673

Collected: 6/ 4/98 at 15:30 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-03 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

SD3-- SDG#: HMS02-03

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

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	21.9	0.080	% by wt.		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

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

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 22:20:00 D 0003 12 129915 618146
 863 0.00 00033420 ASR000



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





LLI Sample No. SW 2941673
 Collected: 6/ 4/98 at 15:30 by RLC
 Submitted: 6/ 6/98 Reported: 7/ 7/98
 Discard: 8/ 7/98

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

P.O.
 Rel.

SD-03 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 SD3-- SDG#: HMS02-03

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	85.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	43.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	43.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	43.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	43.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	43.
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	43.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	43.
4692	3- and 4-methylphenol	72.	J 67.	ug/kg	93.	J 85.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	43.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	43.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	43.
3759	isophorone	N.D.	33.	ug/kg	N.D.	43.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	85.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	85.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	85.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	85.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	43.
3761	naphthalene	1,300.	33.	ug/kg	1,600.	43.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	43.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	85.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	85.
4694	2-methylnaphthalene	340.	33.	ug/kg	440.	43.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	210.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	85.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	85.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	43.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	43.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	85.
3765	acenaphthylene	6,900.	670.	ug/kg	8,900.	850.

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

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

MEMBER

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2215 Rev 11-97





LLI Sample No. SW 2941673

Collected: 6/ 4/98 at 15:30 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-03 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD3-- SDG#: HMS02-03

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	85.
1191	acenaphthene	700.	33.	ug/kg	890.	43.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	250.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	210.
4698	dibenzofuran	380.	33.	ug/kg	480.	43.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	85.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	43.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	85.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	43.
3768	fluorene	810.	33.	ug/kg	1,000.	43.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	85.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	210.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	43.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	85.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	43.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	210.
3775	phenanthrene	2,800.	33.	ug/kg	3,600.	43.
3776	anthracene	4,300.	J 670.	ug/kg	5,500.	J 850.
4702	carbazole	750.	33.	ug/kg	970.	43.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	85.
3778	fluoranthene	17,000.	670.	ug/kg	21,000.	850.
1195	pyrene	25,000.	670.	ug/kg	32,000.	850.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	85.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	85.
3781	benzo (a) anthracene	21,000.	670.	ug/kg	27,000.	850.
3784	bis (2-ethylhexyl) phthalate	200.	J 67.	ug/kg	250.	J 85.
3782	chrysene	32,000.	670.	ug/kg	42,000.	850.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	85.
3786	benzo (b) fluoranthene	61,000.	670.	ug/kg	78,000.	850.
3787	benzo (k) fluoranthene	18,000.	670.	ug/kg	23,000.	850.
3788	benzo (a) pyrene	39,000.	670.	ug/kg	49,000.	850.
3789	indeno (1,2,3-cd) pyrene	31,000.	670.	ug/kg	39,000.	850.
3790	dibenz (a,h) anthracene	7,500.	670.	ug/kg	9,600.	850.
3791	benzo (ghi) perylene	25,000.	670.	ug/kg	32,000.	850.

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

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



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

See reverse side for explanation of symbols and abbreviations

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LLI Sample No. SW 2941673

Collected: 6/ 4/98 at 15:30 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-03 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

SD3-- SDG#: HMS02-03

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

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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

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

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



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2275 10/11/98





LLI Sample No. SW 2941673

Collected: 06/04/98 at 15:30 by RLC

Submitted: 06/06/98

SD-03 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD3-- SDG#: HMS02-03

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	2	06/18/98 0930	Barbara A. Menold
4688	TCL Semivolatiles	SW-846 8270C	1	06/25/98 0435	David J. Evans
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/25/98 0435	David J. Evans
0111	Moisture	EPA 160.3 modified	1	06/10/98 1949	Patrick N. Ward



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LLI Sample No. 2941673

SD-03 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4688 TCL Semivolatiles		Batch: 98169SLB026									
1185	phenol										
67.	ug/kg	N.D.		90	88	3	88			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		87	87	0	88			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		89	87	2	89			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		84	84	0	82			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	83	0	83			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		89	89	0	87			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		90	87	3	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		100	98	2	97			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		89	87	2	92			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		91	88	2	89			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		81	83	3	84			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		91	91	1	97			56	110
3759	isophorone										
33.	ug/kg	N.D.		95	93	2	100			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		92	90	3	91			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	87	2	90			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	93			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		88	87	1	91			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		89	88	1	91			57	104
3761	naphthalene										
33.	ug/kg	N.D.		84	84	0	89			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		46	60	28	86			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	91	1	89			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		91	90	1	97			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	87	0	93			60	102



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LLI Sample No. 2941673

SD-03 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		51	65	24	82			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		93	94	1	95			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		92	96	4	97			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		92	91	1	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		93	95	2	102			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		89	89	0	97			61	104
3765	acenaphthylene										
670.	ug/kg	N.D.		83	85	2	91			62	101

4689	TCL Semivolatiles cont'd	Batch: 98169SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		67	78	15	100			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	86	1	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		73	67	8	92			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		95	98	3	101			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	89	0	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		89	91	2	110			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		90	91	1	106			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		87	89	2	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		90	90	0	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		90	89	0	92			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	86	18	103			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		76	70	9	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		87	87	0	92			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		90	89	1	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		95	91	5	93			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		103	89	14	81			42	108



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2275 Rev. 8-1-97





LLI Sample No. 2941673

SD-03 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
	33. ug/kg	N.D.		91	89	2	94			62	107
3776	anthracene										
	670. ug/kg	N.D.		90	88	2	96			62	105
4702	carbazole										
	33. ug/kg	N.D.		89	89	1	94			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		91	90	1	95			59	114
3778	fluoranthene										
	670. ug/kg	N.D.		89	89	1	95			58	110
1195	pyrene										
	670. ug/kg	N.D.		90	85	5	102			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		92	88	4	103			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		31	47	40	90			15	94
3781	benzo (a) anthracene										
	670. ug/kg	N.D.		89	86	3	99			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		84	83	1	104			8	158
3782	chrysene										
	670. ug/kg	N.D.		87	84	3	96			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		95	92	3	122			54	127
3786	benzo (b) fluoranthene										
	670. ug/kg	N.D.		87	80	8	101			59	105
3787	benzo (k) fluoranthene										
	670. ug/kg	N.D.		92	90	2	108			63	108
3788	benzo (a) pyrene										
	670. ug/kg	N.D.		90	88	3	109			61	107
3789	indeno (1,2,3-cd) pyrene										
	670. ug/kg	N.D.		89	86	3	111			55	111
3790	dibenz (a,h) anthracene										
	670. ug/kg	N.D.		90	89	2	112			60	117
3791	benzo (ghi) perylene										
	670. ug/kg	N.D.		88	85	3	110			52	113
0111	Moisture										
	0.080 % by wt.	* Batch: 981610199820003A	9				100	100	0	99	101



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2015 03 09 10:41





LLI Sample No. 2941673
SD-03 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	90	39	108
	2-F1phenol	88	35	108
	2,4,6-TBP	89	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	97	31	126
	2-Fbiphenyl	84	45	113
	Tphenyl14	76	37	130



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2016 01 14 11:47





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LLI Sample No. SW 2941674

Collected: 6/ 4/98 at 15:00 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-04 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

SD4-- SDG#: HMS02-04

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	METHOD LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles			See Page 2		
4689	TCL Semivolatiles cont'd			See Page 3		
0111	Moisture	16.4	0.080	% by wt.		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 22:22:03 D 0003 12 129915 618146
 863 0.00 00033420 ASR000



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





LLI Sample No. SW 2941674

Collected: 6/ 4/98 at 15:00 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-04 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD4-- SDG#: HMS02-04

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles						
1185	phenol	N.D.	670.	ug/kg	N.D.	800.
3753	bis (2-chloroethyl) ether	N.D.	330.	ug/kg	N.D.	400.
1186	2-chlorophenol	N.D.	330.	ug/kg	N.D.	400.
3754	1,3-dichlorobenzene	N.D.	330.	ug/kg	N.D.	400.
1187	1,4-dichlorobenzene	N.D.	330.	ug/kg	N.D.	400.
3755	1,2-dichlorobenzene	N.D.	330.	ug/kg	N.D.	400.
4690	2-methylphenol	N.D.	330.	ug/kg	N.D.	400.
4691	2,2'-oxybis (1-chloropropane)	N.D.	330.	ug/kg	N.D.	400.
4692	3- and 4-methylphenol	N.D.	670.	ug/kg	N.D.	800.
1188	N-nitrosodi-n-propylamine	N.D.	330.	ug/kg	N.D.	400.
3757	hexachloroethane	N.D.	330.	ug/kg	N.D.	400.
3758	nitrobenzene	N.D.	330.	ug/kg	N.D.	400.
3759	isophorone	N.D.	330.	ug/kg	N.D.	400.
3746	2-nitrophenol	N.D.	670.	ug/kg	N.D.	800.
3747	2,4-dimethylphenol	N.D.	670.	ug/kg	N.D.	800.
3760	bis (2-chloroethoxy) methane	N.D.	670.	ug/kg	N.D.	800.
3748	2,4-dichlorophenol	N.D.	670.	ug/kg	N.D.	800.
1189	1,2,4-trichlorobenzene	N.D.	330.	ug/kg	N.D.	400.
3761	naphthalene	12,000.	330.	ug/kg	14,000.	400.
4693	4-chloroaniline	N.D.	330.	ug/kg	N.D.	400.
3762	hexachlorobutadiene	N.D.	670.	ug/kg	N.D.	800.
1190	4-chloro-3-methylphenol	N.D.	670.	ug/kg	N.D.	800.
4694	2-methylnaphthalene	32,000.	330.	ug/kg	38,000.	400.
3763	hexachlorocyclopentadiene	N.D.	1,700.	ug/kg	N.D.	2,000.
3749	2,4,6-trichlorophenol	N.D.	670.	ug/kg	N.D.	800.
4695	2,4,5-trichlorophenol	N.D.	670.	ug/kg	N.D.	800.
3764	2-chloronaphthalene	N.D.	330.	ug/kg	N.D.	400.
4696	2-nitroaniline	N.D.	330.	ug/kg	N.D.	400.
3766	dimethyl phthalate	N.D.	670.	ug/kg	N.D.	800.
3765	acenaphthylene	5,700.	330.	ug/kg	6,800.	400.

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

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



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2210 Rev. 10-97





LLI Sample No. SW 2941674

Collected: 6/ 4/98 at 15:00 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-04 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

SD4-- SDG#: HMS02-04

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

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL Semivolatiles cont'd							
4697	3-nitroaniline	N.D.		670.	ug/kg	N.D.	800.
1191	acenaphthene	120,000.	J	17,000.	ug/kg	140,000.	J 20,000.
3750	2,4-dinitrophenol	N.D.		1,900.	ug/kg	N.D.	2,300.
1192	4-nitrophenol	N.D.		1,700.	ug/kg	N.D.	2,000.
4698	dibenzofuran	120,000.	J	17,000.	ug/kg	150,000.	J 20,000.
1193	2,4-dinitrotoluene	N.D.		330.	ug/kg	N.D.	400.
3767	2,6-dinitrotoluene	N.D.		330.	ug/kg	N.D.	400.
3770	diethyl phthalate	N.D.		670.	ug/kg	N.D.	800.
3769	4-chlorophenyl phenyl ether	N.D.		330.	ug/kg	N.D.	400.
3768	fluorene	220,000.		17,000.	ug/kg	260,000.	20,000.
4700	4-nitroaniline	N.D.		670.	ug/kg	N.D.	800.
3751	4,6-dinitro-2-methylphenol	N.D.		1,700.	ug/kg	N.D.	2,000.
3772	N-nitrosodiphenylamine	N.D.		330.	ug/kg	N.D.	400.
3773	4-bromophenyl phenyl ether	N.D.		670.	ug/kg	N.D.	800.
3774	hexachlorobenzene	N.D.		330.	ug/kg	N.D.	400.
1194	pentachlorophenol	N.D.		1,700.	ug/kg	N.D.	2,000.
3775	phenanthrene	730,000.		17,000.	ug/kg	870,000.	20,000.
3776	anthracene	2,700.	J	330.	ug/kg	3,300.	J 400.
4702	carbazole	85,000.	J	17,000.	ug/kg	100,000.	J 20,000.
3777	di-n-butyl phthalate	N.D.		670.	ug/kg	N.D.	800.
3778	fluoranthene	390,000.		17,000.	ug/kg	470,000.	20,000.
1195	pyrene	250,000.		17,000.	ug/kg	300,000.	20,000.
3780	butyl benzyl phthalate	N.D.		670.	ug/kg	N.D.	800.
3783	3,3'-dichlorobenzidine	N.D.		670.	ug/kg	N.D.	800.
3781	benzo (a) anthracene	86,000.	J	17,000.	ug/kg	100,000.	J 20,000.
3784	bis (2-ethylhexyl) phthalate	740.	J	670.	ug/kg	880.	J 800.
3782	chrysene	64,000.	J	17,000.	ug/kg	76,000.	J 20,000.
3785	di-n-octyl phthalate	N.D.		670.	ug/kg	N.D.	800.
3786	benzo (b) fluoranthene	38,000.		330.	ug/kg	46,000.	400.
3787	benzo (k) fluoranthene	15,000.		330.	ug/kg	18,000.	400.
3788	benzo (a) pyrene	28,000.		330.	ug/kg	33,000.	400.
3789	indeno (1,2,3-cd) pyrene	10,000.		330.	ug/kg	12,000.	400.
3790	dibenz (a,h) anthracene *	2,800.	J	330.	ug/kg	3,300.	J 400.
3791	benzo (ghi) perylene	7,900.		330.	ug/kg	9,500.	400.

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

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



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

See reverse side for explanation of symbols and abbreviations.

2017-09-11 10:11





LLI Sample No. SW 2941674

Collected: 6/ 4/98 at 15:00 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-04 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

SD4-- SDG#: HMS02-04

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. The quantitation limits for the GC/MS semivolatiles compounds were raised due to the high concentration of target compounds.

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

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



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2215 Rev. 8/1997





LLI Sample No. SW 2941674

Collected: 06/04/98 at 15:00 by RLC

Submitted: 06/06/98

SD-04 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD4-- SDG#: HMS02-04

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	2	06/18/98 0930	Barbara A. Menold
4688	TCL Semivolatiles	SW-846 8270C	1	06/26/98 0354	Linda M. Hartenstine
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/26/98 0354	Linda M. Hartenstine
0111	Moisture	EPA 160.3 modified	1	06/10/98 1949	Patrick N. Ward



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2216 10/28/97





LLI Sample No. 2941674

SD-04 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4688 TCL Semivolatiles		Batch: 98169SLB026									
1185 phenol											
670.	ug/kg	N.D.		90	88	3	88			49	105
3753 bis (2-chloroethyl) ether											
330.	ug/kg	N.D.		87	87	0	88			53	109
1186 2-chlorophenol											
330.	ug/kg	N.D.		89	87	2	89			55	107
3754 1,3-dichlorobenzene											
330.	ug/kg	N.D.		84	84	0	82			53	103
1187 1,4-dichlorobenzene											
330.	ug/kg	N.D.		84	83	0	83			52	103
3755 1,2-dichlorobenzene											
330.	ug/kg	N.D.		89	89	0	87			56	107
4690 2-methylphenol											
330.	ug/kg	N.D.		90	87	3	92			57	101
4691 2,2'-oxybis (1-chloropropane)											
330.	ug/kg	N.D.		100	98	2	97			38	117
4692 3- and 4-methylphenol											
670.	ug/kg	N.D.		89	87	2	92			48	116
1188 N-nitrosodi-n-propylamine											
330.	ug/kg	N.D.		91	88	2	89			50	124
3757 hexachloroethane											
330.	ug/kg	N.D.		81	83	3	84			52	108
3758 nitrobenzene											
330.	ug/kg	N.D.		91	91	1	97			56	110
3759 isophorone											
330.	ug/kg	N.D.		95	93	2	100			57	114
3746 2-nitrophenol											
670.	ug/kg	N.D.		92	90	3	91			59	107
3747 2,4-dimethylphenol											
670.	ug/kg	N.D.		88	87	2	90			39	108
3760 bis (2-chloroethoxy) methane											
670.	ug/kg	N.D.		86	85	1	93			56	103
3748 2,4-dichlorophenol											
670.	ug/kg	N.D.		88	87	1	91			59	100
1189 1,2,4-trichlorobenzene											
330.	ug/kg	N.D.		89	88	1	91			57	104
3761 naphthalene											
330.	ug/kg	N.D.		84	84	0	89			58	99
4693 4-chloroaniline											
330.	ug/kg	N.D.		46	60	28	86			1	102
3762 hexachlorobutadiene											
670.	ug/kg	N.D.		90	91	1	89			56	115
1190 4-chloro-3-methylphenol											
670.	ug/kg	N.D.		91	90	1	97			56	108
4694 2-methylnaphthalene											
330.	ug/kg	N.D.		87	87	0	93			60	102



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2216 3/95 241 11





LLI Sample No. 2941674
 SD-04 Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
1,700.	ug/kg	N.D.		51	65	24	82			27	113
3749	2,4,6-trichlorophenol										
670.	ug/kg	N.D.		93	94	1	95			62	106
4695	2,4,5-trichlorophenol										
670.	ug/kg	N.D.		92	96	4	97			63	107
3764	2-chloronaphthalene										
330.	ug/kg	N.D.		92	91	1	97			60	106
4696	2-nitroaniline										
330.	ug/kg	N.D.		93	95	2	102			54	111
3766	dimethyl phthalate										
670.	ug/kg	N.D.		89	89	0	97			61	104
3765	acenaphthylene										
330.	ug/kg	N.D.		83	85	2	91			62	101

4689	TCL Semivolatiles cont'd	Batch: 98169SLB026									

4697	3-nitroaniline										
670.	ug/kg	N.D.		67	78	15	100			9	110
1191	acenaphthene										
17,000.	ug/kg	N.D.		87	86	1	89			61	100
3750	2,4-dinitrophenol										
1,900.	ug/kg	N.D.		73	67	8	92			29	117
1192	4-nitrophenol										
1,700.	ug/kg	N.D.		95	98	3	101			44	110
4698	dibenzofuran										
17,000.	ug/kg	N.D.		89	89	0	91			62	102
1193	2,4-dinitrotoluene										
330.	ug/kg	N.D.		89	91	2	110			58	113
3767	2,6-dinitrotoluene										
330.	ug/kg	N.D.		90	91	1	106			62	111
3770	diethyl phthalate										
670.	ug/kg	N.D.		87	89	2	96			59	104
3769	4-chlorophenyl phenyl ether										
330.	ug/kg	N.D.		90	90	0	92			52	110
3768	fluorene										
17,000.	ug/kg	N.D.		90	89	0	92			59	109
4700	4-nitroaniline										
670.	ug/kg	N.D.		72	86	18	103			37	120
3751	4,6-dinitro-2-methylphenol										
1,700.	ug/kg	N.D.		76	70	9	88			42	107
3772	N-nitrosodiphenylamine										
330.	ug/kg	N.D.		87	87	0	92			60	106
3773	4-bromophenyl phenyl ether										
670.	ug/kg	N.D.		90	89	1	89			61	110
3774	hexachlorobenzene										
330.	ug/kg	N.D.		95	91	5	93			52	123
1194	pentachlorophenol										
1,700.	ug/kg	N.D.		103	89	14	81			42	108

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LLI Sample No. 2941674

SD-04 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
17,000.	ug/kg	N.D.		91	89	2	94			62	107
3776	anthracene										
330.	ug/kg	N.D.		90	88	2	96			62	105
4702	carbazole										
17,000.	ug/kg	N.D.		89	89	1	94			57	112
3777	di-n-butyl phthalate										
670.	ug/kg	N.D.		91	90	1	95			59	114
3778	fluoranthene										
17,000.	ug/kg	N.D.		89	89	1	95			58	110
1195	pyrene										
17,000.	ug/kg	N.D.		90	85	5	102			52	115
3780	butyl benzyl phthalate										
670.	ug/kg	N.D.		92	88	4	103			58	119
3783	3,3'-dichlorobenzidine										
670.	ug/kg	N.D.		31	47	40	90			15	94
3781	benzo (a) anthracene										
17,000.	ug/kg	N.D.		89	86	3	99			63	106
3784	bis (2-ethylhexyl) phthalate										
670.	ug/kg	N.D.		84	83	1	104			8	158
3782	chrysene										
17,000.	ug/kg	N.D.		87	84	3	96			60	107
3785	di-n-octyl phthalate										
670.	ug/kg	N.D.		95	92	3	122			54	127
3786	benzo (b) fluoranthene										
330.	ug/kg	N.D.		87	80	8	101			59	105
3787	benzo (k) fluoranthene										
330.	ug/kg	N.D.		92	90	2	108			63	108
3788	benzo (a) pyrene										
330.	ug/kg	N.D.		90	88	3	109			61	107
3789	indeno (1,2,3-cd) pyrene										
330.	ug/kg	N.D.		89	86	3	111			55	111
3790	dibenz (a,h) anthracene										
330.	ug/kg	N.D.		90	89	2	112			60	117
3791	benzo (ghi) perylene										
330.	ug/kg	N.D.		88	85	3	110			52	113
0111	Moisture										
0.080	% by wt.	* Batch: 981610199820003A	9				100	100	0	99	101



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2015 161 41097





LLI Sample No. 2941674
SD-04 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles		Phenol-d6	(5)	39	108
		2-Flphenol	(5)	35	108
		2,4,6-TBP	(5)	23	125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	(5)	31	126
		2-Fbiphenyl	(5)	45	113
		Tphenylid14	(5)	37	130

(5) Accurate surrogate recoveries could not be determined due to interferences or dilution necessary for this sample.



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2215 Rev. 6/24/97





LLI Sample No. SW 2941675

Collected: 6/ 4/98 at 14:40 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-05 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD5-- SDG#: HMS02-05

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	20.5	0.080		% by wt.	
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 22:23:47 D 0003 12 129915 618146
 863 0.00 00033420 ASR000



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





LLI Sample No. SW 2941675

Collected: 6/ 4/98 at 14:40 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-05 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD5-- SDG#: HMS02-05

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	84.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	42.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	42.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	42.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	42.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	42.
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	42.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	42.
4692	3- and 4-methylphenol	91.	J	67.	110.	J
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	42.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	42.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	42.
3759	isophorone	N.D.	33.	ug/kg	N.D.	42.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	84.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	84.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	84.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	84.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	42.
3761	naphthalene	120.	J	33.	160.	J
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	42.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	84.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	84.
4694	2-methylnaphthalene	72.	J	33.	91.	J
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	210.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	84.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	84.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	42.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	42.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	84.
3765	acenaphthylene	140.	J	33.	170.	J

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

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

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22





LLI Sample No. SW 2941675

Collected: 6/ 4/98 at 14:40 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-05 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD5-- SDG#: HMS02-05

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL Semivolatiles cont'd							
4697	3-nitroaniline	N.D.		67.	ug/kg	N.D.	84.
1191	acenaphthene	80.	J	33.	ug/kg	100.	J 42.
3750	2,4-dinitrophenol	N.D.		190.	ug/kg	N.D.	240.
1192	4-nitrophenol	N.D.		170.	ug/kg	N.D.	210.
4698	dibenzofuran	81.	J	33.	ug/kg	100.	J 42.
1193	2,4-dinitrotoluene	N.D.		67.	ug/kg	N.D.	84.
3767	2,6-dinitrotoluene	N.D.		33.	ug/kg	N.D.	42.
3770	diethyl phthalate	N.D.		67.	ug/kg	N.D.	84.
3769	4-chlorophenyl phenyl ether	N.D.		33.	ug/kg	N.D.	42.
3768	fluorene	150.	J	33.	ug/kg	180.	J 42.
4700	4-nitroaniline	N.D.		67.	ug/kg	N.D.	84.
3751	4,6-dinitro-2-methylphenol	N.D.		170.	ug/kg	N.D.	210.
3772	N-nitrosodiphenylamine	N.D.		33.	ug/kg	N.D.	42.
3773	4-bromophenyl phenyl ether	N.D.		67.	ug/kg	N.D.	84.
3774	hexachlorobenzene	N.D.		33.	ug/kg	N.D.	42.
1194	pentachlorophenol	N.D.		170.	ug/kg	N.D.	210.
3775	phenanthrene	530.		33.	ug/kg	660.	42.
3776	anthracene	700.		33.	ug/kg	880.	42.
4702	carbazole	180.	J	33.	ug/kg	220.	J 42.
3777	di-n-butyl phthalate	N.D.		67.	ug/kg	N.D.	84.
3778	fluoranthene	1,600.		33.	ug/kg	2,000.	42.
1195	pyrene	1,200.		33.	ug/kg	1,600.	42.
3780	butyl benzyl phthalate	N.D.		67.	ug/kg	N.D.	84.
3783	3,3'-dichlorobenzidine	N.D.		67.	ug/kg	N.D.	84.
3781	benzo (a) anthracene	740.		33.	ug/kg	930.	42.
3784	bis (2-ethylhexyl) phthalate	120.	J	67.	ug/kg	150.	J 84.
3782	chrysene	1,100.		33.	ug/kg	1,300.	42.
3785	di-n-octyl phthalate	N.D.		67.	ug/kg	N.D.	84.
3786	benzo (b) fluoranthene	1,200.		33.	ug/kg	1,400.	42.
3787	benzo (k) fluoranthene	400.		33.	ug/kg	500.	42.
3788	benzo (a) pyrene	770.		33.	ug/kg	970.	42.
3789	indeno (1,2,3-cd) pyrene	430.		33.	ug/kg	540.	42.
3790	dibenz (a,h) anthracene	120.	J	33.	ug/kg	150.	J 42.
3791	benzo (ghi) perylene	340.		33.	ug/kg	420.	42.

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 SVOA





LLI Sample No. SW 2941675

Collected: 6/ 4/98 at 14:40 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-05 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SDS-- SDG#: HMS02-05

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

P.O.
Rel.

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

TCL Semivolatiles cont'd

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

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

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



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

See reverse side for explanation of symbols and abbreviations.

2215 Rev. 3.1.11





LLI Sample No. SW 2941675

Collected: 06/04/98 at 14:40 by RLC

Submitted: 06/06/98

SD-05 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SDS-- SDG#: HMS02-05

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	2	06/18/98 0930	Barbara A. Menold
4688	TCL Semivolatiles	SW-846 8270C	1	06/25/98 1311	David J. Evans
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/25/98 1311	David J. Evans
0111	Moisture	EPA 160.3 modified	1	06/10/98 1949	Patrick N. Ward



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See reverse side for explanation of symbols and abbreviations

221A Rev. 8/97





LLI Sample No. 2941675

SD-05 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4688 TCL Semivolatiles		Batch: 98169SLB026									
1185 phenol	67. ug/kg	N.D.		90	88	3	88			49	105
3753 bis (2-chloroethyl) ether	33. ug/kg	N.D.		87	87	0	88			53	109
1186 2-chlorophenol	33. ug/kg	N.D.		89	87	2	89			55	107
3754 1,3-dichlorobenzene	33. ug/kg	N.D.		84	84	0	82			53	103
1187 1,4-dichlorobenzene	33. ug/kg	N.D.		84	83	0	83			52	103
3755 1,2-dichlorobenzene	33. ug/kg	N.D.		89	89	0	87			56	107
4690 2-methylphenol	33. ug/kg	N.D.		90	87	3	92			57	101
4691 2,2'-oxybis (1-chloropropane)	33. ug/kg	N.D.		100	98	2	97			38	117
4692 3- and 4-methylphenol	67. ug/kg	N.D.		89	87	2	92			48	116
1188 N-nitrosodi-n-propylamine	33. ug/kg	N.D.		91	88	2	89			50	124
3757 hexachloroethane	33. ug/kg	N.D.		81	83	3	84			52	108
3758 nitrobenzene	33. ug/kg	N.D.		91	91	1	97			56	110
3759 isophorone	33. ug/kg	N.D.		95	93	2	100			57	114
3746 2-nitrophenol	67. ug/kg	N.D.		92	90	3	91			59	107
3747 2,4-dimethylphenol	67. ug/kg	N.D.		88	87	2	90			39	108
3760 bis (2-chloroethoxy) methane	67. ug/kg	N.D.		86	85	1	93			56	103
3748 2,4-dichlorophenol	67. ug/kg	N.D.		88	87	1	91			59	100
1189 1,2,4-trichlorobenzene	33. ug/kg	N.D.		89	88	1	91			57	104
3761 naphthalene	33. ug/kg	N.D.		84	84	0	89			58	99
4693 4-chloroaniline	33. ug/kg	N.D.		46	60	28	86			1	102
3762 hexachlorobutadiene	67. ug/kg	N.D.		90	91	1	89			56	115
1190 4-chloro-3-methylphenol	67. ug/kg	N.D.		91	90	1	97			56	108
4694 2-methylnaphthalene	33. ug/kg	N.D.		87	87	0	93			60	102

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See reverse side for explanation of symbols and abbreviations.

2275 06/04/97





LLI Sample No. 2941675

SD-05 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		51	65	24	82			27	113
3749	2,4,6-trichloropheno1										
67.	ug/kg	N.D.		93	94	1	95			62	106
4695	2,4,5-trichloropheno1										
67.	ug/kg	N.D.		92	96	4	97			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		92	91	1	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		93	95	2	102			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		89	89	0	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	85	2	91			62	101

4689	TCL Semivolatiles cont'd	Batch: 98169SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		67	78	15	100			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	86	1	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		73	67	8	92			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		95	98	3	101			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	89	0	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		89	91	2	110			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		90	91	1	106			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		87	89	2	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		90	90	0	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		90	89	0	92			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	86	18	103			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		76	70	9	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		87	87	0	92			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		90	89	1	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		95	91	5	93			52	123
1194	pentachloropheno1										
170.	ug/kg	N.D.		103	89	14	81			42	108



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2216 101 0117





LLI Sample No. 2941675

SD-05 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		91	89	2	94			62	107
3776	anthracene										
33.	ug/kg	N.D.		90	88	2	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		89	89	1	94			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		91	90	1	95			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		89	89	1	95			58	110
1195	pyrene										
33.	ug/kg	N.D.		90	85	5	102			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		92	88	4	103			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		31	47	40	90			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		89	86	3	99			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		84	83	1	104			8	158
3782	chrysene										
33.	ug/kg	N.D.		87	84	3	96			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		95	92	3	122			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		87	80	8	101			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		92	90	2	108			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		90	88	3	109			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		89	86	3	111			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		90	89	2	112			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		88	85	3	110			52	113
0111	Moisture										
0.080	% by wt.	* Batch: 981610199820003A	9				100	100	0	99	101



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2216 Rev. 11-97





LLI Sample No. **2941675**
SD-05 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	86	39	108
	2-F1pheno1	85	35	108
	2,4,6-TBP	92	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	91	31	126
	2-Fbiphnyl	86	45	113
	Tphenyl14	82	37	130



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2216 Rev. 8.4.97





LLI Sample No. SW 2941676

Collected: 6/ 4/98 at 14:20 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-06 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD6-- SDG#: HMS02-06

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	14.3	0.080		1/2 by wt.	
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
22:25:04 D 0003 12 129915 618146
863 0.00 00033420 ASR000



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





LLI Sample No. SW 2941676

Collected: 6/ 4/98 at 14:20 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-06 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD6-- SDG#: HMS02-06

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

P.O.
Rel.

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

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

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



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2210 07/30/97





LLI Sample No. SW 2941676

Collected: 6/ 4/98 at 14:20 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-06 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD6-- SDG#: HMS02-06

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

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	39.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	230.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	190.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	39.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	78.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	39.
3768	fluorene	N.D.	33.	ug/kg	N.D.	39.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	78.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	78.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	39.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	39.
3776	anthracene	N.D.	33.	ug/kg	N.D.	39.
4702	carbazole	N.D.	33.	ug/kg	N.D.	39.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	39.
1195	pyrene	N.D.	33.	ug/kg	N.D.	39.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	78.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	39.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	78.
3782	chrysene	N.D.	33.	ug/kg	N.D.	39.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	39.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	39.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	39.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	39.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	39.

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

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





LLI Sample No. SW 2941676

Collected: 6/ 4/98 at 14:20 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-06 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD6-- SDG#: HMS02-06

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

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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

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

Respectfully Submitted
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Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations

2216 Rev 9/4/97





LLI Sample No. SW 2941676

Collected: 06/04/98 at 14:20 by RLC

Submitted: 06/06/98

SD-06 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD6-- SDG#: HMS02-06

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	2	06/18/98 0930	Barbara A. Menold
4688	TCL Semivolatiles	SW-846 8270C	1	06/25/98 1413	David J. Evans
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/25/98 1413	David J. Evans
0111	Moisture	EPA 160.3 modified	1	06/10/98 1949	Patrick N. Ward



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2941676

SD-06 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4688 TCL Semivolatiles		Batch: 98169SLB026									
1185	phenol										
67.	ug/kg	N.D.		90	88	3	88			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		87	87	0	88			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		89	87	2	89			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		84	84	0	82			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	83	0	83			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		89	89	0	87			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		90	87	3	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		100	98	2	97			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		89	87	2	92			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		91	88	2	89			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		81	83	3	84			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		91	91	1	97			56	110
3759	isophorone										
33.	ug/kg	N.D.		95	93	2	100			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		92	90	3	91			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	87	2	90			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	93			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		88	87	1	91			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		89	88	1	91			57	104
3761	naphthalene										
33.	ug/kg	N.D.		84	84	0	89			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		46	60	28	86			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	91	1	89			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		91	90	1	97			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	87	0	93			60	102



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2941676

SD-06 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		51	65	24	82			27	113
3749	2,4,6-trichlorophenoI										
67.	ug/kg	N.D.		93	94	1	95			62	106
4695	2,4,5-trichlorophenoI										
67.	ug/kg	N.D.		92	96	4	97			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		92	91	1	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		93	95	2	102			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		89	89	0	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	85	2	91			62	101

4689	TCL Semivolatiles cont'd	Batch: 98169SLB026									
4697	3-nitroaniline										
67.	ug/kg	N.D.		67	78	15	100			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	86	1	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		73	67	8	92			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		95	98	3	101			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	89	0	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		89	91	2	110			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		90	91	1	106			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		87	89	2	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		90	90	0	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		90	89	0	92			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	86	18	103			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		76	70	9	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		87	87	0	92			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		90	89	1	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		95	91	5	93			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		103	89	14	81			42	108



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2216 Rev. 1/90





LLI Sample No. 2941676

SD-06 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		91	89	2	94			62	107
3776	anthracene										
33.	ug/kg	N.D.		90	88	2	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		89	89	1	94			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		91	90	1	95			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		89	89	1	95			58	110
1195	pyrene										
33.	ug/kg	N.D.		90	85	5	102			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		92	88	4	103			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		31	47	40	90			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		89	86	3	99			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		84	83	1	104			8	158
3782	chrysene										
33.	ug/kg	N.D.		87	84	3	96			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		95	92	3	122			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		87	80	8	101			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		92	90	2	108			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		90	88	3	109			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		89	86	3	111			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		90	89	2	112			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		88	85	3	110			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981610199820003A	9				100	100	0	99	101



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2216 Rev. 8.01.01





LLI Sample No. 2941676
SD-06 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	89	39	108
	2-Flphenol	87	35	108
	2,4,6-TBP	87	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	91	31	126
	2-Fbiphenyl	89	45	113
	Tphenylid14	89	37	130



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2216 Tg. 4/20/97





LLI Sample No. SW 2941677

Collected: 6/ 4/98 at 13:30 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-07 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD7-- SDG#: HMS02-07

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	18.1	0.080	% by wt.		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
22:26:28 D 0003 12 129915 618146
863 0.00 00033420 ASR000

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





LLI Sample No. SW 2941677

Collected: 6/ 4/98 at 13:30 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-07 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

SD7-- SDG#: HMS02-07

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

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	81.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	41.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	41.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	41.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	41.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	41.
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	41.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	41.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	81.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	41.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	41.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	41.
3759	isophorone	N.D.	33.	ug/kg	N.D.	41.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	81.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	81.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	81.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	81.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	41.
3761	naphthalene	930.	33.	ug/kg	1,100.	41.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	41.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	81.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	81.
4694	2-methylnaphthalene	420.	33.	ug/kg	510.	41.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	81.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	81.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	41.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	41.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	81.
3765	acenaphthylene	64.	J 33.	ug/kg	78.	J 41.

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

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

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LLI Sample No. SW 2941677

Collected: 6/ 4/98 at 13:30 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-07 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD7-- SDG#: HMS02-07

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

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	81.
1191	acenaphthene	370.	33.	ug/kg	450.	41.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	240.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	330.	33.	ug/kg	410.	41.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	81.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	41.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	81.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	41.
3768	fluorene	500.	33.	ug/kg	620.	41.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	81.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	41.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	81.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	41.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.
3775	phenanthrene	1,400.	33.	ug/kg	1,700.	41.
3776	anthracene	380.	33.	ug/kg	460.	41.
4702	carbazole	470.	33.	ug/kg	570.	41.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	81.
3778	fluoranthene	1,400.	33.	ug/kg	1,700.	41.
1195	pyrene	1,100.	33.	ug/kg	1,400.	41.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	81.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	81.
3781	benzo (a) anthracene	490.	33.	ug/kg	590.	41.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	81.
3782	chrysene	430.	33.	ug/kg	530.	41.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	81.
3786	benzo (b) fluoranthene	470.	33.	ug/kg	580.	41.
3787	benzo (k) fluoranthene	160.	J 33.	ug/kg	190.	J 41.
3788	benzo (a) pyrene	320.	J 33.	ug/kg	390.	J 41.
3789	indeno (1,2,3-cd) pyrene	180.	J 33.	ug/kg	220.	J 41.
3790	dibenz (a,h) anthracene	51.	J 33.	ug/kg	62.	J 41.
3791	benzo (ghi) perylene	150.	J 33.	ug/kg	180.	J 41.

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

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



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2216 Rev. 3/4/97





LLI Sample No. SW 2941677

Collected: 6/ 4/98 at 13:30 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-07 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD7-- SDG#: HMS02-07

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

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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

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

Respectfully Submitted
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Group Leader, GC/MS SVOA



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2215 04/13/97





LLI Sample No. SW 2941677

Collected: 06/04/98 at 13:30 by RLC

Submitted: 06/06/98

SD-07 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD7-- SDG#: HMS02-07

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	2	06/18/98 0930	Barbara A. Menold
4688	TCL Semivolatiles	SW-846 8270C	1	06/25/98 1509	David J. Evans
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/25/98 1509	David J. Evans
0111	Moisture	EPA 160.3 modified	1	06/10/98 1949	Patrick N. Ward



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LLI Sample No. 2941677

SD-07 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4688 TCL Semivolatiles		Batch: 98169SLB026									
1185	phenol										
67.	ug/kg	N.D.		90	88	3	88			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		87	87	0	88			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		89	87	2	89			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		84	84	0	82			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	83	0	83			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		89	89	0	87			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		90	87	3	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		100	98	2	97			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		89	87	2	92			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		91	88	2	89			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		81	83	3	84			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		91	91	1	97			56	110
3759	isophorone										
33.	ug/kg	N.D.		95	93	2	100			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		92	90	3	91			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	87	2	90			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	93			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		88	87	1	91			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		89	88	1	91			57	104
3761	naphthalene										
33.	ug/kg	N.D.		84	84	0	89			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		46	60	28	86			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	91	1	89			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		91	90	1	97			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	87	0	93			60	102



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2025 Rev. 8/1/97





LLI Sample No. 2941677

SD-07 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		51	65	24	82			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		93	94	1	95			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		92	96	4	97			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		92	91	1	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		93	95	2	102			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		89	89	0	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	85	2	91			62	101

4689	TCL Semivolatiles cont'd	Batch: 98169SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		67	78	15	100			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	86	1	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		73	67	8	92			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		95	98	3	101			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	89	0	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		89	91	2	110			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		90	91	1	106			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		87	89	2	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		90	90	0	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		90	89	0	92			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	86	18	103			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		76	70	9	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		87	87	0	92			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		90	89	1	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		95	91	5	93			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		103	89	14	81			42	108



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 8/09/07





LLI Sample No. 2941677
SD-07 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		91	89	2	94			62	107
3776	anthracene										
33.	ug/kg	N.D.		90	88	2	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		89	89	1	94			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		91	90	1	95			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		89	89	1	95			58	110
1195	pyrene										
33.	ug/kg	N.D.		90	85	5	102			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		92	88	4	103			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		31	47	40	90			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		89	86	3	99			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		84	83	1	104			8	158
3782	chrysene										
33.	ug/kg	N.D.		87	84	3	96			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		95	92	3	122			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		87	80	8	101			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		92	90	2	108			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		90	88	3	109			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		89	86	3	111			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		90	89	2	112			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		88	85	3	110			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981610199820003A	9				100	100	0	99	101

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

2216 Rev. 8/14/77





LLI Sample No. 2941677
SD-07 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	73	39	108
	2-Flpheno1	72	35	108
	2,4,6-TBP	82	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	74	31	126
	2-Fbiphenyl	76	45	113
	Tphenyl14	73	37	130



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2215 10/1/01





LLI Sample No. SW 2941678

Collected: 6/ 4/98 at 12:25 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-08 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD8-- SDG#: HMS02-08

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

P.O.
Rel.

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

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 22:28:00 D 0003 12 129915 618146
 863 0.00 00033420 ASR000

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



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2216 867 8/4/97





LLI Sample No. SW 2941678

Collected: 6/ 4/98 at 12:25 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-08 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SDB-- SDG#: HMS02-08

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	METHOD LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	80.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	40.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	40.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	40.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	40.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	80.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	40.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	40.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	40.
3759	isophorone	N.D.	33.	ug/kg	N.D.	40.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	80.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	80.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	80.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	80.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3761	naphthalene	150.	J	33.	ug/kg	40.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	40.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	80.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	80.
4694	2-methylnaphthalene	61.	J	33.	ug/kg	40.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	80.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	80.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	40.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	40.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	40.

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

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



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See reverse side for explanation of symbols and abbreviations.

2016 11/11/21





LLI Sample No. SW 2941678

Collected: 6/ 4/98 at 12:25 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-08 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD8-- SDG#: HMS02-08

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
TCL Semivolatiles cont'd							
4697	3-nitroaniline	N.D.		67.	ug/kg	N.D.	80.
1191	acenaphthene	150.	J	33.	ug/kg	180.	J 40.
3750	2,4-dinitrophenol	N.D.		190.	ug/kg	N.D.	230.
1192	4-nitrophenol	N.D.		170.	ug/kg	N.D.	200.
4698	dibenzofuran	120.	J	33.	ug/kg	150.	J 40.
1193	2,4-dinitrotoluene	N.D.		67.	ug/kg	N.D.	80.
3767	2,6-dinitrotoluene	N.D.		33.	ug/kg	N.D.	40.
3770	diethyl phthalate	N.D.		67.	ug/kg	N.D.	80.
3769	4-chlorophenyl phenyl ether	N.D.		33.	ug/kg	N.D.	40.
3768	fluorene	200.	J	33.	ug/kg	230.	J 40.
4700	4-nitroaniline	N.D.		67.	ug/kg	N.D.	80.
3751	4,6-dinitro-2-methylphenol	N.D.		170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.		33.	ug/kg	N.D.	40.
3773	4-bromophenyl phenyl ether	N.D.		67.	ug/kg	N.D.	80.
3774	hexachlorobenzene	N.D.		33.	ug/kg	N.D.	40.
1194	pentachlorophenol	N.D.		170.	ug/kg	N.D.	200.
3775	phenanthrene	600.		33.	ug/kg	720.	40.
3776	anthracene	220.	J	33.	ug/kg	260.	J 40.
4702	carbazole	130.	J	33.	ug/kg	160.	J 40.
3777	di-n-butyl phthalate	N.D.		67.	ug/kg	N.D.	80.
3778	fluoranthene	560.		33.	ug/kg	680.	40.
1195	pyrene	400.		33.	ug/kg	480.	40.
3780	butyl benzyl phthalate	N.D.		67.	ug/kg	N.D.	80.
3783	3,3'-dichlorobenzidine	N.D.		67.	ug/kg	N.D.	80.
3781	benzo (a) anthracene	150.	J	33.	ug/kg	180.	J 40.
3784	bis (2-ethylhexyl) phthalate	N.D.		67.	ug/kg	N.D.	80.
3782	chrysene	150.	J	33.	ug/kg	180.	J 40.
3785	di-n-octyl phthalate	N.D.		67.	ug/kg	N.D.	80.
3786	benzo (b) fluoranthene	140.	J	33.	ug/kg	170.	J 40.
3787	benzo (k) fluoranthene	53.	J	33.	ug/kg	64.	J 40.
3788	benzo (a) pyrene	100.	J	33.	ug/kg	120.	J 40.
3789	indeno (1,2,3-cd) pyrene	58.	J	33.	ug/kg	69.	J 40.
3790	dibenz (a,h) anthracene	N.D.		33.	ug/kg	N.D.	40.
3791	benzo (ghi) perylene	54.	J	33.	ug/kg	65.	J 40.

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

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



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See reverse side for explanation of symbols and abbreviations

2014 Rev. 2/10/11





LLI Sample No. SW 2941678

Collected: 6/ 4/98 at 12:25 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-08 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD8-- SDG#: HMS02-08

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

P.O.
Ref.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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

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

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



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See reverse side for explanation of symbols and abbreviations.

2276 Rev 7/97





LLI Sample No. SW 2941678

Collected: 06/04/98 at 12:25 by RLC

Submitted: 06/06/98

SD-08 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

SD8-- SDG#: HMS02-08

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	2	06/18/98 0930	Barbara A. Menold
4688	TCL Semivolatiles	SW-846 8270C	1	06/25/98 1605	David J. Evans
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/25/98 1605	David J. Evans
0111	Moisture	EPA 160.3 modified	1	06/10/98 1949	Patrick N. Ward



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2941678
SD-08 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4688 TCL Semivolatiles		Batch: 98169SLB026									
1185	phenol										
67.	ug/kg	N.D.		90	88	3	88			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		87	87	0	88			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		89	87	2	89			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		84	84	0	82			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	83	0	83			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		89	89	0	87			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		90	87	3	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		100	98	2	97			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		89	87	2	92			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		91	88	2	89			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		81	83	3	84			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		91	91	1	97			56	110
3759	isophorone										
33.	ug/kg	N.D.		95	93	2	100			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		92	90	3	91			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	87	2	90			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	93			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		88	87	1	91			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		89	88	1	91			57	104
3761	naphthalene										
33.	ug/kg	N.D.		84	84	0	89			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		46	60	28	86			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	91	1	89			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		91	90	1	97			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	87	0	93			60	102



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See reverse side for explanation of symbols and abbreviations

2215 Rev. 8/02/97





LLI Sample No. 2941678

SD-08 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		51	65	24	82			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		93	94	1	95			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		92	96	4	97			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		92	91	1	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		93	95	2	102			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		89	89	0	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	85	2	91			62	101

4689	TCL Semivolatiles cont'd	Batch: 98169SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		67	78	15	100			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	86	1	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		73	67	8	92			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		95	98	3	101			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	89	0	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		89	91	2	110			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		90	91	1	106			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		87	89	2	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		90	90	0	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		90	89	0	92			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	86	18	103			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		76	70	9	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		87	87	0	92			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		90	89	1	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		95	91	5	93			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		103	89	14	81			42	108



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See reverse side for explanation of symbols and abbreviations.

2015-04-14 09:04





LLI Sample No. 2941678

SD-08 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
	33. ug/kg	N.D.		91	89	2	94			62	107
3776	anthracene										
	33. ug/kg	N.D.		90	88	2	96			62	105
4702	carbazole										
	33. ug/kg	N.D.		89	89	1	94			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		91	90	1	95			59	114
3778	fluoranthene										
	33. ug/kg	N.D.		89	89	1	95			58	110
1195	pyrene										
	33. ug/kg	N.D.		90	85	5	102			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		92	88	4	103			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		31	47	40	90			15	94
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		89	86	3	99			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		84	83	1	104			8	158
3782	chrysene										
	33. ug/kg	N.D.		87	84	3	96			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		95	92	3	122			54	127
3786	benzo (b) fluoranthene										
	33. ug/kg	N.D.		87	80	8	101			59	105
3787	benzo (k) fluoranthene										
	33. ug/kg	N.D.		92	90	2	108			63	108
3788	benzo (a) pyrene										
	33. ug/kg	N.D.		90	88	3	109			61	107
3789	indeno (1,2,3-cd) pyrene										
	33. ug/kg	N.D.		89	86	3	111			55	111
3790	dibenz (a,h) anthracene										
	33. ug/kg	N.D.		90	89	2	112			60	117
3791	benzo (ghi) perylene										
	33. ug/kg	N.D.		88	85	3	110			52	113
0111	Moisture										
	0.080 % by wt.	Batch: 981610199820003A	9				100	100	0	99	101



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2011 10/11/11





LLI Sample No. 2941678
SD-08 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	85	39	108
	2-F1phenol	84	35	108
	2,4,6-TBP	93	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	86	31	126
	2-Fbiphenyl	88	45	113
	Tphenylid14	86	37	130



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2941679

Collected: 6/ 4/98 at 11:55 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-09 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

SD9-- SDG#: HMS02-09

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

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION	LIMIT	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	10.6	0.080		% by wt.	
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 22:29:32 D 0003 12 129915 618146
 863 0.00 00033420 ASR000



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





LLI Sample No. SW 2941679

Collected: 6/ 4/98 at 11:55 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-09 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD9-- SDG#: HMS02-09

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	75.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	37.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	37.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	37.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	37.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	75.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	37.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	37.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	37.
3759	isophorone	N.D.	33.	ug/kg	N.D.	37.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	75.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	75.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	75.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	75.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
3761	naphthalene	160.	J	33.	180.	J
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	37.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	75.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	75.
4694	2-methylnaphthalene	39.	J	33.	44.	J
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	75.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	75.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	37.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	37.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	37.

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

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



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2216 Rev. 5.0.97





LLI Sample No. SW 2941679

Collected: 6/ 4/98 at 11:55 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-09 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD9-- SDG#: HMS02-09

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.		67.	ug/kg	N.D. 75.
1191	acenaphthene	330.	J	33.	ug/kg	370. J 37.
3750	2,4-dinitrophenol	N.D.		190.	ug/kg	N.D. 220.
1192	4-nitrophenol	N.D.		170.	ug/kg	N.D. 190.
4698	dibenzofuran	180.	J	33.	ug/kg	210. J 37.
1193	2,4-dinitrotoluene	N.D.		67.	ug/kg	N.D. 75.
3767	2,6-dinitrotoluene	N.D.		33.	ug/kg	N.D. 37.
3770	diethyl phthalate	N.D.		67.	ug/kg	N.D. 75.
3769	4-chlorophenyl phenyl ether	N.D.		33.	ug/kg	N.D. 37.
3768	fluorene	300.	J	33.	ug/kg	340. J 37.
4700	4-nitroaniline	N.D.		67.	ug/kg	N.D. 75.
3751	4,6-dinitro-2-methylphenol	N.D.		170.	ug/kg	N.D. 190.
3772	N-nitrosodiphenylamine	N.D.		33.	ug/kg	N.D. 37.
3773	4-bromophenyl phenyl ether	N.D.		67.	ug/kg	N.D. 75.
3774	hexachlorobenzene	N.D.		33.	ug/kg	N.D. 37.
1194	pentachlorophenol	N.D.		170.	ug/kg	N.D. 190.
3775	phenanthrene	440.		33.	ug/kg	500. 37.
3776	anthracene	110.	J	33.	ug/kg	120. J 37.
4702	carbazole	N.D.		33.	ug/kg	N.D. 37.
3777	di-n-butyl phthalate	N.D.		67.	ug/kg	N.D. 75.
3778	fluoranthene	780.		33.	ug/kg	870. 37.
1195	pyrene	650.		33.	ug/kg	720. 37.
3780	butyl benzyl phthalate	N.D.		67.	ug/kg	N.D. 75.
3783	3,3'-dichlorobenzidine	N.D.		67.	ug/kg	N.D. 75.
3781	benzo (a) anthracene	210.	J	33.	ug/kg	240. J 37.
3784	bis (2-ethylhexyl) phthalate	N.D.		67.	ug/kg	N.D. 75.
3782	chrysene	190.	J	33.	ug/kg	210. J 37.
3785	di-n-octyl phthalate	N.D.		67.	ug/kg	N.D. 75.
3786	benzo (b) fluoranthene	150.	J	33.	ug/kg	170. J 37.
3787	benzo (k) fluoranthene	44.	J	33.	ug/kg	50. J 37.
3788	benzo (a) pyrene	98.	J	33.	ug/kg	110. J 37.
3789	indeno (1,2,3-cd) pyrene	45.	J	33.	ug/kg	51. J 37.
3790	dibenz (a,h) anthracene	N.D.		33.	ug/kg	N.D. 37.
3791	benzo (ghi) perylene	37.	J	33.	ug/kg	42. J 37.

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



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





LLI Sample No. SW 2941679

Collected: 6/ 4/98 at 11:55 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-09 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD9-- SDG#: HMS02-09

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

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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

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

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



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2216





LLI Sample No. SW 2941679

Collected: 06/04/98 at 11:55 by RLC

Submitted: 06/06/98

SD-09 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD9-- SDG#: HMS02-09

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	2	06/18/98 0930	Barbara A. Menold
4688	TCL Semivolatiles	SW-846 8270C	1	06/25/98 1701	David J. Evans
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/25/98 1701	David J. Evans
0111	Moisture	EPA 160.3 modified	1	06/10/98 1949	Patrick N. Ward



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0016 100 4 0007





LLI Sample No. 2941679

SD-09 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

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

4688 TCL Semivolatiles		Batch: 98169SLB026									

1185 phenol	67. ug/kg	N.D.		90	88	3	88			49	105
3753 bis (2-chloroethyl) ether	33. ug/kg	N.D.		87	87	0	88			53	109
1186 2-chlorophenol	33. ug/kg	N.D.		89	87	2	89			55	107
3754 1,3-dichlorobenzene	33. ug/kg	N.D.		84	84	0	82			53	103
1187 1,4-dichlorobenzene	33. ug/kg	N.D.		84	83	0	83			52	103
3755 1,2-dichlorobenzene	33. ug/kg	N.D.		89	89	0	87			56	107
4690 2-methylphenol	33. ug/kg	N.D.		90	87	3	92			57	101
4691 2,2'-oxybis (1-chloropropane)	33. ug/kg	N.D.		100	98	2	97			38	117
4692 3- and 4-methylphenol	67. ug/kg	N.D.		89	87	2	92			48	116
1188 N-nitrosodi-n-propylamine	33. ug/kg	N.D.		91	88	2	89			50	124
3757 hexachloroethane	33. ug/kg	N.D.		81	83	3	84			52	108
3758 nitrobenzene	33. ug/kg	N.D.		91	91	1	97			56	110
3759 isophorone	33. ug/kg	N.D.		95	93	2	100			57	114
3746 2-nitrophenol	67. ug/kg	N.D.		92	90	3	91			59	107
3747 2,4-dimethylphenol	67. ug/kg	N.D.		88	87	2	90			39	108
3760 bis (2-chloroethoxy) methane	67. ug/kg	N.D.		86	85	1	93			56	103
3748 2,4-dichlorophenol	67. ug/kg	N.D.		88	87	1	91			59	100
1189 1,2,4-trichlorobenzene	33. ug/kg	N.D.		89	88	1	91			57	104
3761 naphthalene	33. ug/kg	N.D.		84	84	0	89			58	99
4693 4-chloroaniline	33. ug/kg	N.D.		46	60	28	86			1	102
3762 hexachlorobutadiene	67. ug/kg	N.D.		90	91	1	89			56	115
1190 4-chloro-3-methylphenol	67. ug/kg	N.D.		91	90	1	97			56	108
4694 2-methylnaphthalene	33. ug/kg	N.D.		87	87	0	93			60	102



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2215 Rev. 4-1-97





LLI Sample No. 2941679

SD-09 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		51	65	24	82			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		93	94	1	95			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		92	96	4	97			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		92	91	1	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		93	95	2	102			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		89	89	0	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	85	2	91			62	101

4689	TCL Semivolatiles cont'd	Batch: 98169SLB026									
4697	3-nitroaniline										
67.	ug/kg	N.D.		67	78	15	100			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	86	1	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		73	67	8	92			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		95	98	3	101			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	89	0	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		89	91	2	110			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		90	91	1	106			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		87	89	2	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		90	90	0	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		90	89	0	92			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	86	18	103			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		76	70	9	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		87	87	0	92			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		90	89	1	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		95	91	5	93			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		103	89	14	81			42	108



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2219 Rev. 5/14/97





LLI Sample No. 2941679

SD-09 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
	33. ug/kg	N.D.		91	89	2	94			62	107
3776	anthracene										
	33. ug/kg	N.D.		90	88	2	96			62	105
4702	carbazole										
	33. ug/kg	N.D.		89	89	1	94			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		91	90	1	95			59	114
3778	fluoranthene										
	33. ug/kg	N.D.		89	89	1	95			58	110
1195	pyrene										
	33. ug/kg	N.D.		90	85	5	102			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		92	88	4	103			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		31	47	40	90			15	94
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		89	86	3	99			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		84	83	1	104			8	158
3782	chrysene										
	33. ug/kg	N.D.		87	84	3	96			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		95	92	3	122			54	127
3786	benzo (b) fluoranthene										
	33. ug/kg	N.D.		87	80	8	101			59	105
3787	benzo (k) fluoranthene										
	33. ug/kg	N.D.		92	90	2	108			63	108
3788	benzo (a) pyrene										
	33. ug/kg	N.D.		90	88	3	109			61	107
3789	indeno (1,2,3-cd) pyrene										
	33. ug/kg	N.D.		89	86	3	111			55	111
3790	dibenz (a,h) anthracene										
	33. ug/kg	N.D.		90	89	2	112			60	117
3791	benzo (ghi) perylene										
	33. ug/kg	N.D.		88	85	3	110			52	113
0111	Moisture										
	0.080 % by wt.	* Batch: 981610199820003A	9				100	100	0	99	101



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

See reverse side for explanation of symbols and abbreviations

0216 01/15/07





LLI Sample No. 2941679
SD-09 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	80	39	108
	2-Flphenol	81	35	108
	2,4,6-TBP	94	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	87	31	126
	2-Fbiphenyl	85	45	113
	Tphenylid14	83	37	130



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

See reverse side for explanation of symbols and abbreviations.

2275 12/14/11





LLI Sample No. SW 2941680

Collected: 6/ 4/98 at 11:30 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

SD10- SDG#: HMS02-10

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
4688	TCL Semivolatiles						See Page 2
4689	TCL Semivolatiles cont'd						See Page 3
0111	Moisture	16.6		0.080			% by wt.
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
22:31:03 D 0003 12 129915 618146
863 0.00 00033420 ASR000

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



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2216 Rev 9/01/97





LLI Sample No. SW 2941680

Collected: 6/ 4/98 at 11:30 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD10- SDG#: HMS02-10

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION	LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	pheno1	N.D.	67.	ug/kg	N.D.	80.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	40.
1186	2-chloropheno1	N.D.	33.	ug/kg	N.D.	40.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
4690	2-methylpheno1	N.D.	33.	ug/kg	N.D.	40.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	40.
4692	3- and 4-methylpheno1	N.D.	67.	ug/kg	N.D.	80.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	40.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	40.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	40.
3759	isophorone	N.D.	33.	ug/kg	N.D.	40.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	80.
3747	2,4-dimethylpheno1	N.D.	67.	ug/kg	N.D.	80.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	80.
3748	2,4-dichloropheno1	N.D.	67.	ug/kg	N.D.	80.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	40.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	40.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	40.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	80.
1190	4-chloro-3-methylpheno1	N.D.	67.	ug/kg	N.D.	80.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	40.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	200.
3749	2,4,6-trichloropheno1	N.D.	67.	ug/kg	N.D.	80.
4695	2,4,5-trichloropheno1	N.D.	67.	ug/kg	N.D.	80.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	40.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	40.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	40.

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



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





LLI Sample No. SW 2941680
 Collected: 6/ 4/98 at 11:30 by RLC
 Submitted: 6/ 6/98 Reported: 7/ 7/98
 Discard: 8/ 7/98

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

P.O.
 Rel.

SD-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 SD10- SDG#: HMS02-10

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	80.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	40.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	230.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	40.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	80.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	40.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	40.
3768	fluorene	N.D.	33.	ug/kg	N.D.	40.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	80.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	40.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	80.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	40.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.
3775	phenanthrene	100.	J	33.	120.	J 40.
3776	anthracene	45.	J	33.	54.	J 40.
4702	carbazole	N.D.	33.	ug/kg	N.D.	40.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3778	fluoranthene	87.	J	33.	100.	J 40.
1195	pyrene	66.	J	33.	79.	J 40.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	80.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	40.
3784	bis (2-ethylhexyl) phthalate	330.	J	67.	390.	J 80.
3782	chrysene	N.D.	33.	ug/kg	N.D.	40.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	80.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	40.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	40.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	40.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	40.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	40.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	40.

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

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

MEMBER
ACIL
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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2941680

Collected: 6/ 4/98 at 11:30 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD10- SDG#: HMS02-10

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

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD
DETECTION LIMIT UNITS

DRY WEIGHT
RESULTS METHOD
DETECTION LIMIT

TCL Semivolatiles cont'd

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

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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2275 Rev. A. 4. 97





LLI Sample No. SW 2941680

Collected: 06/04/98 at 11:30 by RLC

Submitted: 06/06/98

SD-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD10- SDG#: HMS02-10

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	2	06/18/98 0930	Barbara A. Menold
4688	TCL Semivolatiles	SW-846 8270C	1	06/25/98 1757	David J. Evans
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/25/98 1757	David J. Evans
0111	Moisture	EPA 160.3 modified	1	06/10/98 1949	Patrick N. Ward



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LLI Sample No. 2941680

SD-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

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

4688	TCL Semivolatiles	Batch: 98169SLB026									
1185	phenol										
67.	ug/kg	N.D.		90	88	3	88			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		87	87	0	88			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		89	87	2	89			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		84	84	0	82			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	83	0	83			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		89	89	0	87			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		90	87	3	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		100	98	2	97			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		89	87	2	92			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		91	88	2	89			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		81	83	3	84			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		91	91	1	97			56	110
3759	isophorone										
33.	ug/kg	N.D.		95	93	2	100			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		92	90	3	91			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	87	2	90			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	93			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		88	87	1	91			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		89	88	1	91			57	104
3761	naphthalene										
33.	ug/kg	N.D.		84	84	0	89			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		46	60	28	86			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	91	1	89			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		91	90	1	97			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	87	0	93			60	102



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See reverse side for explanation of symbols and abbreviations

2216 Rev. 3/2/97





LLI Sample No. 2941680

SD-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		51	65	24	82			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		93	94	1	95			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		92	96	4	97			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		92	91	1	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		93	95	2	102			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		89	89	0	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	85	2	91			62	101

4689	TCL Semivolatiles cont'd	Batch: 98169SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		67	78	15	100			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	86	1	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		73	67	8	92			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		95	98	3	101			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	89	0	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		89	91	2	110			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		90	91	1	106			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		87	89	2	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		90	90	0	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		90	89	0	92			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	86	18	103			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		76	70	9	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		87	87	0	92			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		90	89	1	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		95	91	5	93			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		103	89	14	81			42	108



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See reverse side for explanation of symbols and abbreviations

2016 Rev. 3/1/97





LLI Sample No. 2941680

SD-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		91	89	2	94			62	107
3776	anthracene										
33.	ug/kg	N.D.		90	88	2	96			62	105
4702	carbazole										
33.	ug/kg	N.D.		89	89	1	94			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		91	90	1	95			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		89	89	1	95			58	110
1195	pyrene										
33.	ug/kg	N.D.		90	85	5	102			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		92	88	4	103			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		31	47	40	90			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		89	86	3	99			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		84	83	1	104			8	158
3782	chrysene										
33.	ug/kg	N.D.		87	84	3	96			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		95	92	3	122			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		87	80	8	101			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		92	90	2	108			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		90	88	3	109			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		89	86	3	111			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		90	89	2	112			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		88	85	3	110			52	113
0111	Moisture										
0.080	% by wt.	Batch: 981610199820003A	9				100	100	0	99	101



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

2016 Rev 8.1.07





LLI Sample No. **2941680**
SD-10 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Phenol-d6	82	39 108
		2-Flphenol	83	35 108
		2,4,6-TBP	86	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	87	31 126
		2-Fbiphenyl	83	45 113
		Tphenyl14	76	37 130



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See reverse side for explanation of symbols and abbreviations.

2216 Rev 8/01/97





LLI Sample No. SW 2941681
Collected: 6/ 4/98 at 10:55 by RLC
Submitted: 6/ 6/98 Reported: 7/ 7/98
Discard: 8/ 7/98

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

P.O.
Rel.

SD-11 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD11- SDG#: HMS02-11

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	26.5		0.080	% by wt.	

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

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 22:32:34 D 0003 12 129915 618146
 863 0.00 00033420 ASR000



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

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





LLI Sample No. SW 2941681

Collected: 6/ 4/98 at 10:55 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-11 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

SD11- SDG#: HMS02-11

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

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	phenoI	N.D.	67.	ug/kg	N.D.	91.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	45.
1186	2-chlorophenoI	N.D.	33.	ug/kg	N.D.	45.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	45.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	45.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	45.
4690	2-methylphenoI	N.D.	33.	ug/kg	N.D.	45.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	45.
4692	3- and 4-methylphenoI	N.D.	67.	ug/kg	N.D.	91.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	45.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	45.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	45.
3759	isophorone	N.D.	33.	ug/kg	N.D.	45.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	91.
3747	2,4-dimethylphenoI	N.D.	67.	ug/kg	N.D.	91.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	91.
3748	2,4-dichlorophenoI	N.D.	67.	ug/kg	N.D.	91.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	45.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	45.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	45.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	91.
1190	4-chloro-3-methylphenoI	N.D.	67.	ug/kg	N.D.	91.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	45.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	230.
3749	2,4,6-trichlorophenoI	N.D.	67.	ug/kg	N.D.	91.
4695	2,4,5-trichlorophenoI	N.D.	67.	ug/kg	N.D.	91.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	45.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	45.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	91.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	45.

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

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

MEMBER

 Lancaster Laboratories
 2425 New Holland Pike
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LLI Sample No. SW 2941681

Collected: 6/ 4/98 at 10:55 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-11 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

SD11- SDG#: HMS02-11

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

P.O.
 Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	91.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	45.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	260.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	230.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	45.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	91.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	45.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	91.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	45.
3768	fluorene	N.D.	33.	ug/kg	N.D.	45.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	91.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	230.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	45.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	91.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	45.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	230.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	45.
3776	anthracene	N.D.	33.	ug/kg	N.D.	45.
4702	carbazole	N.D.	33.	ug/kg	N.D.	45.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	91.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	45.
1195	pyrene	N.D.	33.	ug/kg	N.D.	45.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	91.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	91.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	45.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	91.
3782	chrysene	N.D.	33.	ug/kg	N.D.	45.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	91.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	45.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	45.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	45.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	45.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	45.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	45.

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

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



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2210 T-77 9/0 87





LLI Sample No. SW 2941681

Collected: 6/ 4/98 at 10:55 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-11 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD11- SDG#: HMS02-11

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

P.O.
Rel.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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

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

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



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2216 Rev 8/1/97





LLI Sample No. SW 2941681

Collected: 06/04/98 at 10:55 by RLC

Submitted: 06/06/98

SD-11 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD11- SDG#: HMS02-11

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 35508	2	06/18/98 0930	Barbara A. Menold
4688	TCL Semivolatiles	SW-846 8270C	1	06/25/98 1900	David J. Evans
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/25/98 1900	David J. Evans
0111	Moisture	EPA 160.3 modified	1	06/10/98 1949	Patrick N. Ward



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LLI Sample No. 2941681

SD-11 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4688 TCL Semivolatiles		Batch: 98169SLB026									
1185 phenol											
67.	ug/kg	N.D.		90	88	3	88			49	105
3753 bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		87	87	0	88			53	109
1186 2-chlorophenol											
33.	ug/kg	N.D.		89	87	2	89			55	107
3754 1,3-dichlorobenzene											
33.	ug/kg	N.D.		84	84	0	82			53	103
1187 1,4-dichlorobenzene											
33.	ug/kg	N.D.		84	83	0	83			52	103
3755 1,2-dichlorobenzene											
33.	ug/kg	N.D.		89	89	0	87			56	107
4690 2-methylphenol											
33.	ug/kg	N.D.		90	87	3	92			57	101
4691 2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		100	98	2	97			38	117
4692 3- and 4-methylphenol											
67.	ug/kg	N.D.		89	87	2	92			48	116
1188 N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		91	88	2	89			50	124
3757 hexachloroethane											
33.	ug/kg	N.D.		81	83	3	84			52	108
3758 nitrobenzene											
33.	ug/kg	N.D.		91	91	1	97			56	110
3759 isophorone											
33.	ug/kg	N.D.		95	93	2	100			57	114
3746 2-nitrophenol											
67.	ug/kg	N.D.		92	90	3	91			59	107
3747 2,4-dimethylphenol											
67.	ug/kg	N.D.		88	87	2	90			39	108
3760 bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		86	85	1	93			56	103
3748 2,4-dichlorophenol											
67.	ug/kg	N.D.		88	87	1	91			59	100
1189 1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		89	88	1	91			57	104
3761 naphthalene											
33.	ug/kg	N.D.		84	84	0	89			58	99
4693 4-chloroaniline											
33.	ug/kg	N.D.		46	60	28	86			1	102
3762 hexachlorobutadiene											
67.	ug/kg	N.D.		90	91	1	89			56	115
1190 4-chloro-3-methylphenol											
67.	ug/kg	N.D.		91	90	1	97			56	108
4694 2-methylnaphthalene											
33.	ug/kg	N.D.		87	87	0	93			60	102



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717-656-2300 Fax: 717-656-2631

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2210 Rev. 5/1/97





LLI Sample No. 2941681

SD-11 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		51	65	24	82			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		93	94	1	95			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		92	96	4	97			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		92	91	1	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		93	95	2	102			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		89	89	0	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	85	2	91			62	101

4689	TCL Semivolatiles cont'd	Batch: 98169SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		67	78	15	100			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	86	1	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		73	67	8	92			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		95	98	3	101			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	89	0	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		89	91	2	110			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		90	91	1	106			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		87	89	2	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		90	90	0	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		90	89	0	92			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	86	18	103			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		76	70	9	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		87	87	0	92			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		90	89	1	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		95	91	5	93			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		103	89	14	81			42	108



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2941681

SD-11 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775 phenanthrene	33. ug/kg	N.D.		91	89	2	94			62	107
3776 anthracene	33. ug/kg	N.D.		90	88	2	96			62	105
4702 carbazole	33. ug/kg	N.D.		89	89	1	94			57	112
3777 di-n-butyl phthalate	67. ug/kg	N.D.		91	90	1	95			59	114
3778 fluoranthene	33. ug/kg	N.D.		89	89	1	95			58	110
1195 pyrene	33. ug/kg	N.D.		90	85	5	102			52	115
3780 butyl benzyl phthalate	67. ug/kg	N.D.		92	88	4	103			58	119
3783 3,3'-dichlorobenzidine	67. ug/kg	N.D.		31	47	40	90			15	94
3781 benzo (a) anthracene	33. ug/kg	N.D.		89	86	3	99			63	106
3784 bis (2-ethylhexyl) phthalate	67. ug/kg	N.D.		84	83	1	104			8	158
3782 chrysene	33. ug/kg	N.D.		87	84	3	96			60	107
3785 di-n-octyl phthalate	67. ug/kg	N.D.		95	92	3	122			54	127
3786 benzo (b) fluoranthene	33. ug/kg	N.D.		87	80	8	101			59	105
3787 benzo (k) fluoranthene	33. ug/kg	N.D.		92	90	2	108			63	108
3788 benzo (a) pyrene	33. ug/kg	N.D.		90	88	3	109			61	107
3789 indeno (1,2,3-cd) pyrene	33. ug/kg	N.D.		89	86	3	111			55	111
3790 dibenz (a,h) anthracene	33. ug/kg	N.D.		90	89	2	112			60	117
3791 benzo (ghi) perylene	33. ug/kg	N.D.		88	85	3	110			52	113
0111 Moisture	0.080 % by wt.	Batch: 981610199820003A	9				100	100	0	99	101



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2216 Rev. 3.0.97





LLI Sample No. 2941681
SD-11 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4688 TCL Semivolatiles		Phenol-d6	89	39 108
		2-Flphenol	87	35 108
		2,4,6-TBP	97	23 125
4689 TCL Semivolatiles cont'd		Nitrobz-d5	92	31 126
		2-Fbiphenyl	94	45 113
		Tphenylid14	89	37 130



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2016 Rev. 8.4.97





LLI Sample No. SW 2941682

Collected: 6/ 4/98 at 10:05 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-12 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD12- SDG#: HMS02-12

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

P.O.
Rel.

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

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 22:34:17 D 0003 12 129915 618146
 863 0.00 00033420 ASR000

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



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2216 Rev. 9/97





LLI Sample No. SW 2941682

Collected: 6/ 4/98 at 10:05 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-12 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD12- SDG#: HMS02-12

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	78.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	39.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	39.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	39.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	39.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	78.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	39.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	39.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	39.
3759	isophorone	N.D.	33.	ug/kg	N.D.	39.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	78.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	78.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	78.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	78.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	39.
3761	naphthalene	210.	J	33.	240.	J
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	39.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	78.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	78.
4694	2-methylnaphthalene	47.	J	33.	55.	J
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	78.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	78.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	39.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	39.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	78.
3765	acenaphthylene	49.	J	33.	57.	J

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

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



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2015 Rev 6/11/02





LLI Sample No. SW 2941682

Collected: 6/ 4/98 at 10:05 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-12 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD12- SDG#: HMS02-12

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT	
TCL Semivolatiles cont'd							
4697	3-nitroaniline	N.D.		67.	ug/kg	N.D.	78.
1191	acenaphthene	210.	J	33.	ug/kg	240.	J 39.
3750	2,4-dinitrophenol	N.D.		190.	ug/kg	N.D.	230.
1192	4-nitrophenol	N.D.		170.	ug/kg	N.D.	190.
4698	dibenzofuran	150.	J	33.	ug/kg	180.	J 39.
1193	2,4-dinitrotoluene	N.D.		67.	ug/kg	N.D.	78.
3767	2,6-dinitrotoluene	N.D.		33.	ug/kg	N.D.	39.
3770	diethyl phthalate	N.D.		67.	ug/kg	N.D.	78.
3769	4-chlorophenyl phenyl ether	N.D.		33.	ug/kg	N.D.	39.
3768	fluorene	260.	J	33.	ug/kg	300.	J 39.
4700	4-nitroaniline	N.D.		67.	ug/kg	N.D.	78.
3751	4,6-dinitro-2-methylphenol	N.D.		170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.		33.	ug/kg	N.D.	39.
3773	4-bromophenyl phenyl ether	N.D.		67.	ug/kg	N.D.	78.
3774	hexachlorobenzene	N.D.		33.	ug/kg	N.D.	39.
1194	pentachlorophenol	N.D.		170.	ug/kg	N.D.	190.
3775	phenanthrene	770.		33.	ug/kg	890.	39.
3776	anthracene	750.		33.	ug/kg	870.	39.
4702	carbazole	70.	J	33.	ug/kg	81.	J 39.
3777	di-n-butyl phthalate	N.D.		67.	ug/kg	N.D.	78.
3778	fluoranthene	920.		33.	ug/kg	1,100.	39.
1195	pyrene	650.		33.	ug/kg	750.	39.
3780	butyl benzyl phthalate	N.D.		67.	ug/kg	N.D.	78.
3783	3,3'-dichlorobenzidine	N.D.		67.	ug/kg	N.D.	78.
3781	benzo (a) anthracene	320.	J	33.	ug/kg	370.	J 39.
3784	bis (2-ethylhexyl) phthalate	N.D.		67.	ug/kg	N.D.	78.
3782	chrysene	520.		33.	ug/kg	610.	39.
3785	di-n-octyl phthalate	N.D.		67.	ug/kg	N.D.	78.
3786	benzo (b) fluoranthene	290.	J	33.	ug/kg	340.	J 39.
3787	benzo (k) fluoranthene	110.	J	33.	ug/kg	130.	J 39.
3788	benzo (a) pyrene	200.	J	33.	ug/kg	230.	J 39.
3789	indeno (1,2,3-cd) pyrene	110.	J	33.	ug/kg	120.	J 39.
3790	dibenz (a,h) anthracene *	N.D.		33.	ug/kg	N.D.	39.
3791	benzo (ghi) perylene	84.	J	33.	ug/kg	98.	J 39.

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

Respectfully Submitted
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Group Leader, GC/MS SVOA



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221b Rev. 5/97





LLI Sample No. SW 2941682

Collected: 6/ 4/98 at 10:05 by RLC

Submitted: 6/ 6/98 Reported: 7/ 7/98

Discard: 8/ 7/98

SD-12 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
SD12- SDG#: HMS02-12

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						

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

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

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



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2216 Rev. 6/97





LLI Sample No. SW 2941682

Collected: 06/04/98 at 10:05 by RLC

Submitted: 06/06/98

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

SD-12 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 SD12- SDG#: HMS02-12

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1		06/10/98 2300	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1		06/25/98 1956	David J. Evans
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		06/25/98 1956	David J. Evans
0111	Moisture	EPA 160.3 modified	1		06/10/98 1949	Patrick N. Ward



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2216 Rev 8/97





LLI Sample No. 2941682

SD-12 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

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

4688	TCL Semivolatiles	Batch: 98169SLB026									

1185	phenol										
67.	ug/kg	N.D.		90	88	3	88			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		87	87	0	88			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		89	87	2	89			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		84	84	0	82			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		84	83	0	83			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		89	89	0	87			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		90	87	3	92			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		100	98	2	97			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		89	87	2	92			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		91	88	2	89			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		81	83	3	84			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		91	91	1	97			56	110
3759	isophorone										
33.	ug/kg	N.D.		95	93	2	100			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		92	90	3	91			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		88	87	2	90			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		86	85	1	93			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		88	87	1	91			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		89	88	1	91			57	104
3761	naphthalene										
33.	ug/kg	N.D.		84	84	0	89			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		46	60	28	86			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		90	91	1	89			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		91	90	1	97			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		87	87	0	93			60	102



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2216 Rev. 4-1-97





L/LI Sample No. 2941682

SD-12 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		51	65	24	82			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		93	94	1	95			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		92	96	4	97			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		92	91	1	97			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		93	95	2	102			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		89	89	0	97			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		83	85	2	91			62	101

4689	TCL Semivolatiles cont'd	Batch: 98169SLB026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		67	78	15	100			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		87	86	1	89			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		73	67	8	92			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		95	98	3	101			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		89	89	0	91			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		89	91	2	110			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		90	91	1	106			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		87	89	2	96			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		90	90	0	92			52	110
3768	fluorene										
33.	ug/kg	N.D.		90	89	0	92			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		72	86	18	103			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		76	70	9	88			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		87	87	0	92			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		90	89	1	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		95	91	5	93			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		103	89	14	81			42	108



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2216 001 9 0-07





LLI Sample No. 2941682

SD-12 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
	33. ug/kg	N.D.		91	89	2	94			62	107
3776	anthracene										
	33. ug/kg	N.D.		90	88	2	96			62	105
4702	carbazole										
	33. ug/kg	N.D.		89	89	1	94			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		91	90	1	95			59	114
3778	fluoranthene										
	33. ug/kg	N.D.		89	89	1	95			58	110
1195	pyrene										
	33. ug/kg	N.D.		90	85	5	102			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		92	88	4	103			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		31	47	40	90			15	94
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		89	86	3	99			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		84	83	1	104			8	158
3782	chrysene										
	33. ug/kg	N.D.		87	84	3	96			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		95	92	3	122			54	127
3786	benzo (b) fluoranthene										
	33. ug/kg	N.D.		87	80	8	101			59	105
3787	benzo (k) fluoranthene										
	33. ug/kg	N.D.		92	90	2	108			63	108
3788	benzo (a) pyrene										
	33. ug/kg	N.D.		90	88	3	109			61	107
3789	indeno (1,2,3-cd) pyrene										
	33. ug/kg	N.D.		89	86	3	111			55	111
3790	dibenz (a,h) anthracene										
	33. ug/kg	N.D.		90	89	2	112			60	117
3791	benzo (ghi) perylene										
	33. ug/kg	N.D.		88	85	3	110			52	113
0111	Moisture										
	0.080 % by wt.	* Batch: 981610199820003A	9				100	100	0	99	101



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2215 Rev. 6/4/17





LLI Sample No. 2941682
SD-12 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618146
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	30	39	108
	2-Flphenol	30	35	108
	2,4,6-TBP	33	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	31	31	126
	2-Fbiphenyl	32	45	113
	Tphenylid14	29	37	130



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2215 93.1-10.91





LLI Sample No. SW 2943286

Collected: 6/ 9/98 at 12:30 by DCU

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

Discard: 8/ 6/98

GEO-02/0-2' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
0202- SDG#: HMS02-13

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

P.O.
Ref.

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

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 20:48:01 D 0003 10 129915 618545
 412 0.00 00033420 ASR000



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Respectfully Submitted
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 Group Leader, GC/MS SVOA





LLI Sample No. SW 2943286

Collected: 6/ 9/98 at 12:30 by DCU

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

Discard: 8/ 6/98

GEO-02/0-2' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
0202- SDG#: HMS02-13

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

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	76.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	38.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	38.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	76.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	38.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	33.	ug/kg	N.D.	38.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	76.
3747	2,4-dimethylphenol	140.	J 67.	ug/kg	160.	J 76.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	76.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	76.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3761	naphthalene	4,700.	33.	ug/kg	5,400.	38.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	38.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	76.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	76.
4694	2-methylnaphthalene	6,500.	J 2,700.	ug/kg	7,400.	J3,000.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	76.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	76.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	38.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3765	acenaphthylene	11,000.	J 2,700.	ug/kg	12,000.	J3,000.

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. SW 2943286

Collected: 6/ 9/98 at 12:30 by DCU

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

Discard: 8/ 6/98

GEO-02/0-2' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
0202- SDG#: HMS02-13

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

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	76
1191	acenaphthene	35,000.	2,700.	ug/kg	41,000.	3,000
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	220.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	190.
4698	dibenzofuran	20,000.	J 2,700.	ug/kg	23,000.	J3,000.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	76.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	42,000.	2,700.	ug/kg	48,000.	3,000.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	76.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	76.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	160,000.	2,700.	ug/kg	190,000.	3,000.
3776	anthracene	51,000.	2,700.	ug/kg	58,000.	3,000.
4702	carbazole	9,800.	J 2,700.	ug/kg	11,000.	J3,000.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3778	fluoranthene	240,000.	2,700.	ug/kg	270,000.	3,000.
1195	pyrene	180,000.	2,700.	ug/kg	200,000.	3,000.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	76.
3781	benzo (a) anthracene	58,000.	2,700.	ug/kg	67,000.	3,000.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	76.
3782	chrysene	57,000.	2,700.	ug/kg	65,000.	3,000.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	76.
3786	benzo (b) fluoranthene	55,000.	2,700.	ug/kg	62,000.	3,000.
3787	benzo (k) fluoranthene	18,000.	J 2,700.	ug/kg	21,000.	J3,000.
3788	benzo (a) pyrene	36,000.	2,700.	ug/kg	41,000.	3,000.
3789	indeno (1,2,3-cd) pyrene	22,000.	J 2,700.	ug/kg	25,000.	J3,000.
3790	dibenz (a,h) anthracene	4,300.	33.	ug/kg	4,900.	38.
3791	benzo (ghi) perylene	18,000.	J 2,700.	ug/kg	21,000.	J3,000.

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



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

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





LLI Sample No. SW 2943286

Collected: 6/ 9/98 at 12:30 by DCU

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

Discard: 8/ 6/98

GEO-02/0-2' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
0202- SDG#: HMS02-13

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

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD	DETECTION LIMIT
	TCL Semivolatiles cont'd						

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

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

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



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See reverse side for explanation of symbols and abbreviations.

0215 Rev. 3-1-97





LLI Sample No. SW 2943286

Collected: 06/09/98 at 12:30 by DCU

Submitted: 06/10/98

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

GEO-02/0-2' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg MS
0202- SDG#: HMS02-13

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1		06/11/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1		06/30/98 1042	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		06/30/98 1042	Eileen Hostetler
0111	Moisture	EPA 160.3 modified	1		06/13/98 1831	Patrick N. Ward



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LLI Sample No. 2943286

GEO-02/0-2' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUF	LCS RPD	LCS LOW	LCS HIGH
4688 TCL Semivolatiles		Batch: 981625LF026									
1185	phenol										
67.	ug/kg	N.D.		79	69	14	81			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		73	67	10	79			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		79	70	12	84			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.O.		75	67	12	83			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		75	66	12	82			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		78	69	12	85			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		78	70	11	84			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		81	73	11	87			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		78	70	10	84			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	70	12	83			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		76	67	13	84			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		81	72	12	89			56	110
3759	isophorone										
33.	ug/kg	N.D.		85	74	14	92			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		83	71	15	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		79	69	14	86			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		76	67	12	82			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		82	71	14	86			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		80	70	13	87			57	104
3761	naphthalene										
33.	ug/kg	N.D.		75	65	14	79			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		63	59	6	64			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	71	15	89			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		85	74	15	90			56	108
4694	2-methylnaphthalene										
2,700.	ug/kg	N.D.		78	69	12	83			60	102



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See reverse side for explanation of symbols and abbreviations.

2216 351 8443





LLI Sample No. 2943286

GEO-02/0-2' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP.	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
2,700.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
2,700.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
2,700.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
2,700.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108



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See reverse side for explanation of symbols and abbreviations.

2016 74 30407





LLI Sample No. 2943286

GEO-02/0-2' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775 phenanthrene	ug/kg	N.D.		82	72	13	88			62	107
2,700.	ug/kg										
3776 anthracene	ug/kg	N.D.		83	70	16	91			62	105
2,700.	ug/kg										
4702 carbazole	ug/kg	N.D.		84	73	14	91			57	112
2,700.	ug/kg										
3777 di-n-butyl phthalate	ug/kg	N.D.		80	71	12	87			59	114
67.	ug/kg										
3778 fluoranthene	ug/kg	N.D.		84	73	14	91			58	110
2,700.	ug/kg										
1195 pyrene	ug/kg	N.D.		78	67	15	83			52	115
2,700.	ug/kg										
3780 butyl benzyl phthalate	ug/kg	N.D.		77	68	13	85			58	119
67.	ug/kg										
3783 3,3'-dichlorobenzidine	ug/kg	N.D.		67	62	8	53			15	94
67.	ug/kg										
3781 benzo (a) anthracene	ug/kg	N.D.		85	74	14	91			63	106
2,700.	ug/kg										
3784 bis (2-ethylhexyl) phthalate	ug/kg	N.D.		76	66	14	82			8	158
67.	ug/kg										
3782 chrysene	ug/kg	N.D.		82	72	13	88			60	107
2,700.	ug/kg										
3785 di-n-octyl phthalate	ug/kg	N.D.		81	70	15	86			54	127
67.	ug/kg										
3786 benzo (b) fluoranthene	ug/kg	N.D.		79	69	13	85			59	105
2,700.	ug/kg										
3787 benzo (k) fluoranthene	ug/kg	N.D.		84	72	16	90			63	108
2,700.	ug/kg										
3788 benzo (a) pyrene	ug/kg	N.D.		86	74	15	93			61	107
2,700.	ug/kg										
3789 indeno (1,2,3-cd) pyrene	ug/kg	N.D.		85	73	16	91			55	111
2,700.	ug/kg										
3790 dibenz (a,h) anthracene	ug/kg	N.D.		84	71	17	90			60	117
33.	ug/kg										
3791 benzo (ghi) perylene	ug/kg	N.D.		84	71	17	90			52	113
2,700.	ug/kg										
0111 Moisture	% by wt.	*Batch: 981640199820003A	4				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations.

2276 Rev. 3-01





LLI Sample No. 2943286

GEO-02/0-2' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	81	39	108
	2-Flphenol	79	35	108
	2,4,6-TBP	91	23	125
4689 TCL Semivolatiles cont d	Nitrobz-d5	84	31	126
	2-Fbiphenyl	80	45	113
	Tphenylid14	60	37	130



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See reverse side for explanation of symbols and abbreviations.

2215 001 7-1-00





LLI Sample No. SW 2943287

Collected: 6/ 9/98 at 16:49 by DCU

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

Discard: 8/ 6/98

GEO-06/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
0655- SDG#: HMS02-14

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	8.39	0.080	% by wt.		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius					

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:49:47 D 0003 10 129915 618545
412 0.00 00033420 ASR000



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





LLI Sample No. SW 2943287

Collected: 6/ 9/98 at 16:49 by DCU

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

Discard: 8/ 6/98

GEO-06/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
0656- SDG#: HMSG2-14

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

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	73.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	36.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	36.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	36.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	36.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	36.
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	36.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	36.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	73.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	36.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	36.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	36.
3759	isophorone	N.D.	33.	ug/kg	N.D.	36.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	73.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	73.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	73.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	73.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	36.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	36.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	36.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	73.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	73.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	36.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	180.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	73.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	73.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	36.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	36.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	36.

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. SW 2943287

Collected: 6/ 9/98 at 16:49 by DCU

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

Discard: 8/ 6/98

GEO-06/5-6 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
0656- SDG#: HMS02-14

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

P.O.
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	73.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	36.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	210.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	180.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	36.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	73.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	36.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	36.
3768	fluorene	N.D.	33.	ug/kg	N.D.	36.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	73.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	180.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	36.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	73.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	36.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	180.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	36.
3776	anthracene	N.D.	33.	ug/kg	N.D.	36.
4702	carbazole	N.D.	33.	ug/kg	N.D.	36.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	36.
1195	pyrene	N.D.	33.	ug/kg	N.D.	36.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	73.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	36.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	73.
3782	chrysene	N.D.	33.	ug/kg	N.D.	36.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	36.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	36.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	36.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	36.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	36.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	36.

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

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





LLI Sample No. SW 2943287
Collected: 6/ 9/98 at 16:49 by DCU
Submitted: 6/10/98 Reported: 7/ 6/98
Discard: 8/ 6/98

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

P.O.
Rel.

GEO-06/5-6' Grab Soil Sample
Gulf States Creosoting Site: Hattiesburg, MS
0656- SDG#: HMS02-14

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

DRY WEIGHT
METHOD
RESULTS DETECTION LIMIT

TCL Semivolatiles cont'd

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

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

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



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LLI Sample No. SW 2943287

Collected: 06/09/98 at 16:49 by DCU

Submitted: 06/10/98

GEO-06/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
0656 SDG#: HMS02-14

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	06/26/98 1826	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/26/98 1826	Eileen Hostetler
0111	Moisture	EPA 160.3 modified	1	06/13/98 1831	Patrick W. Ward



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2215 Rev 3-4-97





LLI Sample No. 2943287

GEO-06/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
4688	TCL Semivolatiles	Batch: 98162SLF026										
1185	phenol											
67.	ug/kg	N.D.		79	69	14	81			49	105	
3753	bis (2-chloroethoxy) ether											
33.	ug/kg	N.D.		73	67	10	79			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		79	70	12	84			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		75	67	12	83			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		75	66	12	82			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		78	69	12	85			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		78	70	11	84			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		81	73	11	87			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		78	70	10	84			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		79	70	12	83			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		76	67	13	84			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		81	72	12	89			56	110	
3759	isophorone											
33.	ug/kg	N.D.		85	74	14	92			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		83	71	15	86			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		79	69	14	86			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		76	67	12	82			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		82	71	14	86			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		80	70	13	87			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		75	65	14	79			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		63	59	6	64			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		83	71	15	89			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		85	74	15	90			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		78	69	12	83			60	102	



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1215 04/14/07





LLI Sample No. 2943287

GEO-06/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
33.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108



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2215 10/15/01





LLI Sample No. 2943287

GEO-06/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MCL	SAMPLE UNITS	BLANK	DUP RPD	MC	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		82	72	13	88			62	107
3776	anthracene										
33.	ug/kg	N.D.		83	70	16	91			62	105
4702	carbazole										
33.	ug/kg	N.D.		84	73	14	91			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		80	71	12	87			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		84	73	14	91			58	110
1195	pyrene										
33.	ug/kg	N.D.		78	67	15	83			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		77	68	13	85			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		67	62	8	53			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		85	74	14	91			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		76	66	14	82			8	158
3782	chrysene										
33.	ug/kg	N.D.		82	72	13	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		81	70	15	86			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		79	69	13	85			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		84	72	16	90			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		86	74	15	93			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		85	73	16	91			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		84	71	17	90			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	71	17	90			52	113
0111	Moisture										
0.080	% by wt.		4				100	100	0	99	101

* Batch: 981640199820003A



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See reverse side for explanation of symbols and abbreviations

12/14 Rev. 1.1.1





LLI Sample No. **2943287**
GEO-06/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	75	39	108
	2-Flpheno1	76	35	108
	2,4,6-TBP	87	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	75	31	126
	2-Fbiphnyl	76	45	113
	Tphenylid14	74	37	130



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LLI Sample No. SW 2943288

Collected: 6/ 9/98 at 10:12 by DCU

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

Discard: 8/ 6/98

GEO-1970-1' Grab Soil Sample

Gulf States Creosoting Site; Hattiesburg, MS
1901- SDG#: HMS02-15

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	METHOD LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles			See Page	2	
4589	TCL Semivolatiles cont'd			See Page	3	
0111	Moisture	9.64	0.080	% by wt.		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 20:51:54 D 0003 10 129915 618545
 412 0.00 00033420 ASR000



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





LLI Sample No. SW 2943288

Collected: 6/ 9/98 at 10:12 by DCU

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

Discard: 8/ 6/98

GEO-19/0-1 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
1901- SDG#: HMS02-15

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles						
1185	phenol	N.D.	67	ug/kg	N.D.	74.
3753	bis (2-chloroethyl) ether	N.D.	33	ug/kg	N.D.	37.
1186	2-chlorophenol	N.D.	33	ug/kg	N.D.	37.
3754	1,3-dichlorobenzene	N.D.	33	ug/kg	N.D.	37.
1187	1,4-dichlorobenzene	N.D.	33	ug/kg	N.D.	37.
3755	1,2-dichlorobenzene	N.D.	33	ug/kg	N.D.	37.
4690	2-methylphenol	66.	J	33	73.	J
4691	2,2'-oxybis (1-chloropropane)	N.D.	33	ug/kg	N.D.	37.
4692	3- and 4-methylphenol	190.	J	67	210.	J
1188	N-nitrosodi-n-propylamine	N.D.	33	ug/kg	N.D.	37.
3757	hexachloroethane	N.D.	33	ug/kg	N.D.	37.
3758	nitrobenzene	N.D.	33	ug/kg	N.D.	37.
3759	isophorone	N.D.	33	ug/kg	N.D.	37.
3746	2-nitrophenol	N.D.	67	ug/kg	N.D.	74.
3747	2,4-dimethylphenol	230.	J	67	250.	J
3760	bis (2-chloroethoxy) methane	N.D.	67	ug/kg	N.D.	74.
3748	2,4-dichlorophenol	N.D.	67	ug/kg	N.D.	74.
1189	1,2,4-trichlorobenzene	N.D.	33	ug/kg	N.D.	37.
3761	naphthalene	690.	33	ug/kg	770.	37.
4693	4-chloroaniline	N.D.	33	ug/kg	N.D.	37.
3762	hexachlorobutadiene	N.D.	67	ug/kg	N.D.	74.
1190	4-chloro-3-methylphenol	N.D.	67	ug/kg	N.D.	74.
4694	2-methylnaphthalene	480.	33	ug/kg	530.	37.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	180.
3749	2,4,6-trichlorophenol	N.D.	67	ug/kg	N.D.	74.
4695	2,4,5-trichlorophenol	N.D.	67	ug/kg	N.D.	74.
3764	2-chloronaphthalene	N.D.	33	ug/kg	N.D.	37.
4696	2-nitroaniline	N.D.	33	ug/kg	N.D.	37.
3766	dimethyl phthalate	N.D.	67	ug/kg	N.D.	74.
3765	acenaphthylene	12,000.	330.	ug/kg	14,000.	370.

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



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Respectfully Submitted
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Group Leader, GC/MS SVOA





LLI Sample No. SW 2943288

Collected: 6/ 9/98 at 10:12 by DCU

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

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GEO-1970-1' Grab Soil Sample

GuLF States Creosoting Site: Hattiesburg, MS
1901 - SDG#: HMS02-15

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	LIMIT UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	74.
1191	acenaphthene	930.	33.	ug/kg	1,000.	37
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	220
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	180.
4698	dibenzofuran	670.	33.	ug/kg	750.	37.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	74.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	37.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	74.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	37.
3768	fluorene	1,300.	33.	ug/kg	1,400.	37.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	74.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	180.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	37.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	74.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	37.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	180.
3775	phenanthrene	7,000.	330.	ug/kg	7,700.	370.
3776	anthracene	23,000.	330.	ug/kg	25,000.	370.
4702	carbazole	5,300.	330.	ug/kg	5,900.	370.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	74.
3778	fluoranthene	100,000.	1,000.	ug/kg	110,000.	1,100.
1195	pyrene	130,000.	1,000.	ug/kg	140,000.	1,100.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	74.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	74.
3781	benzo (a) anthracene	57,000.	1,000.	ug/kg	63,000.	1,100.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	74.
3782	chrysene	60,000.	1,000.	ug/kg	66,000.	1,100.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	74.
3786	benzo (b) fluoranthene	84,000.	1,000.	ug/kg	93,000.	1,100.
3787	benzo (k) fluoranthene	29,000.	330.	ug/kg	32,000.	370.
3788	benzo (a) pyrene	50,000.	330.	ug/kg	56,000.	370.
3789	indeno (1,2,3-cd) pyrene	29,000.	330.	ug/kg	32,000.	370.
3790	dibenz (a,h) anthracene *	7,600.	330.	ug/kg	8,400.	370.
3791	benzo (ghi) perylene	21,000.	330.	ug/kg	24,000.	370.

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 SVOA





Lancaster Laboratories
A division of Thermo Analytical Inc.

LLI Sample No. SW 2943288

Collected: 6/ 9/98 at 10:12 by DCU

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

Discard: 8/ 6/98

GEO-19/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
1901- SDG#: HMS02-15

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

P.O.
Ret.

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

TCL Semivolatiles cont'd

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

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

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



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

See reverse side for explanation of symbols and abbreviations.

0219 04/ 2.0.17





LLI Sample No. SW 2943288

Collected: 06/09/98 at 10:12 by DCU

Submitted: 06/10/98

GEO-19/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
1901. SDG#: HMS02-15

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1		06/11/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1		06/29/98 1014	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		06/29/98 1014	Eileen Hostetler
0111	Moisture	EPA 160.3 modified	1		06/13/98 1831	Patrick N. Ward



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See reverse side for explanation of symbols and abbreviations.

0216 05 017





LLI Sample No. 2943288

GEO-19/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
4688 TCL Semivolatiles		Batch: 98162SLF026										
1185	phenol											
67.	ug/kg	N.D.		79	69	14	81			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		73	67	10	79			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		79	70	12	84			55	107	
3754	1,3-dichlorobenzene											
33.	ug/Kg	N.D.		75	67	12	83			53	103	
1187	1,4-dichlorobenzene											
33.	ug/Kg	N.D.		75	66	12	82			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		78	69	12	85			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		78	70	11	84			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		81	73	11	87			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		78	70	10	84			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		79	70	12	83			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		76	67	13	84			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		81	72	12	89			56	110	
3759	isophorone											
33.	ug/kg	N.D.		85	74	14	92			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		83	71	15	86			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		79	69	14	86			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		76	67	12	82			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		82	71	14	86			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		80	70	13	87			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		75	65	14	79			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		63	59	6	64			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		83	71	15	89			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		85	74	15	90			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		78	69	12	83			60	102	



Lancaster Laboratories
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1010 11/13/01





LLI Sample No. 2943288
 GEO-19/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
330.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
33.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108



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2215 Rev. 12-97





LLI Sample No. 2943288

GEO-19/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775 phenanthrene	330. ug/kg	N.D.		82	72	13	88			62	107
3776 anthracene	330. ug/kg	N.D.		83	70	16	91			62	105
4702 carbazole	330. ug/kg	N.D.		84	73	14	91			57	112
3777 di-n-butyl phthalate	67. ug/kg	N.D.		80	71	12	87			59	114
3778 fluoranthene	1,000. ug/kg	N.D.		84	73	14	91			58	110
1195 pyrene	1,000. ug/kg	N.D.		78	67	15	83			52	115
3780 butyl benzyl phthalate	67. ug/kg	N.D.		77	68	13	85			58	119
3783 3,3'-dichlorobenzidine	67. ug/kg	N.D.		67	62	8	53			15	94
3781 benzo (a) anthracene	1,000. ug/kg	N.D.		85	74	14	91			63	106
3784 bis (2-ethylhexyl) phthalate	67. ug/kg	N.D.		76	66	14	82			8	158
3782 chrysene	1,000. ug/kg	N.D.		82	72	13	88			60	107
3785 di-n-octyl phthalate	67. ug/kg	N.D.		81	70	15	86			54	127
3786 benzo (b) fluoranthene	1,000. ug/kg	N.D.		79	69	13	85			59	105
3787 benzo (k) fluoranthene	330. ug/kg	N.D.		84	72	16	90			63	108
3788 benzo (a) pyrene	330. ug/kg	N.D.		86	74	15	93			61	107
3789 indeno (1,2,3-cd) pyrene	330. ug/kg	N.D.		85	73	16	91			55	111
3790 dibenz (a,h) anthracene	330. ug/kg	N.D.		84	71	17	90			60	117
3791 benzo (ghi) perylene	330. ug/kg	N.D.		84	71	17	90			52	113
0111 Moisture	0.080 % by wt.	* Batch: 981640199820003A	4				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations

2014





LLI Sample No. 2943288

GEO-19/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	84	39	106
	2-Flphenol	83	35	108
	2,4,6-TBP	95	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	93	31	126
	2-Fbiphenyl	85	45	113
	Tphenylid14	68	37	130



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2210 Rev. 3/07





LLI Sample No. SW 2943289

Collected: 6/ 9/98 at 10:15 by DCU

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

GEO-19/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
1923- SDG#: HMS02-16

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

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	DETECTION	LIMIT	RESULTS	DETECTION	LIMIT
4688	TCL Semivolatiles						See Page 2
4689	TCL Semivolatiles cont'd						See Page 3
0111	Moisture	3.97	0.080				% by wt.
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:54:29 D 0003 10 129915 618545
412 0.00 00033420 ASR000



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





LLI Sample No. SW 2943289

Collected: 6/ 9/98 at 10:15 by DCU

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GEO-19/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
1923- SDG#: HMS02-16

Account No: 07802
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Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles						
1185	phenoI	N.D.	67.	ug/kg	N.D.	73.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	37.
1186	2-chlorophenoI	N.D.	33.	ug/kg	N.D.	37.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
4690	2-methylphenoI	N.D.	33.	ug/kg	N.D.	37.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	37.
4692	3- and 4-methylphenoI	N.D.	67.	ug/kg	N.D.	37.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	73.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	37.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	37.
3759	isophorone	N.D.	33.	ug/kg	N.D.	37.
3746	2-nitrophenoI	N.D.	67.	ug/kg	N.D.	37.
3747	2,4-dimethylphenoI	N.D.	67.	ug/kg	N.D.	73.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	73.
3748	2,4-dichlorophenoI	N.D.	67.	ug/kg	N.D.	73.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
3761	naphthalene	69.	J	33.	76.	J
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	37.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	73.
1190	4-chloro-3-methylphenoI	N.D.	67.	ug/kg	N.D.	73.
4694	2-methylnaphthalene	56.	J	33.	62.	J
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	180.
3749	2,4,6-trichlorophenoI	N.D.	67.	ug/kg	N.D.	73.
4695	2,4,5-trichlorophenoI	N.D.	67.	ug/kg	N.D.	73.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	37.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	37.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3765	acenaphthylene	630.	33.	ug/kg	690.	37.

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



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Collected: 6/ 9/98 at 10:15 by OCU

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GEO-19/2-3' Grab Soil Sample

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1923- SDG#: HMS02-16

Account No: 07802
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CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	73.
1191	acenaphthene	33.	J 33.	ug/kg	97.	J 37.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	210.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	180.
4698	dibenzofuran	71.	J 33.	ug/kg	78.	J 37.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	73.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	37.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	37.
3768	fluorene	130.	J 33.	ug/kg	140.	J 37.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	73.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	180.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	37.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	73.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	37.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	180.
3775	phenanthrene	510.	33.	ug/kg	560.	37.
3776	anthracene	1,500.	33.	ug/kg	1,600.	37.
4702	carbazole	360.	33.	ug/kg	400.	37.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3778	fluoranthene	5,300.	33.	ug/kg	5,900.	37.
1195	pyrene	7,200.	67.	ug/kg	7,900.	73.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	73.
3781	benzo (a) anthracene	2,700.	33.	ug/kg	3,000.	37.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	73.
3782	chrysene	3,000.	33.	ug/kg	3,300.	37.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3786	benzo (b) fluoranthene	4,000.	33.	ug/kg	4,400.	37.
3787	benzo (k) fluoranthene	1,400.	33.	ug/kg	1,500.	37.
3788	benzo (a) pyrene	2,200.	33.	ug/kg	2,400.	37.
3789	indeno (1,2,3-cd) pyrene	1,200.	33.	ug/kg	1,300.	37.
3790	dibenz (a,h) anthracene	340.	33.	ug/kg	370.	37.
3791	benzo (ghi) perylene	930.	33.	ug/kg	1,000.	37.

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

MEMBER
ACIL
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Gulf States Creosoting Site: Hattiesburg, MS
1923- SDG#: HMS02-15

Account No: 07802
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CAT
NO. ANALYSIS NAME

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RESULTS METHOD
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DRY WEIGHT
RESULTS METHOD
DETECTION LIMIT

TCL Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
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Gulf States Creosoting Site: Hattiesburg, MS
1923- SDG#: HMS02-16

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
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4688	TCL Semivolatiles	SW-846 8270C	1	06/29/98 1125	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/29/98 1125	Eileen Hostetler
0111	Moisture	EPA 160.3 modified	1	06/13/98 1831	Patrick N. Ward



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943289

GEO-19/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
4688 TCL Semivolatiles		Batch: 98162SLF026										
1185	phenol											
67.	ug/kg	N.D.		79	69	14	81			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		73	67	10	79			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		79	70	12	84			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		75	67	12	83			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		75	66	12	82			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		78	69	12	85			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		78	70	11	84			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		81	73	11	87			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		78	70	10	84			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		79	70	12	83			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		76	67	13	84			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		81	72	12	89			56	110	
3759	isophorone											
33.	ug/kg	N.D.		85	74	14	92			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		83	71	15	86			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		79	69	14	86			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		76	67	12	82			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		82	71	14	86			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		80	70	13	87			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		75	65	14	79			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		63	59	6	64			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		83	71	15	89			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		85	74	15	90			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		78	69	12	83			60	102	



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations

2316 Rev. 11/01





LLI Sample No. 2943289

GEO-19/2-3" Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSC	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
33.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108

MEMBER
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See reverse side for explanation of symbols and abbreviations



LLI Sample No. 2943289

GEO-19/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		82	72	13	88			62	107
3776	anthracene										
33.	ug/kg	N.D.		83	70	16	91			62	105
4702	carbazole										
33.	ug/kg	N.D.		84	73	14	91			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		80	71	12	87			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		84	73	14	91			58	110
1195	pyrene										
67.	ug/kg	N.D.		78	67	15	83			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		77	68	13	85			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		67	62	8	53			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		85	74	14	91			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		76	66	14	82			8	158
3782	chrysene										
33.	ug/kg	N.D.		82	72	13	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		81	70	15	86			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		79	69	13	85			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		84	72	16	90			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		86	74	15	93			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		85	73	16	91			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		84	71	17	90			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	71	17	90			52	113
0111	Moisture										
0.080	% by wt.	*Batch: 981640199820003A	4				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations

2215 Rev. 3/2007





LLI Sample No. 2943289

GEO-19/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	86	39	108
	2-Flpheno1	85	36	108
	2,4,6-TBP	93	23	125
4689 TCL Semivolatiles cont.	Nitrobz-d5	94	31	126
	2-Fbiphy1	88	45	113
	Tphenyld14	82	37	130



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2216 991 3.0 1/11





LLI Sample No. SW 2943290

Collected: 6/ 9/98 at 10:20 by DCU

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

Discard: 8/ 6/98

GEO-19/5-6 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
1956- SDG#: HMS02-17

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	11.3	0.080	% by wt.		
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 20:56:21 D 0003 10 129915 618545
 412 0.00 00033420 ASR000



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





LLI Sample No. SW 2943290

Collected: 6/ 9/98 at 10:20 by DCU

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

Discard: 8/ 6/98

GEO-19/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
1956- SDG#: HMS02-17

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	phenol	N.D.	67.	ug/kg	N.D.	75.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	38.
1186	2-chlorophenol	N.D.	33.	ug/kg	N.D.	38.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	38.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	38.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	38.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	75.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	38.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	38.
3759	isophorone	N.D.	33.	ug/kg	N.D.	38.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	38.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	75.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	75.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	75.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	38.
3761	naphthalene	360.	33.	ug/kg	400.	38.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	38.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	75.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	75.
4694	2-methylnaphthalene	340.	33.	ug/kg	380.	38.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	190.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	75.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	75.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	38.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	38.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3765	acenaphthylene	73.	J 33.	ug/kg	83.	J 38.

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



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





LLI Sample No. SW 2943290

Collected: 6/ 9/98 at 10:20 by DCU

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

Discard: 8/ 6/98

GEO-19/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
1956- SDG#: HMS02-17

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
1191	acenaphthene	1,300.	33.	ug/kg	1,400.	38.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	220.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	190.
4698	dibenzofuran	1,400.	33.	ug/kg	1,600.	38.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	75.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	38.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	38.
3768	fluorene	2,000.	33.	ug/kg	2,200.	38.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	75.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	190.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	38.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	75.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	38.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	190.
3775	phenanthrene	6,700.	67.	ug/kg	7,600.	75.
3776	anthracene	1,300.	33.	ug/kg	1,500.	38.
4702	carbazole	440.	33.	ug/kg	490.	38.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3778	fluoranthene	2,900.	33.	ug/kg	3,300.	38.
1195	pyrene	1,900.	33.	ug/kg	2,200.	38.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	75.
3781	benzo (a) anthracene	720.	33.	ug/kg	810.	38.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	75.
3782	chrysene	540.	33.	ug/kg	610.	38.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	75.
3786	benzo (b) fluoranthene	330.	J 33.	ug/kg	370.	J 38.
3787	benzo (k) fluoranthene	140.	J 33.	ug/kg	160.	J 38.
3788	benzo (a) pyrene	250.	J 33.	ug/kg	290.	J 38.
3789	indeno (1,2,3-cd) pyrene	83.	J 33.	ug/kg	94.	J 38.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	38.
3791	benzo (ghi) perylene	58.	J 33.	ug/kg	65.	J 38.

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 SVOA





LLI Sample No. SW 2943290

Collected: 6/ 9/98 at 10:20 by DCU

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

Discard: 8/ 6/98

GEO-19/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
1956- SDG#: H4S02-17

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

P.O.
Ref.

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

TCL Semivolatiles cont'd

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

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

Respectfully Submitted
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Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

2216 Rev. 5-1-97





LLI Sample No. SW 2943290

Collected: 06/09/98 at 10:20 by DCU

Submitted: 06/10/98

GEO-19/5-5' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
1956 SDC# HMS02-17

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL	ID DATE AND TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	06/26/98 2039	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/26/98 2039	Eileen Hostetler
0111	Moisture	EPA 160.3 modified	1	06/13/98 1831	Patrick N. Ward



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2943290

GEO-19/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
4688 TCL Semivolatiles		Batch: 98162SLF026										
1185	phenol											
67.	ug/kg	N.D.		79	69	14	81			49	105	
3753	bis (2-chloroethyl) ether											
33.	ug/kg	N.D.		73	67	10	79			53	109	
1186	2-chlorophenol											
33.	ug/kg	N.D.		79	70	12	84			55	107	
3754	1,3-dichlorobenzene											
33.	ug/kg	N.D.		75	67	12	83			53	103	
1187	1,4-dichlorobenzene											
33.	ug/kg	N.D.		75	66	12	82			52	103	
3755	1,2-dichlorobenzene											
33.	ug/kg	N.D.		78	69	12	85			56	107	
4690	2-methylphenol											
33.	ug/kg	N.D.		78	70	11	84			57	101	
4691	2,2'-oxybis (1-chloropropane)											
33.	ug/kg	N.D.		81	73	11	87			38	117	
4692	3- and 4-methylphenol											
67.	ug/kg	N.D.		78	70	10	84			48	116	
1188	N-nitrosodi-n-propylamine											
33.	ug/kg	N.D.		79	70	12	83			50	124	
3757	hexachloroethane											
33.	ug/kg	N.D.		76	67	13	84			52	108	
3758	nitrobenzene											
33.	ug/kg	N.D.		81	72	12	89			56	110	
3759	isophorone											
33.	ug/kg	N.D.		85	74	14	92			57	114	
3746	2-nitrophenol											
67.	ug/kg	N.D.		83	71	15	86			59	107	
3747	2,4-dimethylphenol											
67.	ug/kg	N.D.		79	69	14	86			39	108	
3760	bis (2-chloroethoxy) methane											
67.	ug/kg	N.D.		76	67	12	82			56	103	
3748	2,4-dichlorophenol											
67.	ug/kg	N.D.		82	71	14	86			59	100	
1189	1,2,4-trichlorobenzene											
33.	ug/kg	N.D.		80	70	13	87			57	104	
3761	naphthalene											
33.	ug/kg	N.D.		75	65	14	79			58	99	
4693	4-chloroaniline											
33.	ug/kg	N.D.		63	59	6	64			1	102	
3762	hexachlorobutadiene											
67.	ug/kg	N.D.		83	71	15	89			56	115	
1190	4-chloro-3-methylphenol											
67.	ug/kg	N.D.		85	74	15	90			56	108	
4694	2-methylnaphthalene											
33.	ug/kg	N.D.		78	69	12	83			60	102	



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

2215 Rev 5/01





LLI Sample No. 2943290

GEO-19/5-6" Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	73	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
33.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108



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See reverse side for explanation of symbols and abbreviations.

2015 10/17/15





LLI Sample No. 2943290

GEO-19/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3775	phenanthrene										
67.	ug/kg	N.D.		82	72	13	88			62	107.
3776	anthracene										
33.	ug/kg	N.D.		83	70	16	91			62	105
4702	carbazole										
33.	ug/kg	N.D.		84	73	14	91			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		80	71	12	87			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		84	73	14	91			58	110
1195	pyrene										
33.	ug/kg	N.D.		78	67	15	83			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		77	68	13	85			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		67	62	8	53			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		85	74	14	91			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		76	66	14	82			8	158
3782	chrysene										
33.	ug/kg	N.D.		82	72	13	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		81	70	15	86			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		79	69	13	85			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		84	72	16	90			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		86	74	15	93			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		85	73	16	91			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		84	71	17	90			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	71	17	90			52	113
0111	Moisture										
0.080	% by wt.		4				100	100	0	99	101

* Batch: 981640199820003A



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See reverse side for explanation of symbols and abbreviations.

2016 Rev. 8-1-07





LLI Sample No. 2943290

GEO-19/5-6' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	42	39	108
	2-Flphenol	41	35	108
	2,4,6-TSP	47	23	125
4689 TCL Semivolatiles cont'd	Nitroaz-d5	42	31	126
	2-Fbiphenyl	43	45	113
	Tphenylid14	43	37	130



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2216 Rev. 3/12/97





LLI Sample No. SW 2943291

Collected: 6/ 9/98 at 10:26 by DCU

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

Discard: 8/ 6/98

GEO-20/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2001- SDG#: HMS02-18

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

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	18.1		0.080	% by wt.	
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.					

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:58:22 D 0003 10 129915 618545
412 0.00 00033420 ASR000

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





LLI Sample No. SW 2943291

Collected: 6/ 9/98 at 10:26 by DCU

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

Discard: 8/ 6/98

GEO-20/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2001- SDG#: HMS02-18

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

P.O.
Ref.

CAT NO	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles						
1135	phenol	N.D.	330.	ug/kg	N.D.	410
3753	bis (2-chloroethyl) ether	N.D.	170.	ug/kg	N.D.	200
1186	2-chlorophenol	N.D.	170.	ug/kg	N.D.	200
3754	1,3-dichlorobenzene	N.D.	170.	ug/kg	N.D.	200
1187	1,4-dichlorobenzene	N.D.	170.	ug/kg	N.D.	200
3755	1,2-dichlorobenzene	N.D.	170.	ug/kg	N.D.	200
4690	2-methylphenol	N.D.	170.	ug/kg	N.D.	200
4691	2,2'-oxybis (1-chloropropane)	N.D.	170.	ug/kg	N.D.	200
4692	3- and 4-methylphenol	N.D.	330.	ug/kg	N.D.	410
1188	N-nitrosodi-n-propylamine	N.D.	170.	ug/kg	N.D.	200
3757	hexachloroethane	N.D.	170.	ug/kg	N.D.	200
3758	nitrobenzene	N.D.	170.	ug/kg	N.D.	200
3759	isophorone	N.D.	170.	ug/kg	N.D.	200
3746	2-nitrophenol	N.D.	330.	ug/kg	N.D.	410
3747	2,4-dimethylphenol	N.D.	330.	ug/kg	N.D.	410
3760	bis (2-chloroethoxy) methane	N.D.	330.	ug/kg	N.D.	410
3748	2,4-dichlorophenol	N.D.	330.	ug/kg	N.D.	410
1189	1,2,4-trichlorobenzene	N.D.	170.	ug/kg	N.D.	200
3761	naphthalene	560.	J 170.	ug/kg	680.	J 200.
4693	4-chloroaniline	N.D.	170.	ug/kg	N.D.	200
3762	hexachlorobutadiene	N.D.	330.	ug/kg	N.D.	410
1190	4-chloro-3-methylphenol	N.D.	330.	ug/kg	N.D.	410
4694	2-methylnaphthalene	220.	J 170.	ug/kg	270.	J 200.
3763	hexachlorocyclopentadiene	N.D.	830.	ug/kg	N.D.	1,000.
3749	2,4,6-trichlorophenol	N.D.	330.	ug/kg	N.D.	410
4695	2,4,5-trichlorophenol	N.D.	330.	ug/kg	N.D.	410
3764	2-chloronaphthalene	N.D.	170.	ug/kg	N.D.	200
4696	2-nitroaniline	N.D.	170.	ug/kg	N.D.	200
3766	dimethyl phthalate	N.D.	330.	ug/kg	N.D.	410
3765	acenaphthylene	1,100.	J 170.	ug/kg	1,400.	J 200.

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



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





LLI Sample No. SW 2943291

Collected: 6/ 9/98 at 10:26 by DCU

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

Discard: 8/ 6/98

GEO-20/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2001- SDG#: HMS02-18

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

P.O.
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	330.	ug/kg	N.D.	410.
1191	acenaphthene	N.D.	170.	ug/kg	N.D.	200.
3750	2,4-dinitrophenol	N.D.	970.	ug/kg	N.D.	1,200.
1192	4-nitrophenol	N.D.	830.	ug/kg	N.D.	1,000.
4698	dibenzofuran	280.	J 170.	ug/kg	340.	J 200.
1193	2,4-dinitrotoluene	N.D.	330.	ug/kg	N.D.	410.
3767	2,6-dinitrotoluene	N.D.	170.	ug/kg	N.D.	200.
3770	diethyl phthalate	N.D.	330.	ug/kg	N.D.	410.
3769	4-chlorophenyl phenyl ether	N.D.	170.	ug/kg	N.D.	200.
3768	fluorene	N.D.	170.	ug/kg	N.D.	200.
4700	4-nitroaniline	N.D.	330.	ug/kg	N.D.	410.
3751	4,6-dinitro-2-methylphenol	N.D.	830.	ug/kg	N.D.	1,000.
3772	N-nitrosodiphenylamine	N.D.	170.	ug/kg	N.D.	200.
3773	4-bromophenyl phenyl ether	N.D.	330.	ug/kg	N.D.	410.
3774	hexachlorobenzene	N.D.	170.	ug/kg	N.D.	200.
1194	pentachlorophenol	N.D.	830.	ug/kg	N.D.	1,000.
3775	phenanthrene	1,400.	J 170.	ug/kg	1,700.	J 200.
3776	anthracene	1,800.	J 170.	ug/kg	2,100.	J 200.
4702	carbazole	490.	J 170.	ug/kg	600.	J 200.
3777	di-n-butyl phthalate	N.D.	330.	ug/kg	N.D.	410.
3778	fluoranthene	4,700.	J 170.	ug/kg	5,700.	J 200.
1195	pyrene	4,300.	J 170.	ug/kg	5,300.	J 200.
3780	butyl benzy phthalate	N.D.	330.	ug/kg	N.D.	410.
3783	3,3'-dichlorobenzidine	N.D.	330.	ug/kg	N.D.	410.
3781	benzo (a) anthracene	2,600.	J 170.	ug/kg	3,200.	J 200.
3784	bis (2-ethylhexyl) phthalate	N.D.	330.	ug/kg	N.D.	410.
3782	chrysene	3,000.	J 170.	ug/kg	3,700.	J 200.
3785	di-n-octyl phthalate	N.D.	330.	ug/kg	N.D.	410.
3786	benzo (b) fluoranthene	4,600.	J 170.	ug/kg	5,600.	J 200.
3787	benzo (k) fluoranthene	1,400.	J 170.	ug/kg	1,800.	J 200.
3788	benzo (a) pyrene	2,600.	J 170.	ug/kg	3,200.	J 200.
3789	indeno (1,2,3-cd) pyrene	2,400.	J 170.	ug/kg	2,900.	J 200.
3790	dibenz (a,h) anthracene	620.	J 170.	ug/kg	760.	J 200.
3791	benzo (ghi) perylene	2,200.	J 170.	ug/kg	2,700.	J 200.

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

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





LLI Sample No. SW 2943291

Collected: 6/ 9/98 at 10:26 by DCU

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

Discard: 8/ 6/98

GEO-20/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2001- SOG#: HMS02-18

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

P.O.
Ref.

CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD
DETECTION LIMIT UNITS

DRY WEIGHT
RESULTS METHOD
DETECTION LIMIT

TCL Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.
The quantitation limits for the GC/MS semivolatile compounds were raised
due to the high concentration of target compounds.

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



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

See reverse side for explanation of symbols and abbreviations.

2215 02/06/97





LLI Sample No. SW 2943291

Collected: 06/09/98 at 10:26 by DCU

Submitted: 06/10/98

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

GEO-20/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2001. SDG#: HMS02-18

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 35508	1	06/11/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	06/30/98 0949	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/30/98 0949	Eileen Hostetler
0111	Moisture	EPA 160.2 modified	1	06/13/98 1831	Patrick N. Ward



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943291

GEO-20/0-1" Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH	
4688 TCL Semivolatiles		Batch: 981625L#026										
1185	phenol											
330.	ug/kg	N.D.		79	69	14	81			49	105	
3753	bis (2-chloroethyl) ether											
170.	ug/kg	N.D.		73	67	10	79			53	109	
1186	2-chlorophenol											
170.	ug/kg	N.D.		79	70	12	84			55	107	
3754	1,3-dichlorobenzene											
170.	ug/kg	N.D.		75	67	12	83			53	103	
1187	1,4-dichlorobenzene											
170.	ug/kg	N.D.		75	66	12	82			52	103	
3755	1,2-dichlorobenzene											
170.	ug/kg	N.D.		78	69	12	85			56	107	
4690	2-methylphenol											
170.	ug/kg	N.D.		78	70	11	84			57	101	
4691	2,2'-oxybis (1-chloropropane)											
170.	ug/kg	N.D.		81	73	11	87			38	117	
4692	3- and 4-methylphenol											
330.	ug/kg	N.D.		78	70	10	84			48	116	
1188	N-nitrosodi-n-propylamine											
170.	ug/kg	N.D.		79	70	12	83			50	124	
3757	hexachloroethane											
170.	ug/kg	N.D.		76	67	13	84			52	108	
3758	nitrobenzene											
170.	ug/kg	N.D.		81	72	12	89			56	110	
3759	isophorone											
170.	ug/kg	N.D.		85	74	14	92			57	114	
3746	2-nitrophenol											
330.	ug/kg	N.D.		83	71	15	86			59	107	
3747	2,4-dimethylphenol											
330.	ug/kg	N.D.		79	69	14	86			39	108	
3760	bis (2-chloroethoxy) methane											
330.	ug/kg	N.D.		76	67	12	82			56	103	
3748	2,4-dichlorophenol											
330.	ug/kg	N.D.		82	71	14	86			59	100	
1189	1,2,4-trichlorobenzene											
170.	ug/kg	N.D.		80	70	13	87			57	104	
3761	naphthalene											
170.	ug/kg	N.D.		75	65	14	79			58	99	
4693	4-chloroaniline											
170.	ug/kg	N.D.		63	59	6	64			1	102	
3762	hexachlorobutadiene											
330.	ug/kg	N.D.		83	71	15	89			56	115	
1190	4-chloro-3-methylphenol											
330.	ug/kg	N.D.		85	74	15	90			56	108	
4694	2-methylnaphthalene											
170.	ug/kg	N.D.		78	69	12	83			60	102	



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717-656-2300 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations

2016 04 14 11:11





LLI Sample No. 2943291

GEO-20/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
830.	ug/kg	N.D.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
330.	ug/kg	N.D.		86	77	10	94			52	106
4695	2,4,5-trichlorophenol										
330.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
170.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
170.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
330.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
170.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
330.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
170.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
970.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
830.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
170.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
330.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
170.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
330.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
170.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
170.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
330.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
830.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
170.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
330.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
170.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
830.	ug/kg	N.D.		89	76	16	97			42	108



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See reverse side for explanation of symbols and abbreviations

2216





LLI Sample No. 2943291

GEO-20/0-1' Grab Soil Sample

Gulf States Creosoting Site Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
170.	ug/kg	N.D.		82	72	13	88			62	107
3776	anthracene										
170.	ug/kg	N.D.		83	70	16	91			62	105
4702	carbazole										
170.	ug/kg	N.D.		84	73	14	91			57	112
3777	di-n-butyl phthalate										
330.	ug/kg	N.D.		80	71	12	87			59	114
3778	fluoranthene										
170.	ug/kg	N.D.		84	73	14	91			58	110
1195	pyrene										
170.	ug/kg	N.D.		78	67	15	83			52	115
3780	butyl benzyl phthalate										
330.	ug/kg	N.D.		77	68	13	85			58	119
3783	3,3'-dichlorobenzidine										
330.	ug/kg	N.D.		67	62	8	53			15	94
3781	benzo (a) anthracene										
170.	ug/kg	N.D.		85	74	14	91			63	106
3784	bis (2-ethylhexyl) phthalate										
330.	ug/kg	N.D.		76	66	14	82			8	158
3782	chrysene										
170.	ug/kg	N.D.		82	72	13	88			60	107
3785	di-n-octyl phthalate										
330.	ug/kg	N.D.		81	70	15	86			54	127
3786	benzo (b) fluoranthene										
170.	ug/kg	N.D.		79	69	13	85			59	105
3787	benzo (k) fluoranthene										
170.	ug/kg	N.D.		84	72	16	90			63	108
3788	benzo (a) pyrene										
170.	ug/kg	N.D.		86	74	15	93			61	107
3789	indeno (1,2,3-cd) pyrene										
170.	ug/kg	N.D.		85	73	16	91			55	111
3790	dibenz (a,h) anthracene										
170.	ug/kg	N.D.		84	71	17	90			60	117
3791	benzo (ghi) perylene										
170.	ug/kg	N.D.		84	71	17	90			52	113
0111	Moisture										
0.080	% by wt.			4			100	100	0	99	101

* Batch: 981640199820003A



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2943291

GEO-20/0-1' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	(5)	39	103
	2-Flphenol	(5)	35	108
	2,4,6-TBP	(5)	23	125
4689 TCL Semivolatiles cont'd	Nitrobz-d5	(5)	31	126
	2-Fbiphenyl	(5)	45	113
	Tphenyl14	(5)	37	130

(5) Accurate surrogate recoveries could not be determined due to interferences or dilution necessary for this sample.



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2018-11-14 10:11





LLI Sample No. SW 2943292

Collected: 6/ 9/98 at 10:30 by DCU

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

Discard: 8/ 5/98

GEO-20/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2023- SDG#: #MS02-19

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

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
4688	TCL Semivolatiles					See Page 2
4689	TCL Semivolatiles conc'd					See Page 3
0111	Moisture	16.0		0.080		% by wt.
	"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius					

1 COPY TO Kerr-McGee Corporation
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
21:00:32 D 0003 10 129915 618545
412 0.00 00033420 ASR000



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





LLI Sample No. SW 2943292

Collected: 6/ 9/98 at 10:30 by DCU

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

Discard: 8/ 6/98

GEO-20/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2023- SDG#- HMS02-19

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

P.O.
Ref.

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

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

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





LLI Sample No. SW 2943292

Collected: 6/ 9/98 at 10:30 by DCU

Submitted: 6/10/98 Reported: 7/ 6/98
Discard: 8/ 5/98

GEO-20/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2023- SDG#. HMS02-19

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

P.O.
Ref.

CAT NO.	ANALYST NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION LIMIT	UNITS	RESULTS	DETECTION LIMIT
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	40.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	230.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	200.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	40.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	79.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	40.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	40.
3768	fluorene	N.D.	33.	ug/kg	N.D.	40.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	79.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	200.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	40.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	79.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	40.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	200.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	40.
3776	anthracene	N.D.	33.	ug/kg	N.D.	40.
4702	carbazole	N.D.	33.	ug/kg	N.D.	40.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3778	fluoranthene	83.	J	33.	98.	J
1195	pyrene	76.	J	33.	91.	J
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	79.
3781	benzo (a) anthracene	34.	J	33.	40.	J
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	79.
3782	chrysene	42.	J	33.	50.	J
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	79.
3786	benzo (b) fluoranthene	56.	J	33.	67.	J
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	40.
3788	benzo (a) pyrene	66.	J	33.	79.	J
3789	indeno (1,2,3-cd) pyrene	48.	J	33.	57.	J
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	40.
3791	benzo (ghi) perylene	38.	J	33.	45.	J

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



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





LLI Sample No. SW 2943292

Collected: 6/ 9/98 at 10:30 by DCU

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

Discard: 8/ 6/98

620-2072-3 Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2323 SDG#: HMS02-19

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

P.O.
Ref.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	DETECTION LIMIT	UNITS	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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LLI Sample No. SW 2943292

Collected: 06/09/98 at 10:30 by DCU

Submitted: 06/10/98

GEO-20/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2021 SDG#: HMS02-19

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS			
			TRIAL	ID	DATE AND TIME	ANALYST
0381	BNA Soil Extraction	SW-846 3550B	1		06/11/98 2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1		06/26/98 2229	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1		06/26/98 2229	Eileen Hostetler
0111	Moisture	EPA 160.3 modified	1		06/13/98 1831	Patrick N. Ward



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See reverse side for explanation of symbols and abbreviations

2211 02110111





L/LI Sample No. 2943292
 GEO-20/2-3' Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
 Kerr-McGee Corporation

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

4688	TCL Semivolatiles	Batch: 98162SLF026									

1185	phenol										
67.	ug/kg	N.D.		79	69	14	81			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		73	67	10	79			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		79	70	12	84			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		75	67	12	83			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		75	66	12	82			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		78	69	12	85			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		78	70	11	84			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		81	73	11	87			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		78	70	10	84			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	70	12	83			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		76	67	13	84			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		81	72	12	89			56	110
3759	isophorone										
33.	ug/kg	N.D.		85	74	14	92			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		83	71	15	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		79	69	14	86			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		76	67	12	82			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		82	71	14	86			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		80	70	13	87			57	104
3761	naphthalene										
33.	ug/kg	N.D.		75	65	14	79			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		63	59	6	64			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	71	15	89			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		85	74	15	90			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		78	69	12	83			60	102



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See separate file for explanation of symbols and abbreviations





LLI Sample No. 2943292

GEO-20/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
33.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943292

GEO-20/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE IDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOI	LIMITS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		82	72	13	88				107
3776	anthracene										
33.	ug/kg	N.D.		83	70	16	91				105
4702	carbazole										
33.	ug/kg	N.D.		84	73	14	91				112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		80	71	12	87				114
3778	fluoranthene										
33.	ug/kg	N.D.		84	73	14	91				110
1195	pyrene										
33.	ug/kg	N.D.		78	67	15	83				115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		77	68	13	85				119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		67	62	8	53				94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		85	74	14	91				106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		76	66	14	82				158
3782	chrysene										
33.	ug/kg	N.D.		82	72	13	88				107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		81	70	15	86				127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		79	69	13	85				105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		84	72	16	90				108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		86	74	15	93				107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		85	73	16	91				111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		84	71	17	90				117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	71	17	90				113
0111	Moisture										
0.080	% by wt.		4				100	100	0	99	101

* Batch: 981640199820003A



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

See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943292

GEO-20/2-3' Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d5	70	39	108
	2-F1pheno?	69	35	103
	2,4,5-TBP	81	23	125
4589 TCL Semivolatiles cont'd	Nitrobz-d8	68	31	126
	2-Fb1phnyl	72	45	113
	Tphenylcl4	71	37	130



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See reverse side for explanation of symbols and abbreviations

3011-10-10-11





LLI Sample No. SW 2943293

Collected: 6/ 9/98 at 16:25 by DCU

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

Discard: 8/ 6/98

GEO-2770-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2701- SDG#: HMS02-20BKG

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0111	Moisture	8.79		0.080	% by wt.	
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius.						

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
21:02:29 D 0003 10 129915 618545
412 0.00 00033420 ASR000

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

MEMBER
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See reverse side for explanation of symbols and abbreviations

11/19/98 10:11 AM





LLI Sample No. SW 2943293

Collected: 6/ 9/98 at 16:25 by DCU

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

Discard: 8/ 6/98

GEO-27/0-1 Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2701- SDG#: HMS02-20BKG

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25361
Oklahoma City OK 73125

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1135	phenol	N.D.	57.	ug/kg	N.D.	73.
3753	bis (2-chloroethyl) ether	N.D.	33.	ug/kg	N.D.	37.
1136	2-chlorophenol	N.D.	33.	ug/kg	N.D.	37.
3754	1,3-dichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
1187	1,4-dichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
3755	1,2-dichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
4690	2-methylphenol	N.D.	33.	ug/kg	N.D.	37.
4691	2,2'-oxybis (1-chloropropane)	N.D.	33.	ug/kg	N.D.	37.
4692	3- and 4-methylphenol	N.D.	67.	ug/kg	N.D.	73.
1188	N-nitrosodi-n-propylamine	N.D.	33.	ug/kg	N.D.	37.
3757	hexachloroethane	N.D.	33.	ug/kg	N.D.	37.
3758	nitrobenzene	N.D.	33.	ug/kg	N.D.	37.
3759	isophorone	N.D.	33.	ug/kg	N.D.	37.
3746	2-nitrophenol	N.D.	67.	ug/kg	N.D.	73.
3747	2,4-dimethylphenol	N.D.	67.	ug/kg	N.D.	73.
3760	bis (2-chloroethoxy) methane	N.D.	67.	ug/kg	N.D.	73.
3748	2,4-dichlorophenol	N.D.	67.	ug/kg	N.D.	73.
1189	1,2,4-trichlorobenzene	N.D.	33.	ug/kg	N.D.	37.
3761	naphthalene	N.D.	33.	ug/kg	N.D.	37.
4693	4-chloroaniline	N.D.	33.	ug/kg	N.D.	37.
3762	hexachlorobutadiene	N.D.	67.	ug/kg	N.D.	73.
1190	4-chloro-3-methylphenol	N.D.	67.	ug/kg	N.D.	73.
4694	2-methylnaphthalene	N.D.	33.	ug/kg	N.D.	37.
3763	hexachlorocyclopentadiene	N.D.	170.	ug/kg	N.D.	180.
3749	2,4,6-trichlorophenol	N.D.	67.	ug/kg	N.D.	73.
4695	2,4,5-trichlorophenol	N.D.	67.	ug/kg	N.D.	73.
3764	2-chloronaphthalene	N.D.	33.	ug/kg	N.D.	37.
4696	2-nitroaniline	N.D.	33.	ug/kg	N.D.	37.
3766	dimethyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3765	acenaphthylene	N.D.	33.	ug/kg	N.D.	37.

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

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





LLI Sample No. SW 2943293

Collected: 6/ 9/98 at 16:25 by DCU

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

Discard: 8/ 6/98

GEO-27/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2701- SDG#: HMS02-208KG

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles cont'd						
4697	3-nitroaniline	N.D.	67.	ug/kg	N.D.	73.
1191	acenaphthene	N.D.	33.	ug/kg	N.D.	37.
3750	2,4-dinitrophenol	N.D.	190.	ug/kg	N.D.	210.
1192	4-nitrophenol	N.D.	170.	ug/kg	N.D.	190.
4698	dibenzofuran	N.D.	33.	ug/kg	N.D.	37.
1193	2,4-dinitrotoluene	N.D.	67.	ug/kg	N.D.	73.
3767	2,6-dinitrotoluene	N.D.	33.	ug/kg	N.D.	37.
3770	diethyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3769	4-chlorophenyl phenyl ether	N.D.	33.	ug/kg	N.D.	37.
3768	fluorene	N.D.	33.	ug/kg	N.D.	37.
4700	4-nitroaniline	N.D.	67.	ug/kg	N.D.	73.
3751	4,6-dinitro-2-methylphenol	N.D.	170.	ug/kg	N.D.	180.
3772	N-nitrosodiphenylamine	N.D.	33.	ug/kg	N.D.	37.
3773	4-bromophenyl phenyl ether	N.D.	67.	ug/kg	N.D.	73.
3774	hexachlorobenzene	N.D.	33.	ug/kg	N.D.	37.
1194	pentachlorophenol	N.D.	170.	ug/kg	N.D.	180.
3775	phenanthrene	N.D.	33.	ug/kg	N.D.	37.
3776	anthracene	N.D.	33.	ug/kg	N.D.	37.
4702	carbazole	N.D.	33.	ug/kg	N.D.	37.
3777	di-n-butyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3778	fluoranthene	N.D.	33.	ug/kg	N.D.	37.
1195	pyrene	N.D.	33.	ug/kg	N.D.	37.
3780	butyl benzyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3783	3,3'-dichlorobenzidine	N.D.	67.	ug/kg	N.D.	73.
3781	benzo (a) anthracene	N.D.	33.	ug/kg	N.D.	37.
3784	bis (2-ethylhexyl) phthalate	N.D.	67.	ug/kg	N.D.	73.
3782	chrysene	N.D.	33.	ug/kg	N.D.	37.
3785	di-n-octyl phthalate	N.D.	67.	ug/kg	N.D.	73.
3786	benzo (b) fluoranthene	N.D.	33.	ug/kg	N.D.	37.
3787	benzo (k) fluoranthene	N.D.	33.	ug/kg	N.D.	37.
3788	benzo (a) pyrene	N.D.	33.	ug/kg	N.D.	37.
3789	indeno (1,2,3-cd) pyrene	N.D.	33.	ug/kg	N.D.	37.
3790	dibenz (a,h) anthracene	N.D.	33.	ug/kg	N.D.	37.
3791	benzo (ghi) perylene	N.D.	33.	ug/kg	N.D.	37.

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



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





LLI Sample No. SW 2943293

Collected: 6/ 9/98 at 16:25 by DCU

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

Discard: 8/ 6/98

GE0-27/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site- Hattiesburg, MS
2701- SDG#: HMS02-20BKG

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

P.O.
Ref

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

TCL Semivolatiles cont'd

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

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

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



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. SW 2943293

Collected: 06/09/98 at 16:25 by DCU

Submitted: 06/10/98

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

GEO-27/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg MS
2701- SDG#: HMS02-208KG

CAT NO	ANALYSIS NAME	METHOD	TRIAL ID	ANALYSIS		ANALYST
				DATE	TIME	
0381	BNA Soil Extraction	SW-846 3550B	1	06/11/98	2200	Clara L. Medina
4688	TCL Semivolatiles	SW-846 8270C	1	06/25/98	1544	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/25/98	1544	Eileen Hostetler
0111	Moisture	EPA 160.3 modified	1	06/13/98	1331	Patrick N. Ward



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LLI Sample No. 2943293

GEO-27/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLWT	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
4688 TCL Semivolatiles		Batch: 98163SLF026									
1185	phenol										
67.	ug/kg	N.D.		79	69	14	81			49	106
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		73	67	10	79			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		79	70	12	84			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		75	67	12	83			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		75	66	12	82			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		78	69	12	85			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		78	70	11	84			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		81	73	11	87			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		78	70	10	84			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	70	12	83			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		76	67	13	84			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		81	72	12	89			56	110
3759	isophorone										
33.	ug/kg	N.D.		85	74	14	92			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		83	71	15	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		79	69	14	86			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		76	67	12	82			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		82	71	14	86			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		80	70	13	87			57	104
3761	naphthalene										
33.	ug/kg	N.D.		75	65	14	79			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		63	59	6	64			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	71	15	89			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		85	74	15	90			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		78	69	12	83			60	102



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See reverse side for explanation of symbols and abbreviations

2015 06 11 10:10





LLI Sample No. 2943293

GEO-27/0-1 Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3763	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4595	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
33.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943293

GEO-27/0-1' Unspiked Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		82	72	13	88			62	107
3776	anthracene										
33.	ug/kg	N.D.		83	70	16	91			62	105
4702	carbazole										
33.	ug/kg	N.D.		84	73	14	91			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		80	71	12	87			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		84	73	14	91			58	110
1195	pyrene										
33.	ug/kg	N.D.		78	67	15	83			52	115
3780	butyl benzyl phthalate										
67.	ug/kg	N.D.		77	68	13	85			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		67	62	8	53			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		85	74	14	91			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		76	66	14	82			8	158
3782	chrysene										
33.	ug/kg	N.D.		82	72	13	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		81	70	15	86			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		79	69	13	85			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		84	72	16	90			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		86	74	15	93			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		85	73	16	91			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		84	71	17	90			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	71	17	90			52	113
0111	Moisture										
0.080	% by wt.	* Batch: 981640199820003A	4				100	100	0	99	101



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See reverse side for explanation of symbols and abbreviations

11/14/01





LLI Sample No. 2943293
GEO-2770-1' Unspiked Grab Soil Sample
Gulf States Creosoting Site Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d6	76	32	108
	2-Flphenol	76	33	108
	2,4,6-TBP	91	27	125
4689 TCL Semivolatiles	Nitrobz-d5	78	31	125
	2-Fbiphenyl	84	45	113
	Tphenyl14	75	37	130



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

See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943294

Collected: 6/ 9/98 at 16:25 by DCU

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

Discard: 8/ 6/98

GEO-2770-1 Matrix Spike Grab Soil Sample

Gulf States Leasoting Site: Hattiesburg, MS
2701- SDG# PHS02-20MS

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

P.O.
Rel.

CAT NO.	ANAL. TO NAME	AS RECEIVED			DRY WEIGHT		
		RESULTS	DETECTION LIMIT	METHOD	RESULTS	DETECTION LIMIT	METHOD
4688	TCL Semivolatiles			See Page 2			
4689	TCL Semivolatiles cont'd			See Page 3			
0118	Moisture	8.79	0.080	2.5x wet			

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
21:04:23 D 0003 10 129915 618545
412 0.00 00032700 ASR000



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





LLI Sample No. SW 2943294

Collected: 6/ 9/98 at 16:25 by DCU

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

Discard: 8/ 6/98

GEO-2770-1 Matrix Spike Grab Soil Sample

Gulf States Creosoting Site, Hattiesburg, MS
2701- SDG#: HMS02-20MS

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	phenol	2,600.	67.	ug/kg	2,900.	73.
3753	bis (2-chloromethyl) ether	2,400.	33.	ug/kg	2,700.	37.
1186	2-chlorophenol	2,600.	33.	ug/kg	2,900.	37.
3754	1,3-dichlorobenzene	2,500.	33.	ug/kg	2,700.	37.
1187	1,4-dichlorobenzene	2,500.	33.	ug/kg	2,700.	37.
3755	1,2-dichlorobenzene	2,600.	33.	ug/kg	2,900.	37.
4690	2-methylphenol	2,600.	33.	ug/kg	2,900.	37.
4691	2,2'-oxybis (1-chloropropane)	2,700.	33.	ug/kg	3,000.	37.
4692	3- and 4-methylphenol	2,600.	67.	ug/kg	2,900.	73.
1188	N-nitrosodi-n-propylamine	2,600.	33.	ug/kg	2,900.	37.
3757	hexachloroethane	2,500.	33.	ug/kg	2,800.	37.
3758	nitrobenzene	2,700.	33.	ug/kg	3,000.	37.
3759	isophorone	2,800.	33.	ug/kg	3,100.	37.
3746	2-nitrophenol	2,800.	67.	ug/kg	3,000.	73.
3747	2,4-dimethylphenol	2,600.	67.	ug/kg	2,900.	73.
3760	bis (2-chloroethoxy) methane	2,500.	67.	ug/kg	2,800.	73.
3748	2,4-dichlorophenol	2,700.	67.	ug/kg	3,000.	73.
1189	1,2,4-trichlorobenzene	2,700.	33.	ug/kg	2,900.	37.
3761	naphthalene	2,500.	33.	ug/kg	2,700.	37.
4693	4-chloroaniline	2,100.	33.	ug/kg	2,300.	37.
3762	hexachlorobutadiene	2,800.	67.	ug/kg	3,000.	73.
1190	4-chloro-3-methylphenol	2,800.	67.	ug/kg	3,100.	73.
4694	2-methylnaphthalene	2,600.	33.	ug/kg	2,800.	37.
3763	hexachlorocyclopentadiene	4,700.	170.	ug/kg	5,200.	180.
3749	2,4,6-trichlorophenol	2,900.	67.	ug/kg	3,100.	73.
4695	2,4,5-trichlorophenol	3,000.	67.	ug/kg	3,300.	73.
3764	2-chloronaphthalene	2,700.	33.	ug/kg	3,000.	37.
4696	2-nitroaniline	2,900.	33.	ug/kg	3,200.	37.
3766	dimethyl phthalate	2,700.	67.	ug/kg	3,000.	73.
3765	acenaphthylene	2,600.	33.	ug/kg	2,900.	37.

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

Kay G. Hower

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



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1215 10/11/97





LLI Sample No. SW 2943294

Collected: 6/ 9/98 at 16:25 by DCU

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

Discard: 8/ 6/98

GEO-2770-1 Matrix Spike Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2701- SDG#: HMS02-20MS

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

P.O.
Ref.

CAT NO.	ANALYTED NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT	RESULTS	DETECTION LIMIT
TCL Semivolatiles cont d						
4697	3-nitroaniline	2,500.	67.	ug/kg	2,800.	73.
1191	acenaphthene	2,700.	33.	ug/kg	2,900.	37.
3750	2,4-dinitrophenol	2,200.	190.	ug/kg	2,400.	210.
1192	4-nitrophenol	3,100.	170.	ug/kg	3,400.	180.
4698	dibenzofuran	2,700.	33.	ug/kg	3,000.	37.
1193	2,4-dinitrotoluene	2,800.	67.	ug/kg	3,000.	73.
3767	2,6-dinitrotoluene	2,700.	33.	ug/kg	3,000.	37.
3770	diethyl phthalate	2,700.	67.	ug/kg	3,000.	73.
3769	4-chlorophenyl phenyl ether	2,800.	33.	ug/kg	3,100.	37.
3768	fluorene	2,800.	33.	ug/kg	3,100.	37.
4700	4-nitroaniline	2,900.	67.	ug/kg	3,200.	73.
3751	4,6-dinitro-2-methylphenol	2,500.	170.	ug/kg	2,700.	180.
3772	N-nitrosodiphenylamine	2,600.	33.	ug/kg	2,900.	37.
3773	4-bromophenyl phenyl ether	2,800.	67.	ug/kg	3,000.	73.
3774	hexachlorobenzene	2,900.	33.	ug/kg	3,200.	37.
1194	pentachlorophenol	3,000.	170.	ug/kg	3,200.	180.
3775	phenanthrene	2,700.	33.	ug/kg	3,000.	37.
3776	anthracene	2,800.	33.	ug/kg	3,000.	37.
4702	carbazole	2,800.	33.	ug/kg	3,000.	37.
3777	di-n-butyl phthalate	2,700.	67.	ug/kg	3,100.	37.
3778	fluoranthene	2,800.	33.	ug/kg	2,900.	73.
1195	pyrene	2,600.	33.	ug/kg	3,100.	37.
3780	butyl benzyl phthalate	2,600.	67.	ug/kg	2,800.	37.
3783	3,3'-dichlorobenzidine	2,200.	67.	ug/kg	2,800.	73.
3781	benzo (a) anthracene	2,800.	33.	ug/kg	2,400.	73.
3784	bis (2-ethylhexyl) phthalate	2,800.	33.	ug/kg	3,100.	37.
3782	chrysene	2,500.	67.	ug/kg	2,800.	73.
3785	di-n-octyl phthalate	2,700.	33.	ug/kg	3,000.	37.
3786	benzo (b) fluoranthene	2,700.	67.	ug/kg	3,000.	73.
3787	benzo (k) fluoranthene	2,600.	33.	ug/kg	2,900.	37.
3788	benzo (a) pyrene	2,800.	33.	ug/kg	3,100.	37.
3789	indeno (1,2,3-cd) pyrene	2,900.	33.	ug/kg	3,100.	37.
3790	dibenz (a,h) anthracene	2,800.	33.	ug/kg	3,100.	37.
3791	benzo (ghi) perylene	2,800.	33.	ug/kg	3,100.	37.

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. SW 2943294

Collected: 6/ 9/98 at 16:25 by DCU

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

Discard: 8/ 6/98

GEO-2770-1 Matrix Spike Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2701 SDG#: HMS02-20MS

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

P.O.
Ref.

CAT
NO. ANALYSIS NAME

AS RECEIVED
RESULTS METHOD
DETECTION LIMIT UNITS

DRY WEIGHT
RESULTS METHOD
DETECTION LIMIT

TCL Semivolatiles cont'd

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

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

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



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LLI Sample No. SW 2943294

Collected: 06/09/98 at 16:25 by DCU

Submitted: 06/10/98

GEO-2770-11 Matrix Spike Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2701 - SDC# - HHS02-20MS

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 35508	1	06/11/98 2200	Clara L. Medina
4638	TCL Semivolatiles	SW-846 8270C	1	06/26/98 1638	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/26/98 1638	Eileen Hostetler
0118	Moisture	EPA 160.3 modified	1	06/13/98 1831	Patrick N. Ward



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LLI Sample No. 2943294
 GEO-27/0-1' Matrix Spike Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
4683	100.0000	Batch: 98162SLF026									
1185	phenol										
67.	ug/kg	N.D.		79	69	14	81			49	105
3753	bis (2-chloroethyl) ether										
33.	ug/kg	N.D.		73	67	10	79			53	109
1186	2-chlorophenol										
33.	ug/kg	N.D.		79	70	12	84			55	107
3754	1,3-dichlorobenzene										
33.	ug/kg	N.D.		75	67	12	83			53	103
1187	1,4-dichlorobenzene										
33.	ug/kg	N.D.		75	66	12	82			52	103
3755	1,2-dichlorobenzene										
33.	ug/kg	N.D.		78	69	12	85			56	107
4690	2-methylphenol										
33.	ug/kg	N.D.		78	70	11	84			57	101
4691	2,2'-oxybis (1-chloropropane)										
33.	ug/kg	N.D.		81	73	11	87			38	117
4692	3- and 4-methylphenol										
67.	ug/kg	N.D.		78	70	10	84			48	116
1188	N-nitrosodi-n-propylamine										
33.	ug/kg	N.D.		79	70	12	83			50	124
3757	hexachloroethane										
33.	ug/kg	N.D.		76	67	13	84			52	108
3758	nitrobenzene										
33.	ug/kg	N.D.		81	72	12	89			56	110
3759	isophorone										
33.	ug/kg	N.D.		85	74	14	92			57	114
3746	2-nitrophenol										
67.	ug/kg	N.D.		83	71	15	86			59	107
3747	2,4-dimethylphenol										
67.	ug/kg	N.D.		79	69	14	86			39	108
3760	bis (2-chloroethoxy) methane										
67.	ug/kg	N.D.		76	67	12	82			56	103
3748	2,4-dichlorophenol										
67.	ug/kg	N.D.		82	71	14	86			59	100
1189	1,2,4-trichlorobenzene										
33.	ug/kg	N.D.		80	70	13	87			57	104
3761	naphthalene										
33.	ug/kg	N.D.		75	65	14	79			58	99
4693	4-chloroaniline										
33.	ug/kg	N.D.		63	59	6	64			1	102
3762	hexachlorobutadiene										
67.	ug/kg	N.D.		83	71	15	89			56	115
1190	4-chloro-3-methylphenol										
67.	ug/kg	N.D.		85	74	15	90			56	108
4694	2-methylnaphthalene										
33.	ug/kg	N.D.		78	69	12	83			60	102



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943294
 GEO-27/0-1' Matrix Spike Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
 Kerr-McGee Corporation

SAMPLE MDI	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LIMITS HIGH
3753	hexachlorocyclopentadiene										
170.	ug/kg	N.D.		71	63	13	74			27	113
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4595	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
33.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943294
 GEO-27/0-1' Matrix Spike Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
 Kerr-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	OUP RPD	MS	MSD	MS RPD	LCS	LCS DUP.	LCS RPD	LCS LOW	LIMITS HIGH
3775	phenanthrene										
33.	ug/kg	N.D.		82	71	13	88			62	107
3776	anthracene										
33.	ug/kg	N.D.		83	70	16	91			62	105
4702	carbazole										
33.	ug/kg	N.D.		84	73	14	91			57	112
3777	di-n-butyl phthalate										
67.	ug/kg	N.D.		80	71	12	87			59	114
3778	fluoranthene										
33.	ug/kg	N.D.		84	73	14	91			58	110
1195	pyrene										
33.	ug/kg	N.D.		78	67	15	83			52	115
3780	butyl benzy l phthalate										
67.	ug/kg	N.D.		77	68	13	85			58	119
3783	3,3'-dichlorobenzidine										
67.	ug/kg	N.D.		67	62	8	53			15	94
3781	benzo (a) anthracene										
33.	ug/kg	N.D.		85	74	14	91			63	106
3784	bis (2-ethylhexyl) phthalate										
67.	ug/kg	N.D.		76	66	14	82			8	158
3782	chrysene										
33.	ug/kg	N.D.		82	72	13	88			60	107
3785	di-n-octyl phthalate										
67.	ug/kg	N.D.		81	70	15	86			54	127
3786	benzo (b) fluoranthene										
33.	ug/kg	N.D.		79	69	13	85			59	105
3787	benzo (k) fluoranthene										
33.	ug/kg	N.D.		84	72	16	90			63	108
3788	benzo (a) pyrene										
33.	ug/kg	N.D.		86	74	15	93			61	107
3789	indeno (1,2,3-cd) pyrene										
33.	ug/kg	N.D.		85	73	16	91			55	111
3790	dibenz (a,h) anthracene										
33.	ug/kg	N.D.		84	71	17	90			60	117
3791	benzo (ghi) perylene										
33.	ug/kg	N.D.		84	71	17	90			52	113
0118	Moisture										
0.080	% by wt.										

* Batch: 981640199820003A



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2943294
GEO-27/0-1' Matrix Spike Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d5	74	39	108
	2-Fluorenyl	75	35	108
	2,4,6-TSP	91	23	125
4689 TCL Semivolatiles cont'd	Nitrobenz-d5	76	31	126
	2-Fluorenyl	79	45	113
	Tphenylid14	75	37	130



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943295

Collected: 6/ 9/98 at 16:25 by DCU

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

Discard: 8/ 6/98

GEO-27/0 1 Matrix Spike Dup Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
27/01 - SPC#: H1SD2-20MSD*

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

P.O.
Ret.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION	METHOD LIMIT UNITS	RESULTS	METHOD LIMIT UNITS
4688	TCL Semivolatiles				See Page	2
4689	TCL Semivolatiles cont'd				See Page	3
0118	Moisture	8.79	0.080	% by wt.		
0121	Moisture Duplicate	9.15	0.080	% by wt.		

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
21:06:18 D 0003 10 129915 618545
412 0.00 00033420 ASR000

MEMBER
ACIL

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Respectfully Submitted
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Group Leader, GC/MS SVOA





LLI Sample No. SW 2943295

Collected: 6/ 9/98 at 16:25 by DCU

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

Discard: 8/ 6/98

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

P.O.
 Ref.

GEO-27/0-1 Matrix Spike Dup Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 2701 - SDG#: HMS02-20MSD*

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD DETECTION LIMIT	UNITS	RESULTS	METHOD DETECTION LIMIT
TCL Semivolatiles						
1185	phenol	2,300.	67.	ug/kg	2,500.	73
3753	bis (2-chloroethyl) ether	2,200.	33	ug/kg	2,400.	37
1186	2-chlorophenol	2,300.	33	ug/kg	2,500.	37
3754	1,3-dichlorobenzene	2,200.	33	ug/kg	2,400.	37
1187	1,4-dichlorobenzene	2,200.	33	ug/kg	2,400.	37
3755	1,2-dichlorobenzene	2,300.	33	ug/kg	2,500.	37
4690	2-methylphenol	2,300.	33	ug/kg	2,600.	37
4691	2,2'-oxybis (1-chloropropane)	2,400.	33	ug/kg	2,700.	37
4692	3- and 4-methylphenol	2,300.	67.	ug/kg	2,600.	73.
1188	N-nitrosodi-n-propylamine	2,300.	33	ug/kg	2,600.	37.
3757	hexachloroethane	2,200.	33.	ug/kg	2,400.	37.
3758	nitrobenzene	2,400.	33.	ug/kg	2,600.	37.
3759	isophorone	2,500.	33.	ug/kg	2,700.	37.
3746	2-nitrophenol	2,400.	67.	ug/kg	2,600.	73.
3747	2,4-dimethylphenol	2,300.	67.	ug/kg	2,500.	73.
3760	bis (2-chloroethoxy) methane	2,200.	67.	ug/kg	2,500.	73.
3748	2,4-dichlorophenol	2,400.	67.	ug/kg	2,600.	73.
1189	1,2,4-trichlorobenzene	2,300.	33.	ug/kg	2,600.	37.
3761	naphthalene	2,200.	33.	ug/kg	2,400.	37.
4693	4-chloroaniline	2,000.	33.	ug/kg	2,200.	37.
3762	hexachlorobutadiene	2,400.	67.	ug/kg	2,600.	73.
1190	4-chloro-3-methylphenol	2,500.	67.	ug/kg	2,700.	73.
4694	2-methylnaphthalene	2,300.	33.	ug/kg	2,500.	37.
3763	hexachlorocyclopentadiene	4,200.	170.	ug/kg	4,600.	180.
3749	2,4,6-trichlorophenol	2,600.	67.	ug/kg	2,800.	73.
4695	2,4,5-trichlorophenol	2,600.	67.	ug/kg	2,900.	73.
3764	2-chloronaphthalene	2,400.	33.	ug/kg	2,700.	37.
4696	2-nitroaniline	2,500.	33.	ug/kg	2,700.	37.
3766	dimethyl phthalate	2,400.	67.	ug/kg	2,600.	73.
3765	acenaphthylene	2,300.	33.	ug/kg	2,500.	37.

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

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

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





LLI Sample No. SW 2943295

Collected: 6/ 9/98 at 16:25 by DCU

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

Discard: 8/ 6/98

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

P.O.
 Ref.

GE0-27/0-1 Matrix Spike Dup Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 2701- SDG#: HMS02-20MSD*

CAT NO.	ANALYSTS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	METHOD	DETECTION LIMIT UNITS	RESULTS	METHOD
TCL Semivolatiles cont'd						
4697	3-nitroaniline	2.300.	67.	ug/kg	2.600.	73.
1191	acenaphthene	2.400.	33.	ug/kg	2.600.	37.
3750	2,4-dinitrophenol	2.100.	190.	ug/kg	2.300.	210.
1192	4-nitrophenol	2.800.	170.	ug/kg	3.100.	180.
4698	dibenzofuran	2.400.	33.	ug/kg	2.700.	37.
1193	2,4-dinitrotoluene	2.500.	67.	ug/kg	2.700.	73.
3767	2,6-dinitrotoluene	2.500.	33.	ug/kg	2.700.	37.
3770	diethyl phthalate	2.400.	67.	ug/kg	2.600.	73.
3769	4-chlorophenyl phenyl ether	2.500.	33.	ug/kg	2.700.	37.
3768	fluorene	2.500.	33.	ug/kg	2.700.	37.
4700	4-nitroaniline	2.500.	67.	ug/kg	2.800.	73.
3751	4,6-dinitro-2-methylphenol	2.200.	170.	ug/kg	2.400.	180.
3772	N-nitrosodiphenylamine	2.300.	33.	ug/kg	2.500.	37.
3773	4-bromophenyl phenyl ether	2.400.	67.	ug/kg	2.600.	73.
3774	hexachlorobenzene	2.500.	33.	ug/kg	2.800.	37.
1194	pentachlorophenol	2.500.	170.	ug/kg	2.800.	180.
3775	phenanthrene	2.400.	33.	ug/kg	2.600.	37.
3776	anthracene	2.300.	33.	ug/kg	2.600.	37.
4702	carbazole	2.400.	33.	ug/kg	2.700.	37.
3777	di-n-butyl phthalate	2.400.	67.	ug/kg	2.600.	73.
3778	fluoranthene	2.400.	33.	ug/kg	2.700.	37.
1195	pyrene	2.200.	33.	ug/kg	2.400.	37.
3780	butyl benzyl phthalate	2.300.	67.	ug/kg	2.500.	73.
3783	3,3'-dichlorobenzidine	2.100.	67.	ug/kg	2.300.	73.
3781	benzo (a) anthracene	2.500.	33.	ug/kg	2.700.	37.
3784	bis (2-ethylhexyl) phthalate	2.200.	67.	ug/kg	2.400.	73.
3782	chrysene	2.400.	33.	ug/kg	2.600.	37.
3785	di-n-octyl phthalate	2.300.	67.	ug/kg	2.500.	73.
3786	benzo (b) fluoranthene	2.300.	33.	ug/kg	2.500.	37.
3787	benzo (k) fluoranthene	2.400.	33.	ug/kg	2.600.	37.
3788	benzo (a) pyrene	2.500.	33.	ug/kg	2.700.	37.
3789	indeno (1,2,3-cd) pyrene	2.400.	33.	ug/kg	2.700.	37.
3790	dibenz (a,h) anthracene	2.400.	33.	ug/kg	2.600.	37.
3791	benzo (ghi) perylene	2.400.	33.	ug/kg	2.600.	37.

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

Respectfully Submitted
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 Group Leader, GC/MS SVOA

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See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943295

Collected: 6/ 9/98 at 16:25 by DCU

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

Discard: 8/ 6/98

GEO-2770-1 Matrix Spike Dup Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
2701 SDG#: HMS02-20MSD*

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

P.O.
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED			DRY WEIGHT	
		RESULTS	DETECTION LIMIT	UNITS	RESULTS	DETECTION LIMIT
	TCL Semivolatiles cont'd					

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

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



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

See reverse side for explanation of symbols and abbreviations





LLI Sample No. SW 2943295

Collected: 06/09/98 at 16:25 by DCU

Submitted: 06/10/98

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

GEO-27/0-1' Matrix Spike Dup Grab Soil Sample

Gulf States Creosoting Site: Hattiesburg, MS
 2701- SDG#: HMS02-20MSD*

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0381	BNA Soil Extraction	SW-846 35505	1	06/11/98 2200	Clara L. Medina
4689	TCL Semivolatiles	SW-846 8270C	1	06/26/98 1732	Eileen Hostetler
4689	TCL Semivolatiles cont'd	SW-846 8270C	1	06/26/98 1732	Eileen Hostetler
0118	Moisture	EPA 160.3 modified	1	06/13/98 1831	Patrick N. Ward
0121	Moisture Duplicate	EPA 160.3 modified	1	06/13/98 1831	Patrick N. Ward



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LLI Sample No. 2943295
 GEO-27/0-1 Matrix Spike Dup Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
 Kerr-McGee Corporation

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

4688	TCL Semivolatiles	Batch: 98162SLF028									

1185	pheno:										
67.	ug/kg	N.D.		79	69	14	81			49	105
3753	bis (2-chloroethyl) ether	N.D.		73	67	10	79			53	109
33.	ug/kg	N.D.		79	70	12	84			55	107
1186	2-chlorophenol	N.D.		75	67	12	83			53	103
33.	ug/kg	N.D.		75	66	12	82			52	103
3754	1,3-dichlorobenzene	N.D.		78	69	12	85			56	107
33.	ug/kg	N.D.		78	70	11	84			57	101
1187	1,4-dichlorobenzene	N.D.		81	73	11	87			38	117
33.	ug/kg	N.D.		78	70	10	84			48	116
3755	1,2-dichlorobenzene	N.D.		79	70	12	83			50	124
33.	ug/kg	N.D.		76	67	13	84			52	108
4690	2-methylphenol	N.D.		81	72	12	89			56	110
33.	ug/kg	N.D.		85	74	14	92			57	114
4691	2,2'-oxybis (1-chloropropane)	N.D.		83	71	15	86			59	107
33.	ug/kg	N.D.		79	69	14	86			39	108
4692	3- and 4-methylphenol	N.D.		76	67	12	82			56	103
67.	ug/kg	N.D.		82	71	14	86			59	100
1188	N-nitrosodi-n-propylamine	N.D.		80	70	13	87			57	104
33.	ug/kg	N.D.		75	65	14	79			58	99
3757	hexachloroethane	N.D.		63	59	6	64			1	102
33.	ug/kg	N.D.		83	71	15	89			56	115
3758	nitrobenzene	N.D.		85	74	15	90			56	108
33.	ug/kg	N.D.		78	69	12	83			60	102
3759	isophorone	N.D.									
33.	ug/kg	N.D.									
3746	2-nitrophenol	N.D.									
67.	ug/kg	N.D.									
3747	2,4-dimethylphenol	N.D.									
67.	ug/kg	N.D.									
3760	bis (2-chloroethoxy) methane	N.D.									
67.	ug/kg	N.D.									
3748	2,4-dichlorophenol	N.D.									
67.	ug/kg	N.D.									
1189	1,2,4-trichlorobenzene	N.D.									
33.	ug/kg	N.D.									
3761	naphthalene	N.D.									
33.	ug/kg	N.D.									
4693	4-chloroaniline	N.D.									
33.	ug/kg	N.D.									
3762	hexachlorobutadiene-	N.D.									
67.	ug/kg	N.D.									
1190	4-chloro-3-methylphenol	N.D.									
67.	ug/kg	N.D.									
4694	2-methylnaphthalene	N.D.									
33.	ug/kg	N.D.									



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943295
 GEO-27/0-1 Matrix Spike Dup Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
 Kerr-McGee Corporation

SAMPLE NO.	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	LCS HIGH
3750	1,2,3,4,5,6-hexachlorocyclopentadiene										
170.	ug/kg	N.D.		71	63	13	74			27	100
3749	2,4,6-trichlorophenol										
67.	ug/kg	N.D.		86	77	10	94			62	106
4695	2,4,5-trichlorophenol										
67.	ug/kg	N.D.		90	79	13	96			63	107
3764	2-chloronaphthalene										
33.	ug/kg	N.D.		81	73	12	87			60	106
4696	2-nitroaniline										
33.	ug/kg	N.D.		87	75	15	94			54	111
3766	dimethyl phthalate										
67.	ug/kg	N.D.		82	72	12	90			61	104
3765	acenaphthylene										
33.	ug/kg	N.D.		78	69	13	84			62	101

4689	TCL Semivolatiles cont'd	Batch: 98162SLF026									

4697	3-nitroaniline										
67.	ug/kg	N.D.		76	70	9	80			9	110
1191	acenaphthene										
33.	ug/kg	N.D.		80	72	11	88			61	100
3750	2,4-dinitrophenol										
190.	ug/kg	N.D.		67	63	6	63			29	117
1192	4-nitrophenol										
170.	ug/kg	N.D.		93	84	10	100			44	110
4698	dibenzofuran										
33.	ug/kg	N.D.		82	73	11	88			62	102
1193	2,4-dinitrotoluene										
67.	ug/kg	N.D.		83	74	11	90			58	113
3767	2,6-dinitrotoluene										
33.	ug/kg	N.D.		82	74	10	91			62	111
3770	diethyl phthalate										
67.	ug/kg	N.D.		82	72	13	88			59	104
3769	4-chlorophenyl phenyl ether										
33.	ug/kg	N.D.		84	74	13	89			52	110
3768	fluorene										
33.	ug/kg	N.D.		85	74	13	90			59	109
4700	4-nitroaniline										
67.	ug/kg	N.D.		88	76	14	92			37	120
3751	4,6-dinitro-2-methylphenol										
170.	ug/kg	N.D.		74	65	13	73			42	107
3772	N-nitrosodiphenylamine										
33.	ug/kg	N.D.		79	68	15	86			60	106
3773	4-bromophenyl phenyl ether										
67.	ug/kg	N.D.		83	71	16	89			61	110
3774	hexachlorobenzene										
33.	ug/kg	N.D.		88	76	14	95			52	123
1194	pentachlorophenol										
170.	ug/kg	N.D.		89	76	16	97			42	108



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2943295
 GEO-27/0-1' Matrix Spike Dup Grab Soil Sample
 Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
 Kern-McGee Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LOW	UNITS HIGH
3775	phenanthrene										
	33. ug/kg	N.D.		82	72	13	88			62	107
3775	anthracene										
	33. ug/kg	N.D.		93	70	16	91			62	105
4702	carbazole										
	33. ug/kg	N.D.		84	73	14	91			57	112
3777	di-n-butyl phthalate										
	67. ug/kg	N.D.		60	71	12	87			59	114
3778	fluoranthene										
	33. ug/kg	N.D.		84	73	14	91			58	110
1195	pyrene										
	33. ug/kg	N.D.		78	67	15	83			52	115
3780	butyl benzyl phthalate										
	67. ug/kg	N.D.		77	68	13	85			58	119
3783	3,3'-dichlorobenzidine										
	67. ug/kg	N.D.		67	62	8	53			15	94
3781	benzo (a) anthracene										
	33. ug/kg	N.D.		85	74	14	91			63	106
3784	bis (2-ethylhexyl) phthalate										
	67. ug/kg	N.D.		76	66	14	82			8	158
3782	chrysene										
	33. ug/kg	N.O.		82	72	13	88			60	107
3785	di-n-octyl phthalate										
	67. ug/kg	N.D.		81	70	15	86			54	127
3786	benzo (b) fluoranthene										
	33. ug/kg	N.D.		79	69	13	85			59	105
3787	benzo (k) fluoranthene										
	33. ug/kg	N.D.		84	72	16	90			63	108
3788	benzo (a) pyrene										
	33. ug/kg	N.D.		86	74	15	93			61	107
3789	indeno (1,2,3-cd) pyrene										
	33. ug/kg	N.D.		85	73	16	91			55	111
3790	dibenz (a,h) anthracene										
	33. ug/kg	N.D.		84	71	17	90			60	117
3791	benzo (ghi) perylene										
	33. ug/kg	N.D.		84	71	17	90			52	113
0118	Moisture										
	0.080 % by wt.										
0121	Moisture Duplicate										
	0.080 % by wt.										
		* Batch: 981640199820003A									
		Batch: 981640199820003A									



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See reverse side for explanation of symbols and abbreviations.

2013 Rev. 1.1.1





LLI Sample No. 2943295
GEO-27/0-1' Matrix Spike Dup Grab Soil Sample
Gulf States Creosoting Site: Hattiesburg, MS

Group No. 618545
Kerr-McGee Corporation

TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			LOW	HIGH
4688 TCL Semivolatiles	Phenol-d5	68	39	102
	2-Fluorophenol	66	35	109
	2,4,6-TBP	83	23	125
4689 TCL Semivolatiles cont'd	Nitrobenz-d5	68	31	126
	2-Fluorophenyl	70	45	113
	Tphenylid14	67	37	130



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LLI Sample No. **WW 2941683**

Collected: 6/ 4/98 at 16:30 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-02 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
2SW-- SDG#: HMS03-01

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	
		RESULTS	METHOD DETECTION LIMIT UNITS
4678	TCL Semivolatiles		See Page 2
4679	TCL Semivolatiles cont'd		See Page 3

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 02:02:36 D 0003 12 129915 618147
 863 0.00 00029700 ASR000

Respectfully Submitted
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See reverse side for explanation of symbols and abbreviations

2000-10-10 10:00 AM





LLI Sample No. WW 2941683

Collected: 6/ 4/98 at 16:30 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-02 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
2SW-- SDG#: HMS03-01

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		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethyl phthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

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

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



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations

0010 (Rev. 1-99)





LLI Sample No. WW 2941683

Collected: 6/ 4/98 at 16:30 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-02 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
2SW-- SDG#: HMS03-01

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 cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	14.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	16.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	11.	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	12.	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	13.	1.	ug/l
4684	carbazole	10.	J	1.
3965	di-n-butyl phthalate	9.	J	2.
3966	fluoranthene	39.		1.
3967	pyrene	21.		1.
3969	butyl benzyl phthalate	3.	J	2.
3972	3,3'-dichlorobenzidine	N.D.		2.
3970	benzo (a) anthracene	5.	J	1.
3973	bis (2-ethylhexyl) phthalate	3.	J	2.
3971	chrysene	6.	J	1.
3974	di-n-octyl phthalate	N.D.		2.
3975	benzo (b) fluoranthene	12.		1.
3976	benzo (k) fluoranthene	2.	J	1.
3977	benzo (a) pyrene	N.D.		1.
3978	indeno (1,2,3-cd) pyrene	N.D.		1.
3979	dibenz (a,h) anthracene	N.D.		1.
3980	benzo (ghi) perylene	N.D.		1.

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

Respectfully Submitted
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Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

2016 T-11-1-01





LLI Sample No. **WW 2941683**

Collected: 6/ 4/98 at 16:30 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-02 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
2SW-- SDG#: HMS03-01

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.
Di-n-butylphthalate and Butylbenzylphthalate were detected in the method blank at concentrations of 10. ug/l and 6. ug/l respectively. The blank results were not subtracted from the analytical results.

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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01/15/98 Rel. 2.00





LLI Sample No. WW 2941683

Collected: 06/04/98 at 16:30 by ACT

Submitted: 06/06/98

SW-02 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
2SW-- SDG#: HMS03-01

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	06/10/98 0800	Denise L. Trimby
4678	TCL Semivolatiles	SW-846 8270C	1	07/08/98 1453	Mark A. Ratcliff
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/08/98 1453	Mark A. Ratcliff



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22 11 1998 8:00 AM





LLI Sample No. 2941683

SW-02 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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: 98161WAC026										
3925	phenol											
	1. ug/l	N.D.		46	45	2	44			5	83	
3936	bis (2-chloroethyl) ether											
	1. ug/l	N.D.		98	100	2	80			66	106	
3924	2-chlorophenol											
	1. ug/l	N.D.		86	87	1	80			62	107	
3937	1,3-dichlorobenzene											
	1. ug/l	N.D.		80	86	7	59			45	91	
3938	1,4-dichlorobenzene											
	1. ug/l	N.D.		80	86	7	59			45	94	
3939	1,2-dichlorobenzene											
	1. ug/l	N.D.		84	89	7	62			52	97	
4680	2-methylphenol											
	1. ug/l	N.D.		92	86	6	83			55	96	
4681	2,2'-oxybis (1-chloropropane)											
	2. ug/l	N.D.		115	116	1	89			43	118	
4682	4-methylphenol											
	3. ug/l	N.D.		86	85	2	80			48	99	
3942	N-nitrosodi-n-propylamine											
	1. ug/l	N.D.		94	94	1	81			62	118	
3941	hexachloroethane											
	1. ug/l	N.D.		69	74	6	51			40	84	
3943	nitrobenzene											
	1. ug/l	N.D.		101	105	4	82			61	113	
3944	isophorone											
	1. ug/l	N.D.		108	114	5	94			66	113	
3926	2-nitrophenol											
	1. ug/l	N.D.		89	88	2	83			67	104	
3927	2,4-dimethylphenol											
	1. ug/l	N.D.		90	91	1	83			52	99	
3945	bis (2-chloroethoxy) methane											
	1. ug/l	N.D.		98	102	4	84			64	103	
3928	2,4-dichlorophenol											
	1. ug/l	N.D.		91	90	1	85			65	98	
3946	1,2,4-trichlorobenzene											
	1. ug/l	N.D.		86	91	6	65			52	93	
3947	naphthalene											
	1. ug/l	N.D.		88	93	5	69			60	97	
3871	4-chloroaniline											
	1. ug/l	N.D.		81	77	5	67			34	101	
3948	hexachlorobutadiene											
	2. ug/l	N.D.		59	62	5	45			24	86	
3929	4-chloro-3-methylphenol											
	1. ug/l	N.D.		100	102	2	97			60	111	
3905	2-methylnaphthalene											
	1. ug/l	N.D.		88	91	3	71			62	98	



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L/LI Sample No. 2941683

SW-02 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		47	44	7	38			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		88	83	5	84			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		85	82	4	83			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	89	3	73			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		108	111	3	99			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		89	87	3	48			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		81	82	1	70			64	100

4679	TCL Semivolatiles cont'd	Batch: 98161WAC026									

3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	2	75			40	108
3954	acenaphthene										
	1. ug/l	N.D.		84	85	1	73			61	100
3931	2,4-dinitrophenol										
	16. ug/l	N.D.		74	50	39	86			25	124
3932	4-nitrophenol										
	10. ug/l	N.D.		50	42	18	55			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		81	83	3	73			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		90	92	2	84			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		104	106	2	94			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		95	95	0	74			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		83	84	0	76			62	104
3956	fluorene										
	1. ug/l	N.D.		85	86	1	78			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		103	106	3	97			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		80	71	13	84			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		84	84	0	77			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		87	86	1	79			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		92	92	0	86			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		74	59	23	86			46	114



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2315 7/93 41107





LLI Sample No. 2941683

SW-02 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		87	88	1	81			68	102
3964	anthracene										
	1. ug/l	N.D.		88	87	1	81			66	101
4684	carbazole										
	1. ug/l	N.D.		88	91	3	83			66	110
3965	di-n-butyl phthalate										
	2. ug/l	10. ug/l		90	90	0	81			61	105
3966	fluoranthene										
	1. ug/l	N.D.		87	87	0	81			66	106
3967	pyrene										
	1. ug/l	N.D.		93	95	2	85			58	112
3969	butyl benzyl phthalate										
	2. ug/l	6. ug/l		94	96	2	77			48	105
3972	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		95	96	0	86			37	104
3970	benzo (a) anthracene										
	1. ug/l	N.D.		98	99	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		98	99	2	91			64	113
3971	chrysene										
	1. ug/l	N.D.		96	97	1	90			67	101
3974	di-n-octyl phthalate										
	2. ug/l	N.D.		90	90	0	83			59	118
3975	benzo (b) fluoranthene										
	1. ug/l	N.D.		77	77	0	71			64	101
3976	benzo (k) fluoranthene										
	1. ug/l	N.D.		100	98	2	90			67	105
3977	benzo (a) pyrene										
	1. ug/l	N.D.		96	96	0	89			65	101
3978	indeno (1,2,3-cd) pyrene										
	1. ug/l	N.D.		103	100	3	96			59	111
3979	dibenz (a,h) anthracene										
	1. ug/l	N.D.		105	102	3	97			66	117
3980	benzo (ghi) perylene										
	1. ug/l	N.D.		105	102	2	99			55	115



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2214 03/05/07





LLI Sample No. **2941683**
SW-02 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
Kerr-McGee Corporation

TRIAL ID	SURROGATE SUMMARY		SURROGATE LIMITS	
	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	39	7	74
	Pheno1-d6	24	25	88
	2,4,6-TBP	59	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	59	47	114
	2-Fbiphny1	55	51	106
	Tpheny1d14	52	37	119



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2216 Rev. 9-1-07





LLI Sample No. **WW 2941684**

Collected: 6/ 4/98 at 15:25 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
3SW-- SDG#: HMS03-02

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
4678	TCL Semivolatiles		See Page 2
4679	TCL Semivolatiles cont'd		See Page 3

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
02:04:45 D 0003 12 129915 618147
863 0.00 00029700 ASR000



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Group Leader, GC/MS SVOA





LLI Sample No. WW 2941684

Collected: 6/ 4/98 at 15:25 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

3SW-- SDG#: HMS03-02

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		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethyl phthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

Questions? Contact your Client Services Representative
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Respectfully Submitted
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22 0 100 1 1





LLI Sample No. WW 2941684

Collected: 6/ 4/98 at 15:25 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
3SW-- SDG#: HMS03-02

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		LIMIT UNITS
		RESULTS	METHOD DETECTION	
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	9.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	16.	ug/l
3932	4-nitrophenol	N.D.	11.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethyl phthalate	N.D.	2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	1.	ug/l
3956	fluorene	11.	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	13.	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	9.	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
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Group Leader, GC/MS SVOA





LLI Sample No. **WW 2941684**

Collected: 6/ 4/98 at 15:25 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
3SW-- SDG#: HMS03-02

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

P.O. GULF STATES CREOSOT
Re1.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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

Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.

Due to insufficient sample, the quantitation limits for the GC/MS semivolatile compounds were raised.

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

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



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

See reverse side for explanation of symbols and abbreviations.

2215 Rev. 5.1.97





LLI Sample No. WW 2941684

Collected: 06/04/98 at 15:25 by ACT

Submitted: 06/06/98

SW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
3SW-- SDG#: HMS03-02

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	06/10/98 0800	Denise L. Trimby
4678	TCL Semivolatiles	SW-846 8270C	1	07/08/98 1554	Mark A. Ratcliff
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/08/98 1554	Mark A. Ratcliff



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LLI Sample No. 2941684

SW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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: 98161WAC026									
3925	phenol										
	1. ug/l	N.D.		46	45	2	44			5	83
3936	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		98	100	2	80			66	106
3924	2-chlorophenol										
	1. ug/l	N.D.		86	87	1	80			62	107
3937	1,3-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	91
3938	1,4-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	94
3939	1,2-dichlorobenzene										
	1. ug/l	N.D.		84	89	7	62			52	97
4680	2-methylphenol										
	1. ug/l	N.D.		92	86	6	83			55	96
4681	2,2'oxybis (1-chloropropane)										
	2. ug/l	N.D.		115	116	1	89			43	118
4682	4-methylphenol										
	3. ug/l	N.D.		86	85	2	80			48	99
3942	N-nitrosodi-n-propylamine										
	1. ug/l	N.D.		94	94	1	81			62	118
3941	hexachloroethane										
	1. ug/l	N.D.		69	74	6	51			40	84
3943	nitrobenzene										
	1. ug/l	N.D.		101	105	4	82			61	113
3944	isophorone										
	1. ug/l	N.D.		108	114	5	94			66	113
3926	2-nitrophenol										
	1. ug/l	N.D.		89	88	2	83			67	104
3927	2,4-dimethylphenol										
	1. ug/l	N.D.		90	91	1	83			52	99
3945	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		98	102	4	84			64	103
3928	2,4-dichlorophenol										
	1. ug/l	N.D.		91	90	1	85			65	98
3946	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		86	91	6	65			52	93
3947	naphthalene										
	1. ug/l	N.D.		88	93	5	69			60	97
3871	4-chloroaniline										
	1. ug/l	N.D.		81	77	5	67			34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		59	62	5	45			24	86
3929	4-chloro-3-methylphenol										
	1. ug/l	N.D.		100	102	2	97			60	111
3905	2-methylnaphthalene										
	1. ug/l	N.D.		88	91	3	71			62	98



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2016-09-03 11:11





LLI Sample No. 2941684

SW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		47	44	7	38			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		88	83	5	84			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		85	82	4	83			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	89	3	73			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		108	111	3	99			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		89	87	3	48			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		81	82	1	70			64	100

4679	TCL Semivolatiles cont'd	Batch: 98161WAC026									
3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	2	75			40	108
3954	acenaphthene										
	1. ug/l	N.D.		84	85	1	73			61	100
3931	2,4-dinitrophenol										
	16. ug/l	N.D.		74	50	39	86			25	124
3932	4-nitrophenol										
	11. ug/l	N.D.		50	42	18	55			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		81	83	3	73			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		90	92	2	84			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		104	106	2	94			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		95	95	0	74			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		83	84	0	76			62	104
3956	fluorene										
	1. ug/l	N.D.		85	86	1	78			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		103	106	3	97			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		80	71	13	84			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		84	84	0	77			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		87	86	1	79			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		92	92	0	86			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		74	59	23	86			46	114



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See reverse side for explanation of symbols and abbreviations

2216 7/10/01





LLI Sample No. 2941684

SW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		87	88	1	81			68	102
3964	anthracene										
	1. ug/l	N.D.		88	87	1	81			66	101
4684	carbazole										
	1. ug/l	N.D.		88	91	3	83			66	110
3965	di-n-butyl phthalate										
	2. ug/l	10. ug/l		90	90	0	81			61	105
3966	fluoranthene										
	1. ug/l	N.D.		87	87	0	81			66	106
3967	pyrene										
	1. ug/l	N.D.		93	95	2	85			58	112
3969	butyl benzyl phthalate										
	2. ug/l	6. J ug/l		94	96	2	77			48	105
3972	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		95	96	0	86			37	104
3970	benzo (a) anthracene										
	1. ug/l	N.D.		98	99	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		98	99	2	91			64	113
3971	chrysene										
	1. ug/l	N.D.		96	97	1	90			67	101
3974	di-n-octyl phthalate										
	2. ug/l	N.D.		90	90	0	83			59	118
3975	benzo (b) fluoranthene										
	1. ug/l	N.D.		77	77	0	71			64	101
3976	benzo (k) fluoranthene										
	1. ug/l	N.D.		100	98	2	90			67	105
3977	benzo (a) pyrene										
	1. ug/l	N.D.		96	96	0	89			65	101
3978	indeno (1,2,3-cd) pyrene										
	1. ug/l	N.D.		103	100	3	96			59	111
3979	dibenz (a,h) anthracene										
	1. ug/l	N.D.		105	102	3	97			66	117
3980	benzo (ghi) perylene										
	1. ug/l	N.D.		105	102	2	99			55	115



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2270-174-1-11





LLI Sample No. 2941684

SW-03 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles		2-F1pheno1	63	7	74
		Pheno1-d6	37	25	88
		2,4,6-TBP	96	34	125
4679 TCL Semivolatiles cont'd		Nitrobz-d5	96	47	114
		2-Fbiphenyl	92	51	106
		Tphenylid14	100	37	119



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2216 11/14/07





LLI Sample No. **WW 2941685**

Collected: 6/ 4/98 at 14:55 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-04 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
4SW-- SDG#: HMS03-03

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	
		RESULTS	METHOD DETECTION LIMIT UNITS
4678	TCL Semivolatiles		See Page 2
4679	TCL Semivolatiles cont'd		See Page 3

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
02:06:46 D 0003 12 129915 618147
863 0.00 00029700 ASR000



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





LLI Sample No. WW 2941685

Collected: 6/ 4/98 at 14:55 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-04 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

4SW-- SDG#: HMS03-03

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		
		RESULTS	METHOD DETECTION	LIMIT UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethyl phthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

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



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





LLI Sample No. WW 2941685

Collected: 6/ 4/98 at 14:55 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-04 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
4SW-- SDG#: HMS03-03

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

P.O. GULF STATES CREOSOT
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	16.	ug/l
3932	4-nitrophenol	N.D.	11.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethyl phthalate	N.D.	2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butyl phthalate	N.D.	2.	ug/l
3966	fluoranthene	12.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butyl benzyl phthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo (a) anthracene	N.D.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	N.D.	1.	ug/l
3976	benzo (k) fluoranthene	N.D.	1.	ug/l
3977	benzo (a) pyrene	N.D.	1.	ug/l
3978	indeno (1,2,3-cd) pyrene	N.D.	1.	ug/l
3979	dibenz (a,h) anthracene	N.D.	1.	ug/l
3980	benzo (ghi) perylene	N.D.	1.	ug/l

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

Respectfully Submitted
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Group Leader, GC/MS SVOA



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See reverse side for explanation of symbols and abbreviations.

2016-01-14 11:11





LLI Sample No. WW 2941685

Collected: 6/ 4/98 at 14:55 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-04 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
4SW-- SDG#: HMS03-03

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.

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

See reverse side for explanation of symbols and abbreviations.

2276





LLI Sample No. WW 2941685

Collected: 06/04/98 at 14:55 by ACT

Submitted: 06/06/98

SW-04 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
4SW-- SDG#: HMS03-03

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	06/10/98 0800	Denise L. Trimby
4678	TCL Semivolatiles	SW-846 8270C	1	07/08/98 1655	Mark A. Ratcliff
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/08/98 1655	Mark A. Ratcliff



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See reverse side for explanation of symbols and abbreviations.

2276 01/18/01





LLI Sample No. 2941685

SW-04 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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: 98161WAC026									
3925	phenol										
	1. ug/l	N.D.		46	45	2	44			5	83
3936	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		98	100	2	80			66	106
3924	2-chlorophenol										
	1. ug/l	N.D.		86	87	1	80			62	107
3937	1,3-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	91
3938	1,4-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	94
3939	1,2-dichlorobenzene										
	1. ug/l	N.D.		84	89	7	62			52	97
4680	2-methylphenol										
	1. ug/l	N.D.		92	86	6	83			55	96
4681	2,2'oxybis (1-chloropropane)										
	2. ug/l	N.D.		115	116	1	89			43	118
4682	4-methylphenol										
	3. ug/l	N.D.		86	85	2	80			48	99
3942	N-nitrosodi-n-propylamine										
	1. ug/l	N.D.		94	94	1	81			62	118
3941	hexachloroethane										
	1. ug/l	N.D.		69	74	6	51			40	84
3943	nitrobenzene										
	1. ug/l	N.D.		101	105	4	82			61	113
3944	isophorone										
	1. ug/l	N.D.		108	114	5	94			66	113
3926	2-nitrophenol										
	1. ug/l	N.D.		89	88	2	83			67	104
3927	2,4-dimethylphenol										
	1. ug/l	N.D.		90	91	1	83			52	99
3945	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		98	102	4	84			64	103
3928	2,4-dichlorophenol										
	1. ug/l	N.D.		91	90	1	85			65	98
3946	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		86	91	6	65			52	93
3947	naphthalene										
	1. ug/l	N.D.		88	93	5	69			60	97
3871	4-chloroaniline										
	1. ug/l	N.D.		81	77	5	67			34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		59	62	5	45			24	86
3929	4-chloro-3-methylphenol										
	1. ug/l	N.D.		100	102	2	97			60	111
3905	2-methylnaphthalene										
	1. ug/l	N.D.		88	91	3	71			62	98



Lancaster Laboratories
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LLI Sample No. 2941685

SW-04 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		47	44	7	38			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		88	83	5	84			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		85	82	4	83			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	89	3	73			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		108	111	3	99			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		89	87	3	48			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		81	82	1	70			64	100

4679	TCL Semivolatiles cont'd	Batch: 98161WAC026									
3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	2	75			40	108
3954	acenaphthene										
	1. ug/l	N.D.		84	85	1	73			61	100
3931	2,4-dinitrophenol										
	16. ug/l	N.D.		74	50	39	86			25	124
3932	4-nitrophenol										
	11. ug/l	N.D.		50	42	18	55			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		81	83	3	73			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		90	92	2	84			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		104	106	2	94			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		95	95	0	74			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		83	84	0	76			62	104
3956	fluorene										
	1. ug/l	N.D.		85	86	1	78			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		103	106	3	97			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		80	71	13	84			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		84	84	0	77			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		87	86	1	79			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		92	92	0	86			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		74	59	23	86			46	114



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2016 76 8110





LLI Sample No. 2941685

SW-04 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		87	88	1	81			68	102
3964	anthracene										
	1. ug/l	N.D.		88	87	1	81			66	101
4684	carbazole										
	1. ug/l	N.D.		88	91	3	83			66	110
3965	di-n-butyl phthalate										
	2. ug/l	10. ug/l		90	90	0	81			61	105
3966	fluoranthene										
	1. ug/l	N.D.		87	87	0	81			66	106
3967	pyrene										
	1. ug/l	N.D.		93	95	2	85			58	112
3969	butyl benzyl phthalate										
	2. ug/l	6. J ug/l		94	96	2	77			48	105
3972	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		95	96	0	86			37	104
3970	benzo (a) anthracene										
	1. ug/l	N.D.		98	99	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		98	99	2	91			64	113
3971	chrysene										
	1. ug/l	N.D.		96	97	1	90			67	101
3974	di-n-octyl phthalate										
	2. ug/l	N.D.		90	90	0	83			59	118
3975	benzo (b) fluoranthene										
	1. ug/l	N.D.		77	77	0	71			64	101
3976	benzo (k) fluoranthene										
	1. ug/l	N.D.		100	98	2	90			67	105
3977	benzo (a) pyrene										
	1. ug/l	N.D.		96	96	0	89			65	101
3978	indeno (1,2,3-cd) pyrene										
	1. ug/l	N.D.		103	100	3	96			59	111
3979	dibenz (a,h) anthracene										
	1. ug/l	N.D.		105	102	3	97			66	117
3980	benzo (ghi) perylene										
	1. ug/l	N.D.		105	102	2	99			55	115



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0215 Rev. 11/01





LLI Sample No. 2941685
SW-04 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	66	7	74
	Pheno1-d6	41	25	88
	2,4,6-TBP	96	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	96	47	114
	2-Fbiphny1	88	51	106
	Tphenyld14	93	37	119



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2216 10/1/97





LLI Sample No. WW 2941686

Collected: 6/ 4/98 at 14:15 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
6SW-- SDG#: HMS03-04

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	RESULTS	METHOD	
			DETECTION	LIMIT UNITS
4678	TCL Semivolatiles		See Page	2
4679	TCL Semivolatiles cont'd		See Page	3

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
02:08:44 D 0003 12 129915 618147
863 0.00 00029700 ASR000

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



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2219 Rev. 7.0.97





LLI Sample No. WW 2941686

Collected: 6/ 4/98 at 14:15 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
6SW-- SDG#: HMS03-04

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		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethyl phthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

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

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



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2010 7/18/98 11





LLI Sample No. WW 2941686

Collected: 6/ 4/98 at 14:15 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
6SW-- SDG#: HMS03-04

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	RESULTS	METHOD	
			DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethyl phthalate	N.D.	2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butyl phthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butyl benzyl phthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo (a) anthracene	N.D.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	N.D.	1.	ug/l
3976	benzo (k) fluoranthene	N.D.	1.	ug/l
3977	benzo (a) pyrene	N.D.	1.	ug/l
3978	indeno (1,2,3-cd) pyrene	N.D.	1.	ug/l
3979	dibenz (a,h) anthracene	N.D.	1.	ug/l
3980	benzo (ghi) perylene	N.D.	1.	ug/l

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

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



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2/2/98 Rev 8.1.1.1





LLI Sample No. WW 2941686

Collected: 6/ 4/98 at 14:15 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

6SW-- SDG#: HMS03-04

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

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

TCL Semivolatiles cont'd

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

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

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



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2216 12/11/98





LLI Sample No. WW 2941686

Collected: 06/04/98 at 14:15 by ACT

Submitted: 06/06/98

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

SW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
6SW-- SDG#: HMS03-04

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	06/10/98 0800	Denise L. Trimby
4678	TCL Semivolatiles	SW-846 8270C	1	07/08/98 1756	Mark A. Ratcliff
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/08/98 1756	Mark A. Ratcliff



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2016 Rev. 4.1.17





LLI Sample No. 2941686

SW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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: 98161WAC026									

3925	phenol										
	1. ug/l	N.D.		46	45	2	44			5	83
3936	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		98	100	2	80			66	106
3924	2-chlorophenol										
	1. ug/l	N.D.		86	87	1	80			62	107
3937	1,3-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	91
3938	1,4-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	94
3939	1,2-dichlorobenzene										
	1. ug/l	N.D.		84	89	7	62			52	97
4680	2-methylphenol										
	1. ug/l	N.D.		92	86	6	83			55	96
4681	2,2'-oxybis (1-chloropropane)										
	2. ug/l	N.D.		115	116	1	89			43	118
4682	4-methylphenol										
	3. ug/l	N.D.		86	85	2	80			48	99
3942	N-nitrosodi-n-propylamine										
	1. ug/l	N.D.		94	94	1	81			62	118
3941	hexachloroethane										
	1. ug/l	N.D.		69	74	6	51			40	84
3943	nitrobenzene										
	1. ug/l	N.D.		101	105	4	82			61	113
3944	isophorone										
	1. ug/l	N.D.		108	114	5	94			66	113
3926	2-nitrophenol										
	1. ug/l	N.D.		89	88	2	83			67	104
3927	2,4-dimethylphenol										
	1. ug/l	N.D.		90	91	1	83			52	99
3945	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		98	102	4	84			64	103
3928	2,4-dichlorophenol										
	1. ug/l	N.D.		91	90	1	85			65	98
3946	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		86	91	6	65			52	93
3947	naphthalene										
	1. ug/l	N.D.		88	93	5	69			60	97
3871	4-chloroaniline										
	1. ug/l	N.D.		81	77	5	67			34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		59	62	5	45			24	86
3929	4-chloro-3-methylphenol										
	1. ug/l	N.D.		100	102	2	97			60	111
3905	2-methylnaphthalene										
	1. ug/l	N.D.		88	91	3	71			62	98



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2216 05/19/07





LLI Sample No. 2941686

SW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		47	44	7	38			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		88	83	5	84			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		85	82	4	83			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	89	3	73			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		108	111	3	99			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		89	87	3	48			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		81	82	1	70			64	100

4679	TCL Semivolatiles cont'd	Batch: 98161WAC026									

3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	2	75			40	108
3954	acenaphthene										
	1. ug/l	N.D.		84	85	1	73			61	100
3931	2,4-dinitrophenol										
	15. ug/l	N.D.		74	50	39	86			25	124
3932	4-nitrophenol										
	10. ug/l	N.D.		50	42	18	55			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		81	83	3	73			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		90	92	2	84			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		104	106	2	94			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		95	95	0	74			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		83	84	0	76			62	104
3956	fluorene										
	1. ug/l	N.D.		85	86	1	78			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		103	106	3	97			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		80	71	13	84			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		84	84	0	77			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		87	86	1	79			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		92	92	0	86			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		74	59	23	86			46	114



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2015 04-08-149





LLI Sample No. 2941686

SW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		87	88	1	81			68	102
3964	anthracene										
	1. ug/l	N.D.		88	87	1	81			66	101
4684	carbazole										
	1. ug/l	N.D.		88	91	3	83			66	110
3965	di-n-butyl phthalate										
	2. ug/l	10. ug/l		90	90	0	81			61	105
3966	fluoranthene										
	1. ug/l	N.D.		87	87	0	81			66	106
3967	pyrene										
	1. ug/l	N.D.		93	95	2	85			58	112
3969	butyl benzyl phthalate										
	2. ug/l	6. J ug/l		94	96	2	77			48	105
3972	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		95	96	0	86			37	104
3970	benzo (a) anthracene										
	1. ug/l	N.D.		98	99	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		98	99	2	91			64	113
3971	chrysene										
	1. ug/l	N.D.		96	97	1	90			67	101
3974	di-n-octyl phthalate										
	2. ug/l	N.D.		90	90	0	83			59	118
3975	benzo (b) fluoranthene										
	1. ug/l	N.D.		77	77	0	71			64	101
3976	benzo (k) fluoranthene										
	1. ug/l	N.D.		100	98	2	90			67	105
3977	benzo (a) pyrene										
	1. ug/l	N.D.		96	96	0	89			65	101
3978	indeno (1,2,3-cd) pyrene										
	1. ug/l	N.D.		103	100	3	96			59	111
3979	dibenz (a,h) anthracene										
	1. ug/l	N.D.		105	102	3	97			66	117
3980	benzo (ghi) perylene										
	1. ug/l	N.D.		105	102	2	99			55	115



Lancaster Laboratories
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Lancaster, PA 17605-2425
717-653-2300 Fax: 717-656-2881

See reverse side for explanation of symbols and abbreviations.

2016-09-08 10:01





LLI Sample No. **2941686**
SW-06 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
Kerr-McGee Corporation

TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	77	7	74
	Pheno1-d6	44	25	88
	2,4,6-TBP	104	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	98	47	114
	2-Fbiphnyl	96	51	106
	Tphenyld14	109	37	119



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03/01/06 11:01 AM





LLI Sample No. ww 2941687

Collected: 6/ 4/98 at 13:25 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
7SW-- SDG#: HMS03-05

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	
		RESULTS	METHOD DETECTION LIMIT UNITS
4678	TCL Semivolatiles		See Page 2
4679	TCL Semivolatiles cont'd		See Page 3

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
02:10:43 D 0003 12 129915 618147
863 0.00 00029700 ASR000



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Lancaster, PA 17605-2425
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 2941687

Collected: 6/ 4/98 at 13:25 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
7SW-- SDG#: HMS03-05

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

P.O. GULF STATES CREOSOT
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	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

MEMBER
ACIL
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See reverse side for explanation of symbols and abbreviations.

2010 06/18/98





LLI Sample No. WW 2941687

Collected: 6/ 4/98 at 13:25 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
7SW-- SDG#: HMS03-05

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

P.O. GULF STATES CREOSOT
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	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 2941687

Collected: 6/ 4/98 at 13:25 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
7SW-- SDG#: HMS03-05

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

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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00 6 14 9 0 21





LLI Sample No. WW 2941687

Collected: 06/04/98 at 13:25 by ACT

Submitted: 06/06/98

SW-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
7SW-- SDG#: HMS03-05

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

CAT NO	ANALYSIS NAME	METHOD	TRIAL ID	ANALYSIS		ANALYST
				DATE	TIME	
0813	BNA Water Extraction	SW-846 3510C	1	06/10/98	0800	Denise L. Trimby
4678	TCL Semivolatiles	SW-846 8270C	1	07/08/98	1858	Stephanie M. Small
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/08/98	1858	Stephanie M. Small



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LLI Sample No. 2941687

SW-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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: 98161WAC026									

3925	phenol										
	1. ug/l	N.D.		46	45	2	44			5	83
3936	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		98	100	2	80			66	106
3924	2-chlorophenol										
	1. ug/l	N.D.		86	87	1	80			62	107
3937	1,3-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	91
3938	1,4-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	94
3939	1,2-dichlorobenzene										
	1. ug/l	N.D.		84	89	7	62			52	97
4680	2-methylphenol										
	1. ug/l	N.D.		92	86	6	83			55	96
4681	2,2'oxybis (1-chloropropane)										
	2. ug/l	N.D.		115	116	1	89			43	118
4682	4-methylphenol										
	3. ug/l	N.D.		86	85	2	80			48	99
3942	N-nitrosodi-n-propylamine										
	1. ug/l	N.D.		94	94	1	81			62	118
3941	hexachloroethane										
	1. ug/l	N.D.		69	74	6	51			40	84
3943	nitrobenzene										
	1. ug/l	N.D.		101	105	4	82			61	113
3944	isophorone										
	1. ug/l	N.D.		108	114	5	94			66	113
3926	2-nitrophenol										
	1. ug/l	N.D.		89	88	2	83			67	104
3927	2,4-dimethylphenol										
	1. ug/l	N.D.		90	91	1	83			52	99
3945	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		98	102	4	84			64	103
3928	2,4-dichlorophenol										
	1. ug/l	N.D.		91	90	1	85			65	98
3946	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		86	91	6	65			52	93
3947	naphthalene										
	1. ug/l	N.D.		88	93	5	69			60	97
3871	4-chloroaniline										
	1. ug/l	N.D.		81	77	5	67			34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		59	62	5	45			24	86
3929	4-chloro-3-methylphenol										
	1. ug/l	N.D.		100	102	2	97			60	111
3905	2-methylnaphthalene										
	1. ug/l	N.D.		88	91	3	71			62	98



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See reverse side for explanation of symbols and abbreviations

2010 Rev. 3.0.17





LLI Sample No. 2941687

SW-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		47	44	7	38			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		88	83	5	84			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		85	82	4	83			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	89	3	73			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		108	111	3	99			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		89	87	3	48			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		81	82	1	70			64	100

4679	TCL Semivolatiles cont'd	Batch: 98161WAC026									

3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	2	75			40	108
3954	acenaphthene										
	1. ug/l	N.D.		84	85	1	73			61	100
3931	2,4-dinitrophenol										
	15. ug/l	N.D.		74	50	39	86			25	124
3932	4-nitrophenol										
	10. ug/l	N.D.		50	42	18	55			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		81	83	3	73			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		90	92	2	84			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		104	106	2	94			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		95	95	0	74			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		83	84	0	76			62	104
3956	fluorene										
	1. ug/l	N.D.		85	86	1	78			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		103	106	3	97			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		80	71	13	84			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		84	84	0	77			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		87	86	1	79			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		92	92	0	86			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		74	59	23	86			46	114



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

2015 Rev. 3.0147





LLI Sample No. 2941687

SW-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		87	88	1	81			68	102
3964	anthracene										
1.	ug/l	N.D.		88	87	1	81			66	101
4684	carbazole										
1.	ug/l	N.D.		88	91	3	83			66	110
3965	di-n-butyl phthalate										
2.	ug/l	10. ug/l		90	90	0	81			61	105
3966	fluoranthene										
1.	ug/l	N.D.		87	87	0	81			66	106
3967	pyrene										
1.	ug/l	N.D.		93	95	2	85			58	112
3969	butyl benzy] phthalate										
2.	ug/l	6. J ug/l		94	96	2	77			48	105
3972	3,3'-dichlorobenzidine										
2.	ug/l	N.D.		95	96	0	86			37	104
3970	benzo (a) anthracene										
1.	ug/l	N.D.		98	99	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		98	99	2	91			64	113
3971	chrysene										
1.	ug/l	N.D.		96	97	1	90			67	101
3974	di-n-octyl phthalate										
2.	ug/l	N.D.		90	90	0	83			59	118
3975	benzo (b) fluoranthene										
1.	ug/l	N.D.		77	77	0	71			64	101
3976	benzo (k) fluoranthene										
1.	ug/l	N.D.		100	98	2	90			67	105
3977	benzo (a) pyrene										
1.	ug/l	N.D.		96	96	0	89			65	101
3978	indeno (1,2,3-cd) pyrene										
1.	ug/l	N.D.		103	100	3	96			59	111
3979	dibenz (a,h) anthracene										
1.	ug/l	N.D.		105	102	3	97			66	117
3980	benzo (ghi) perylene										
1.	ug/l	N.D.		105	102	2	99			55	115



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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2941687
SW-07 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flphenol	64	7	74
	Phenol-d6	38	25	88
	2,4,6-TBP	90	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	93	47	114
	2-Fbiphenyl	87	51	106
	Tphenyl-d14	106	37	119



Lancaster Laboratories
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See reverse side for explanation of symbols and abbreviations

2016 06 01/01





LLI Sample No. WW 2941688

Collected: 6/ 4/98 at 12:20 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
8SW-- SDG#: HMS03-06

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	RESULTS	METHOD	
			DETECTION	LIMIT UNITS
4678	TCL Semivolatiles		See Page	2
4679	TCL Semivolatiles cont'd		See Page	3

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 02:12:37 D 0003 12 129915 618147
 863 0.00 00029700 ASR000

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



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See reverse side for explanation of symbols and abbreviations.

Lab No. 17110101





LLI Sample No. WW 2941688

Collected: 6/ 4/98 at 12:20 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
8SW-- SDG#: HMS03-06

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

P.O. GULF STATES CREOSOT
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	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



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

See reverse side for explanation of symbols and abbreviations

2275 2-11-94 11





LLI Sample No. WW 2941688

Collected: 6/ 4/98 at 12:20 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

BSW-- SDG#: HMS03-06

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		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	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	13.	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.	2.	ug/l
3970	benzo (a) anthracene	1.	J 1.	ug/l
3973	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	N.D.	1.	ug/l
3976	benzo (k) fluoranthene	N.D.	1.	ug/l
3977	benzo (a) pyrene	N.D.	1.	ug/l
3978	indeno (1,2,3-cd) pyrene	N.D.	1.	ug/l
3979	dibenz (a,h) anthracene	N.D.	1.	ug/l
3980	benzo (ghi) perylene	N.D.	1.	ug/l

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

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



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

2017-04-18 14:57





LLI Sample No. **WW 2941688**

Collected: 6/ 4/98 at 12:20 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
BSW-- SDG#: HMS03-06

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
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

2015-04-13 10:07





LLI Sample No. WW 2941688

Collected: 06/04/98 at 12:20 by ACT

Submitted: 06/06/98

SW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
8SW-- SDG#: HMS03-06

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	06/10/98 0800	Denise L. Trimby
4678	TCL Semivolatiles	SW-846 8270C	1	07/08/98 1959	Stephanie M. Small
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/08/98 1959	Stephanie M. Small



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LLI Sample No. 2941688

SW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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: 98161WAC026									

3925	phenol										
	1. ug/l	N.D.		46	45	2	44			5	83
3936	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		98	100	2	80			66	106
3924	2-chlorophenol										
	1. ug/l	N.D.		86	87	1	80			62	107
3937	1,3-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	91
3938	1,4-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	94
3939	1,2-dichlorobenzene										
	1. ug/l	N.D.		84	89	7	62			52	97
4680	2-methylphenol										
	1. ug/l	N.D.		92	86	6	83			55	96
4681	2,2'-oxybis (1-chloropropane)										
	2. ug/l	N.D.		115	116	1	89			43	118
4682	4-methylphenol										
	3. ug/l	N.D.		86	85	2	80			48	99
3942	N-nitrosodi-n-propylamine										
	1. ug/l	N.D.		94	94	1	81			62	118
3941	hexachloroethane										
	1. ug/l	N.D.		69	74	6	51			40	84
3943	nitrobenzene										
	1. ug/l	N.D.		101	105	4	82			61	113
3944	isophorone										
	1. ug/l	N.D.		108	114	5	94			66	113
3926	2-nitrophenol										
	1. ug/l	N.D.		89	88	2	83			67	104
3927	2,4-dimethylphenol										
	1. ug/l	N.D.		90	91	1	83			52	99
3945	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		98	102	4	84			64	103
3928	2,4-dichlorophenol										
	1. ug/l	N.D.		91	90	1	85			65	98
3946	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		86	91	6	65			52	93
3947	naphthalene										
	1. ug/l	N.D.		88	93	5	69			60	97
3871	4-chloroaniline										
	1. ug/l	N.D.		81	77	5	67			34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		59	62	5	45			24	86
3929	4-chloro-3-methylphenol										
	1. ug/l	N.D.		100	102	2	97			60	111
3905	2-methylnaphthalene										
	1. ug/l	N.D.		88	91	3	71			62	98



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2215 7-1-11





LLI Sample No. 2941688

SW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		47	44	7	38			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		88	83	5	84			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		85	82	4	83			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	89	3	73			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		108	111	3	99			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		89	87	3	48			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		81	82	1	70			64	100

4679	TCL Semivolatiles cont'd	Batch: 98161WAC026									

3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	2	75			40	108
3954	acenaphthene										
	1. ug/l	N.D.		84	85	1	73			61	100
3931	2,4-dinitrophenol										
	15. ug/l	N.D.		74	50	39	86			25	124
3932	4-nitrophenol										
	10. ug/l	N.D.		50	42	18	55			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		81	83	3	73			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		90	92	2	84			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		104	106	2	94			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		95	95	0	74			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		83	84	0	76			62	104
3956	fluorene										
	1. ug/l	N.D.		85	86	1	78			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		103	106	3	97			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		80	71	13	84			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		84	84	0	77			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		87	86	1	79			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		92	92	0	86			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		74	59	23	86			46	114



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717-656-7100 Fax 717-656-1681

See reverse side for explanation of symbols and abbreviations

2015 04 10 11





LLI Sample No. 2941688

SW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		87	88	1	81			68	102
3964	anthracene										
1.	ug/l	N.D.		88	87	1	81			66	101
4684	carbazole										
1.	ug/l	N.D.		88	91	3	83			66	110
3965	di-n-butyl phthalate										
2.	ug/l	10. ug/l		90	90	0	81			61	105
3966	fluoranthene										
1.	ug/l	N.D.		87	87	0	81			66	106
3967	pyrene										
1.	ug/l	N.D.		93	95	2	85			58	112
3969	butyl benzyl phthalate										
2.	ug/l	6. J ug/l		94	96	2	77			48	105
3972	3,3'-dichlorobenzidine										
2.	ug/l	N.D.		95	96	0	86			37	104
3970	benzo (a) anthracene										
1.	ug/l	N.D.		98	99	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		98	99	2	91			64	113
3971	chrysene										
1.	ug/l	N.D.		96	97	1	90			67	101
3974	di-n-octyl phthalate										
2.	ug/l	N.D.		90	90	0	83			59	118
3975	benzo (b) fluoranthene										
1.	ug/l	N.D.		77	77	0	71			64	101
3976	benzo (k) fluoranthene										
1.	ug/l	N.D.		100	98	2	90			67	105
3977	benzo (a) pyrene										
1.	ug/l	N.D.		96	96	0	89			65	101
3978	indeno (1,2,3-cd) pyrene										
1.	ug/l	N.D.		103	100	3	96			59	111
3979	dibenz (a,h) anthracene										
1.	ug/l	N.D.		105	102	3	97			66	117
3980	benzo (ghi) perylene										
1.	ug/l	N.D.		105	102	2	99			55	115



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See reverse side for explanation of symbols and abbreviations

0215 19 001 01





LLI Sample No. 2941688
 SW-08 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
 Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %		
			LOW	HIGH	
4678 TCL Semivolatiles		2-Flpheno1	62	7	74
		Pheno1-d6	38	25	88
		2,4,6-TBP	96	34	125
4679 TCL Semivolatiles cont'd		Nitrobz-d5	93	47	114
		2-Fbiphenyl	90	51	106
		Tpheny1d14	108	37	119



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2210 740 12 97





LLI Sample No. **ww 2941689**

Collected: 6/ 4/98 at 11:50 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
9SW-- SDG#: HMS03-07

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
4678	TCL Semivolatiles		See Page 2
4679	TCL Semivolatiles cont'd		See Page 3

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 02:14:37 D 0003 12 129915 618147
 863 0.00 00029700 ASR000

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



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 2425 New Holland Pike
 PO Box 12425
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See reverse side for explanation of symbols and abbreviations.

02/10/98 10:11 AM





LLI Sample No. WW 2941689

Collected: 6/ 4/98 at 11:50 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
9SW- SDG#: HMS03-07

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		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	pheno1	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chloropheno1	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylpheno1	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylpheno1	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitropheno1	N.D.	1.	ug/l
3927	2,4-dimethylpheno1	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichloropheno1	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylpheno1	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichloropheno1	N.D.	2.	ug/l
3922	2,4,5-trichloropheno1	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	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

MEMBER
ACIL
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PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations

2216





LLI Sample No. WW 2941689

Collected: 6/ 4/98 at 11:50 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
95W-- SDG#: HMS03-07

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		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	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	12.	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.	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	6.	J 2.	ug/l
3975	benzo (b) fluoranthene	9.	J 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



Lancaster Laboratories
2425 Blew-Holland Pkx
PO Box 12125
Lancaster, PA 17605-2425
Tel: 717-656-2300 Fax: 717-656-2681

See reverse side for explanation of symbols and abbreviations





LLI Sample No. WW 2941689

Collected: 6/ 4/98 at 11:50 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

9SW-- SDG#: HMS03-07

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	
		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.

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.

Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.

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

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



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

02/15/98 11:51 AM





LLI Sample No. WW 2941689

Collected: 06/04/98 at 11:50 by ACT

Submitted: 06/06/98

SW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
9SW-- SDG#: HMS03-07

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	06/10/98 0900	Denise L. Trimby
4678	TCL Semivolatiles	SW-846 8270C	1	07/08/98 2100	Mark A. Ratcliff
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/08/98 2100	Mark A. Ratcliff



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27.5 194 11.1





LLI Sample No. 2941689

SW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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: 98161WAC026									
3925	phenol										
	1. ug/l	N.D.		46	45	2	44			5	83
3936	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		98	100	2	80			66	106
3924	2-chlorophenol										
	1. ug/l	N.D.		86	87	1	80			62	107
3937	1,3-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	91
3938	1,4-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	94
3939	1,2-dichlorobenzene										
	1. ug/l	N.D.		84	89	7	62			52	97
4680	2-methylphenol										
	1. ug/l	N.D.		92	86	6	83			55	96
4681	2,2'-oxybis (1-chloropropane)										
	2. ug/l	N.D.		115	116	1	89			43	118
4682	4-methylphenol										
	3. ug/l	N.D.		86	85	2	80			48	99
3942	N-nitrosodi-n-propylamine										
	1. ug/l	N.D.		94	94	1	81			62	118
3941	hexachloroethane										
	1. ug/l	N.D.		69	74	6	51			40	84
3943	nitrobenzene										
	1. ug/l	N.D.		101	105	4	82			61	113
3944	isophorone										
	1. ug/l	N.D.		108	114	5	94			66	113
3926	2-nitrophenol										
	1. ug/l	N.D.		89	88	2	83			67	104
3927	2,4-dimethylphenol										
	1. ug/l	N.D.		90	91	1	83			52	99
3945	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		98	102	4	84			64	103
3928	2,4-dichlorophenol										
	1. ug/l	N.D.		91	90	1	85			65	98
3946	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		86	91	6	65			52	93
3947	naphthalene										
	1. ug/l	N.D.		88	93	5	69			60	97
3871	4-chloroaniline										
	1. ug/l	N.D.		81	77	5	67			34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		59	62	5	45			24	86
3929	4-chloro-3-methylphenol										
	1. ug/l	N.D.		100	102	2	97			60	111
3905	2-methylnaphthalene										
	1. ug/l	N.D.		88	91	3	71			62	98



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01-01-01-01-01





LLI Sample No. 2941689
SW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		47	44	7	38			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		88	83	5	84			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		85	82	4	83			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	89	3	73			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		108	111	3	99			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		89	87	3	48			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		81	82	1	70			64	100

4679	TCL Semivolatiles cont'd	Batch: 98161WAC026									

3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	2	75			40	108
3954	acenaphthene										
	1. ug/l	N.D.		84	85	1	73			61	100
3931	2,4-dinitrophenol										
	15. ug/l	N.D.		74	50	39	86			25	124
3932	4-nitrophenol										
	10. ug/l	N.D.		50	42	18	55			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		81	83	3	73			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		90	92	2	84			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		104	106	2	94			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		95	95	0	74			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		83	84	0	76			62	104
3956	fluorene										
	1. ug/l	N.D.		85	86	1	78			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		103	106	3	97			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		80	71	13	84			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		84	84	0	77			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		87	86	1	79			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		92	92	0	86			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		74	59	23	86			46	114



Lancaster Laboratories
 1125 West Orange Pike
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See reverse side for explanation of symbols and abbreviations

2015-04-14 11:11





LLI Sample No. **2941689**

SW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		87	88	1	81			68	102
3964	anthracene										
	1. ug/l	N.D.		88	87	1	81			66	101
4684	carbazole										
	1. ug/l	N.D.		88	91	3	83			66	110
3965	di-n-butyl phthalate										
	2. ug/l	10. ug/l		90	90	0	81			61	105
3966	fluoranthene										
	1. ug/l	N.D.		87	87	0	81			66	106
3967	pyrene										
	1. ug/l	N.D.		93	95	2	85			58	112
3969	butyl benzyl phthalate										
	2. ug/l	6. J ug/l		94	96	2	77			48	105
3972	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		95	96	0	86			37	104
3970	benzo (a) anthracene										
	1. ug/l	N.D.		98	99	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		98	99	2	91			64	113
3971	chrysene										
	1. ug/l	N.D.		96	97	1	90			67	101
3974	di-n-octyl phthalate										
	2. ug/l	N.D.		90	90	0	83			59	118
3975	benzo (b) fluoranthene										
	1. ug/l	N.D.		77	77	0	71			64	101
3976	benzo (k) fluoranthene										
	1. ug/l	N.D.		100	98	2	90			67	105
3977	benzo (a) pyrene										
	1. ug/l	N.D.		96	96	0	89			65	101
3978	indeno (1,2,3-cd) pyrene										
	1. ug/l	N.D.		103	100	3	96			59	111
3979	dibenz (a,h) anthracene										
	1. ug/l	N.D.		105	102	3	97			66	117
3980	benzo (ghi) perylene										
	1. ug/l	N.D.		105	102	2	99			55	115



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2216 9/13/11





LLI Sample No. 2941689
SW-09 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-F1phenol	16	7	74
	Phenol-d6	10	25	88
	2,4,6-TBP	24	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	22	47	114
	2-Fbiphenyl	24	51	106
	Tphenyl14	20	37	119



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717-355-2000 Fax 717-656-2021

See reverse side for explanation of symbols and abbreviations.

227- 3-11-2011





LLI Sample No. **ww 2941690**

Collected: 6/ 4/98 at 11:25 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

10SW- SDG#: HMS03-08

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	RESULTS	METHOD	
			DETECTION	LIMIT UNITS
4678	TCL Semivolatiles		See Page	2
4679	TCL Semivolatiles cont'd		See Page	3

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
02:16:36 D 0003 12 129915 618147
863 0.00 00029700 ASR000

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



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LLI Sample No. WW 2941690

Collected: 6/ 4/98 at 11:25 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
10SW- SDG#: HMS03-08

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		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethyl phthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

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

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



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See reverse side for explanation of symbols and abbreviations.



**LLI Sample No. WW 2941690**

Collected: 6/ 4/98 at 11:25 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
10SW- SDG#: HMS03-08

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

P.O. GULF STATES CREOSOT
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	14.	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

Respectfully Submitted
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LLI Sample No. WW 2941690

Collected: 6/ 4/98 at 11:25 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
10SW- SDG#: HMS03-08

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
Charles J. Neslund, B.S.
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See reverse side for explanation of symbols and abbreviations.

0216 04/98/07





LLI Sample No. ww 2941690

Collected: 06/04/98 at 11:25 by ACT

Submitted: 06/06/98

SW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

10SW- SDG#: HMS03-08

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	06/10/98 0800	Denise L. Trimby
4678	TCL Semivolatiles	SW-846 8270C	1	07/11/98 2044	Teresa A. Perros
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/11/98 2044	Teresa A. Perros



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





LLI Sample No. 2941690

SW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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: 98161WAC026									
3925	phenol										
	1. ug/l	N.D.		46	45	2	44			5	83
3936	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		98	100	2	80			66	106
3924	2-chlorophenol										
	1. ug/l	N.D.		86	87	1	80			62	107
3937	1,3-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	91
3938	1,4-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	94
3939	1,2-dichlorobenzene										
	1. ug/l	N.D.		84	89	7	62			52	97
4680	2-methylphenol										
	1. ug/l	N.D.		92	86	6	83			55	96
4681	2,2'oxybis (1-chloropropane)										
	2. ug/l	N.D.		115	116	1	89			43	118
4682	4-methylphenol										
	3. ug/l	N.D.		86	85	2	80			48	99
3942	N-nitrosodi-n-propylamine										
	1. ug/l	N.D.		94	94	1	81			62	118
3941	hexachloroethane										
	1. ug/l	N.D.		69	74	6	51			40	84
3943	nitrobenzene										
	1. ug/l	N.D.		101	105	4	82			61	113
3944	isophorone										
	1. ug/l	N.D.		108	114	5	94			66	113
3926	2-nitrophenol										
	1. ug/l	N.D.		89	88	2	83			67	104
3927	2,4-dimethylphenol										
	1. ug/l	N.D.		90	91	1	83			52	99
3945	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		98	102	4	84			64	103
3928	2,4-dichlorophenol										
	1. ug/l	N.D.		91	90	1	85			65	98
3946	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		86	91	6	65			52	93
3947	naphthalene										
	1. ug/l	N.D.		88	93	5	69			60	97
3871	4-chloroaniline										
	1. ug/l	N.D.		81	77	5	67			34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		59	62	5	45			24	86
3929	4-chloro-3-methylphenol										
	1. ug/l	N.D.		100	102	2	97			60	111
3905	2-methylnaphthalene										
	1. ug/l	N.D.		88	91	3	71			62	98



Lancaster Laboratories
21251 Lew Holland Pike
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See reverse side for explanation of symbols and abbreviations

22 5 1994 11:11





LLI Sample No. 2941690
SW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		47	44	7	38			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		88	83	5	84			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		85	82	4	83			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	89	3	73			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		108	111	3	99			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		89	87	3	48			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		81	82	1	70			64	100

4679	TCL Semivolatiles cont'd	Batch: 98161WAC026									

3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	2	75			40	108
3954	acenaphthene										
	1. ug/l	N.D.		84	85	1	73			61	100
3931	2,4-dinitrophenol										
	14. ug/l	N.D.		74	50	39	86			25	124
3932	4-nitrophenol										
	10. ug/l	N.D.		50	42	18	55			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		81	83	3	73			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		90	92	2	84			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		104	106	2	94			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		95	95	0	74			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		83	84	0	76			62	104
3956	fluorene										
	1. ug/l	N.D.		85	86	1	78			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		103	106	3	97			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		80	71	13	84			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		84	84	0	77			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		87	86	1	79			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		92	92	0	86			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		74	59	23	86			46	114



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2216 Rev. 8.0.01





LLI Sample No. 2941690
SW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		87	88	1	81			68	102
3964	anthracene										
	1. ug/l	N.D.		88	87	1	81			66	101
4684	carbazole										
	1. ug/l	N.D.		88	91	3	83			66	110
3965	di-n-butyl phthalate										
	2. ug/l	10. ug/l		90	90	0	81			61	105
3966	fluoranthene										
	1. ug/l	N.D.		87	87	0	81			66	106
3967	pyrene										
	1. ug/l	N.D.		93	95	2	85			58	112
3969	butyl benzyl phthalate										
	2. ug/l	6. J ug/l		94	96	2	77			48	105
3972	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		95	96	0	86			37	104
3970	benzo (a) anthracene										
	1. ug/l	N.D.		98	99	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		98	99	2	91			64	113
3971	chrysene										
	1. ug/l	N.D.		96	97	1	90			67	101
3974	di-n-octyl phthalate										
	2. ug/l	N.D.		90	90	0	83			59	118
3975	benzo (b) fluoranthene										
	1. ug/l	N.D.		77	77	0	71			64	101
3976	benzo (k) fluoranthene										
	1. ug/l	N.D.		100	98	2	90			67	105
3977	benzo (a) pyrene										
	1. ug/l	N.D.		96	96	0	89			65	101
3978	indeno (1,2,3-cd) pyrene										
	1. ug/l	N.D.		103	100	3	96			59	111
3979	dibenz (a,h) anthracene										
	1. ug/l	N.D.		105	102	3	97			66	117
3980	benzo (ghi) perylene										
	1. ug/l	N.D.		105	102	2	99			55	115



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2216 Rev. 9/2/97





LLI Sample No. 2941690
SW-10 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS		
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles		2-Flpheno1	52	7	74
		Pheno1-d6	35	25	88
		2,4,6-TBP	83	34	125
4679 TCL Semivolatiles cont'd		Nitrobz-d5	85	47	114
		2-Fbiphny1	82	51	106
		Tpheny1d14	62	37	119



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2216 Rev. 3.0.07





LLI Sample No. WW 2941691

Collected: 6/ 4/98 at 10:50 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
11SW- SDG#: HMS03-09

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	
		RESULTS	METHOD DETECTION LIMIT UNITS
4678	TCL Semivolatiles		See Page 2
4679	TCL Semivolatiles cont'd		See Page 3

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
02:18:29 D 0003 12 129915 618147
863 0.00 00029700 ASR000

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



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**LLI Sample No. WW 2941691**

Collected: 6/ 4/98 at 10:50 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
11SW- SDG#: HMS03-09

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

P.O. GULF STATES CREOSOT
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethyl phthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

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

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



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2216 Rev 8/4/97





LLI Sample No. WW 2941691

Collected: 6/ 4/98 at 10:50 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
11SW- SDG#: HMS03-09

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		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	16.	ug/l
3932	4-nitrophenol	N.D.	11.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethyl phthalate	N.D.	2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butyl phthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butyl benzyl phthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo (a) anthracene	N.D.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	N.D.	1.	ug/l
3976	benzo (k) fluoranthene	N.D.	1.	ug/l
3977	benzo (a) pyrene	N.D.	1.	ug/l
3978	indeno (1,2,3-cd) pyrene	N.D.	1.	ug/l
3979	dibenz (a,h) anthracene	N.D.	1.	ug/l
3980	benzo (ghi) perylene	N.D.	1.	ug/l

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

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



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2216 Dec. 1997





LLI Sample No. WW 2941691

Collected: 6/ 4/98 at 10:50 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
11SW- SDG#: HMS03-09

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

P.O. GULF STATES CREOSOT
ReI.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.
Due to insufficient sample, the quantitation limits for the GC/MS
semivolatile compounds were raised.

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

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



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2216 Rev 8/4/97





LLI Sample No. WW 2941691

Collected: 06/04/98 at 10:50 by ACT

Submitted: 06/06/98

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

SW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
11SW- SDG#: HMS03-09

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0813	BNA Water Extraction	SW-846 3510C	1	06/10/98 0800	Denise L. Trimby
4678	TCL Semivolatiles	SW-846 8270C	1	07/11/98 2149	Teresa A. Perros
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/11/98 2149	Teresa A. Perros



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LLI Sample No. 2941691

SW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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: 98161WAC026									
3925	phenol										
	1. ug/l	N.D.		46	45	2	44			5	83
3936	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		98	100	2	80			66	106
3924	2-chlorophenol										
	1. ug/l	N.D.		86	87	1	80			62	107
3937	1,3-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	91
3938	1,4-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	94
3939	1,2-dichlorobenzene										
	1. ug/l	N.D.		84	89	7	62			52	97
4680	2-methylphenol										
	1. ug/l	N.D.		92	86	6	83			55	96
4681	2,2'oxybis (1-chloropropane)										
	2. ug/l	N.D.		115	116	1	89			43	118
4682	4-methylphenol										
	3. ug/l	N.D.		86	85	2	80			48	99
3942	N-nitrosodi-n-propylamine										
	1. ug/l	N.D.		94	94	1	81			62	118
3941	hexachloroethane										
	1. ug/l	N.D.		69	74	6	51			40	84
3943	nitrobenzene										
	1. ug/l	N.D.		101	105	4	82			61	113
3944	isophorone										
	1. ug/l	N.D.		108	114	5	94			66	113
3926	2-nitrophenol										
	1. ug/l	N.D.		89	88	2	83			67	104
3927	2,4-dimethylphenol										
	1. ug/l	N.D.		90	91	1	83			52	99
3945	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		98	102	4	84			64	103
3928	2,4-dichlorophenol										
	1. ug/l	N.D.		91	90	1	85			65	98
3946	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		86	91	6	65			52	93
3947	naphthalene										
	1. ug/l	N.D.		88	93	5	69			60	97
3871	4-chloroaniline										
	1. ug/l	N.D.		81	77	5	67			34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		59	62	5	45			24	86
3929	4-chloro-3-methylphenol										
	1. ug/l	N.D.		100	102	2	97			60	111
3905	2-methylnaphthalene										
	1. ug/l	N.D.		88	91	3	71			62	98



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2016 Rev 5/11/11





LLI Sample No. 2941691

SW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		47	44	7	38			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		88	83	5	84			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		85	82	4	83			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	89	3	73			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		108	111	3	99			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		89	87	3	48			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		81	82	1	70			64	100

4679	TCL Semivolatiles cont'd	Batch: 98161WAC026									

3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	2	75			40	108
3954	acenaphthene										
	1. ug/l	N.D.		84	85	1	73			61	100
3931	2,4-dinitrophenol										
	16. ug/l	N.D.		74	50	39	86			25	124
3932	4-nitrophenol										
	11. ug/l	N.D.		50	42	18	55			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		81	83	3	73			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		90	92	2	84			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		104	106	2	94			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		95	95	0	74			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		83	84	0	76			62	104
3956	fluorene										
	1. ug/l	N.D.		85	86	1	78			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		103	106	3	97			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		80	71	13	84			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		84	84	0	77			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		87	86	1	79			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		92	92	0	86			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		74	59	23	86			46	114



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

2216 Rev. 11/97





LLI Sample No. 2941691
SW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		87	88	1	81			68	102
3964	anthracene										
1.	ug/l	N.D.		88	87	1	81			66	101
4684	carbazole										
1.	ug/l	N.D.		88	91	3	83			66	110
3965	di-n-butyl phthalate										
2.	ug/l	10. ug/l		90	90	0	81			61	105
3966	fluoranthene										
1.	ug/l	N.D.		87	87	0	81			66	106
3967	pyrene										
1.	ug/l	N.D.		93	95	2	85			58	112
3969	butyl benzyl phthalate										
2.	ug/l	6. J ug/l		94	96	2	77			48	105
3972	3,3'-dichlorobenzidine										
2.	ug/l	N.D.		95	96	0	86			37	104
3970	benzo (a) anthracene										
1.	ug/l	N.D.		98	99	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
2.	ug/l	N.D.		98	99	2	91			64	113
3971	chrysene										
1.	ug/l	N.D.		96	97	1	90			67	101
3974	di-n-octyl phthalate										
2.	ug/l	N.D.		90	90	0	83			59	118
3975	benzo (b) fluoranthene										
1.	ug/l	N.D.		77	77	0	71			64	101
3976	benzo (k) fluoranthene										
1.	ug/l	N.D.		100	98	2	90			67	105
3977	benzo (a) pyrene										
1.	ug/l	N.D.		96	96	0	89			65	101
3978	indeno (1,2,3-cd) pyrene										
1.	ug/l	N.D.		103	100	3	96			59	111
3979	dibenz (a,h) anthracene										
1.	ug/l	N.D.		105	102	3	97			66	117
3980	benzo (ghi) perylene										
1.	ug/l	N.D.		105	102	2	99			55	115



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2216 Rev 8-4-97





LLI Sample No. 2941691
SW-11 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	55	7	74
	Pheno1-d6	38	25	88
	2,4,6-TBP	88	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	86	47	114
	2-Fbiphenyl	85	51	106
	Tphenyl14	75	37	119



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2215 Rev. 3/4/97





LLI Sample No. WW 2941692

Collected: 6/ 4/98 at 10:00 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
12SW- SDG#: HMS03-10

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	
		RESULTS	METHOD DETECTION LIMIT UNITS
4678	TCL Semivolatiles		See Page 2
4679	TCL Semivolatiles cont'd		See Page 3

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 02:20:24 D 0003 12 129915 618147
 863 0.00 00029700 ASR000

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



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LLI Sample No. **WW 2941692**

Collected: 6/ 4/98 at 10:00 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
12SW- SDG#: HMS03-10

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		
		RESULTS	METHOD DETECTION	LIMIT UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethyl phthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

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

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



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2216 BA1 3 0197





LLI Sample No. WW 2941692

Collected: 6/ 4/98 at 10:00 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
12SW- SDG#: HMS03-10

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

P.O. GULF STATES CREOSOT
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	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	2.	J	1.
3967	pyrene	1.	J	1.
3969	butyl benzyl phthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo (a) anthracene	N.D.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	N.D.	1.	ug/l
3976	benzo (k) fluoranthene	N.D.	1.	ug/l
3977	benzo (a) pyrene	N.D.	1.	ug/l
3978	indeno (1,2,3-cd) pyrene	N.D.	1.	ug/l
3979	dibenz (a,h) anthracene	N.D.	1.	ug/l
3980	benzo (ghi) perylene	N.D.	1.	ug/l

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

Respectfully Submitted
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Group Leader, GC/MS SVOA



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02/15/98 10:11 AM





LLI Sample No. WW 2941692

Collected: 6/ 4/98 at 10:00 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

SW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
12SW- SDG#: HMS03-10

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
Charles J. Neslund, B.S.
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2211-100-1007





LLI Sample No. WW 2941692

Collected: 06/04/98 at 10:00 by ACT

Submitted: 06/06/98

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

SW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
12SW- SDG#: HMS03-10

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	06/10/98 0800	Denise L. Trimby
4678	TCL Semivolatiles	SW-846 8270C	1	07/11/98 2254	Teresa A. Perros
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/11/98 2254	Teresa A. Perros



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LLI Sample No. 2941692
SW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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: 98161WAC026									
3925	phenol										
	1. ug/l	N.D.		46	45	2	44			5	83
3936	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		98	100	2	80			66	106
3924	2-chlorophenol										
	1. ug/l	N.D.		86	87	1	80			62	107
3937	1,3-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	91
3938	1,4-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	94
3939	1,2-dichlorobenzene										
	1. ug/l	N.D.		84	89	7	62			52	97
4680	2-methylphenol										
	1. ug/l	N.D.		92	86	6	83			55	96
4681	2,2'oxybis (1-chloropropane)										
	2. ug/l	N.D.		115	116	1	89			43	118
4682	4-methylphenol										
	3. ug/l	N.D.		86	85	2	80			48	99
3942	N-nitrosodi-n-propylamine										
	1. ug/l	N.D.		94	94	1	81			62	118
3941	hexachloroethane										
	1. ug/l	N.D.		69	74	6	51			40	84
3943	nitrobenzene										
	1. ug/l	N.D.		101	105	4	82			61	113
3944	isophorone										
	1. ug/l	N.D.		108	114	5	94			66	113
3926	2-nitrophenol										
	1. ug/l	N.D.		89	88	2	83			67	104
3927	2,4-dimethylphenol										
	1. ug/l	N.D.		90	91	1	83			52	99
3945	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		98	102	4	84			64	103
3928	2,4-dichlorophenol										
	1. ug/l	N.D.		91	90	1	85			65	98
3946	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		86	91	6	65			52	93
3947	naphthalene										
	1. ug/l	N.D.		88	93	5	69			60	97
3871	4-chloroaniline										
	1. ug/l	N.D.		81	77	5	67			34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		59	62	5	45			24	86
3929	4-chloro-3-methylphenol										
	1. ug/l	N.D.		100	102	2	97			60	111
3905	2-methylnaphthalene										
	1. ug/l	N.D.		88	91	3	71			62	98



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See reverse side for explanation of symbols and abbreviations

CS16 4/14/97





LLI Sample No. 2941692
SW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		47	44	7	38			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		88	83	5	84			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		85	82	4	83			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	89	3	73			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		108	111	3	99			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		89	87	3	48			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		81	82	1	70			64	100

4679	TCL Semivolatiles cont'd	Batch: 98161WAC026									

3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	2	75			40	108
3954	acenaphthene										
	1. ug/l	N.D.		84	85	1	73			61	100
3931	2,4-dinitrophenol										
	15. ug/l	N.D.		74	50	39	86			25	124
3932	4-nitrophenol										
	10. ug/l	N.D.		50	42	18	55			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		81	83	3	73			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		90	92	2	84			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		104	106	2	94			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		95	95	0	74			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		83	84	0	76			62	104
3956	fluorene										
	1. ug/l	N.D.		85	86	1	78			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		103	106	3	97			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		80	71	13	84			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		84	84	0	77			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		87	86	1	79			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		92	92	0	86			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		74	59	23	86			46	114



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02/11/05 10:17





LLI Sample No. 2941692
SW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		87	88	1	81			68	102
3964	anthracene										
	1. ug/l	N.D.		88	87	1	81			66	101
4684	carbazole										
	1. ug/l	N.D.		88	91	3	83			66	110
3965	di-n-butyl phthalate										
	2. ug/l	10. ug/l		90	90	0	81			61	105
3966	fluoranthene										
	1. ug/l	N.D.		87	87	0	81			66	106
3967	pyrene										
	1. ug/l	N.D.		93	95	2	85			58	112
3969	butyl benzyl phthalate										
	2. ug/l	6. J ug/l		94	96	2	77			48	105
3972	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		95	96	0	86			37	104
3970	benzo (a) anthracene										
	1. ug/l	N.D.		98	99	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		98	99	2	91			64	113
3971	chrysene										
	1. ug/l	N.D.		96	97	1	90			67	101
3974	di-n-octyl phthalate										
	2. ug/l	N.D.		90	90	0	83			59	118
3975	benzo (b) fluoranthene										
	1. ug/l	N.D.		77	77	0	71			64	101
3976	benzo (k) fluoranthene										
	1. ug/l	N.D.		100	98	2	90			67	105
3977	benzo (a) pyrene										
	1. ug/l	N.D.		96	96	0	89			65	101
3978	indeno (1,2,3-cd) pyrene										
	1. ug/l	N.D.		103	100	3	96			59	111
3979	dibenz (a,h) anthracene										
	1. ug/l	N.D.		105	102	3	97			66	117
3980	benzo (ghi) perylene										
	1. ug/l	N.D.		105	102	2	99			55	115



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

See reverse side for explanation of symbols and abbreviations

2215





LLI Sample No. 2941692
 SW-12 Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
 Kerr-McGee Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flphenol	55	7	74
	Phenol-d6	37	25	88
	2,4,6-TBP	89	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	87	47	114
	2-Fbiphenyl	86	51	106
	Tphenylid14	80	37	119



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7216 (Rev. 11/02)





LLI Sample No. WW 2941693

Collected: 6/ 4/98 at 16:50 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

CFO Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CFO-- SDG#: HMS03-11

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	
		RESULTS	METHOD DETECTION LIMIT UNITS
4678	TCL Semivolatiles		See Page 2
4679	TCL Semivolatiles cont'd		See Page 3

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

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 02:22:28 D 0003 12 129915 618147
 863 0.00 00029700 ASR000

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



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1215 rel. 4/97





LLI Sample No. WW 2941693

Collected: 6/ 4/98 at 16:50 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

CFO Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CFO-- SDG#: HMS03-11

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

P.O. GULF STATES CREOSOT
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	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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1215 04 12 01





LLI Sample No. WW 2941693

Collected: 6/ 4/98 at 16:50 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

CFO Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CFO-- SDG#: HMS03-11

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 cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	16.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	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	3. J	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butyl benzyl phthalate	13.	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	7. 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

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.

2017-06-14 10:11





LLI Sample No. WW 2941693

Collected: 6/ 4/98 at 16:50 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

CFO Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CFO-- SDG#: HMS03-11

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.
Di-n-butylphthalate and Butylbenzylphthalate were detected in the method blank at concentrations of 10. ug/l and 6. ug/l respectively. The blank results were not subtracted from the analytical results.

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

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



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2018 EPA 8160-G-18-001





LLI Sample No. WW 2941693

Collected: 06/04/98 at 16:50 by ACT

Submitted: 06/06/98

CFO Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
CFO-- SDG#: HMS03-11

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
0813	BNA Water Extraction	SW-846 3510C	1	06/10/98 0800	Denise L. Trimby
4678	TCL Semivolatiles	SW-846 8270C	1	07/12/98 1249	Teresa A. Perros
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/12/98 1249	Teresa A. Perros



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LLI Sample No. 2941693
CFO Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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: 98161WAC026									
3925	phenol										
	1. ug/l	N.D.		46	45	2	44			5	83
3936	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		98	100	2	80			66	106
3924	2-chlorophenol										
	1. ug/l	N.D.		86	87	1	80			62	107
3937	1,3-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	91
3938	1,4-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	94
3939	1,2-dichlorobenzene										
	1. ug/l	N.D.		84	89	7	62			52	97
4680	2-methylphenol										
	1. ug/l	N.D.		92	86	6	83			55	96
4681	2,2'oxybis (1-chloropropane)										
	2. ug/l	N.D.		115	116	1	89			43	118
4682	4-methylphenol										
	3. ug/l	N.D.		86	85	2	80			48	99
3942	N-nitrosodi-n-propylamine										
	1. ug/l	N.D.		94	94	1	81			62	118
3941	hexachloroethane										
	1. ug/l	N.D.		69	74	6	51			40	84
3943	nitrobenzene										
	1. ug/l	N.D.		101	105	4	82			61	113
3944	isophorone										
	1. ug/l	N.D.		108	114	5	94			66	113
3926	2-nitrophenol										
	1. ug/l	N.D.		89	88	2	83			67	104
3927	2,4-dimethylphenol										
	1. ug/l	N.D.		90	91	1	83			52	99
3945	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		98	102	4	84			64	103
3928	2,4-dichlorophenol										
	1. ug/l	N.D.		91	90	1	85			65	98
3946	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		86	91	6	65			52	93
3947	naphthalene										
	1. ug/l	N.D.		88	93	5	69			60	97
3871	4-chloroaniline										
	1. ug/l	N.D.		81	77	5	67			34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		59	62	5	45			24	86
3929	4-chloro-3-methylphenol										
	1. ug/l	N.D.		100	102	2	97			60	111
3905	2-methylnaphthalene										
	1. ug/l	N.D.		88	91	3	71			62	98



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L316 640 3.1.11





LLI Sample No. 2941693
CFD Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		47	44	7	38			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		88	83	5	84			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		85	82	4	83			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	89	3	73			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		108	111	3	99			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		89	87	3	48			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		81	82	1	70			64	100

4679	TCL Semivolatiles cont'd	Batch: 98161WAC026									

3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	2	75			40	108
3954	acenaphthene										
	1. ug/l	N.D.		84	85	1	73			61	100
3931	2,4-dinitrophenol										
	16. ug/l	N.D.		74	50	39	86			25	124
3932	4-nitrophenol										
	10. ug/l	N.D.		50	42	18	55			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		81	83	3	73			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		90	92	2	84			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		104	106	2	94			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		95	95	0	74			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		83	84	0	76			62	104
3956	fluorene										
	1. ug/l	N.D.		85	86	1	78			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		103	106	3	97			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		80	71	13	84			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		84	84	0	77			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		87	86	1	79			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		92	92	0	86			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		74	59	23	86			46	114



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2941693
CFO Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
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.		87	88	1	81			68	102
3964	anthracene										
	1. ug/l	N.D.		88	87	1	81			66	101
4684	carbazole										
	1. ug/l	N.D.		88	91	3	83			66	110
3965	di-n-butyl phthalate										
	2. ug/l	10. ug/l		90	90	0	81			61	105
3966	fluoranthene										
	1. ug/l	N.D.		87	87	0	81			66	106
3967	pyrene										
	1. ug/l	N.D.		93	95	2	85			58	112
3969	butyl benzyl phthalate										
	2. ug/l	6. J ug/l		94	96	2	77			48	105
3972	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		95	96	0	86			37	104
3970	benzo (a) anthracene										
	1. ug/l	N.D.		98	99	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		98	99	2	91			64	113
3971	chrysene										
	1. ug/l	N.D.		96	97	1	90			67	101
3974	di-n-octyl phthalate										
	2. ug/l	N.D.		90	90	0	83			59	118
3975	benzo (b) fluoranthene										
	1. ug/l	N.D.		77	77	0	71			64	101
3976	benzo (k) fluoranthene										
	1. ug/l	N.D.		100	98	2	90			67	105
3977	benzo (a) pyrene										
	1. ug/l	N.D.		96	96	0	89			65	101
3978	indeno (1,2,3-cd) pyrene										
	1. ug/l	N.D.		103	100	3	96			59	111
3979	dibenz (a,h) anthracene										
	1. ug/l	N.D.		105	102	3	97			66	117
3980	benzo (ghi) perylene										
	1. ug/l	N.D.		105	102	2	99			55	115



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2941693
CFO Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
Kerr-McGee Corporation

	SURROGATE SUMMARY			SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW	HIGH
4678 TCL Semivolatiles		2-Flphenol	57	7	74
		Phenol-d6	40	25	88
		2,4,6-TBP	85	34	125
4679 TCL Semivolatiles cont'd		Nitrobz-d5	91	47	114
		2-Fbiphenyl	86	51	106
		Tphenylid14	70	37	119



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2011-04-15 10:07





LLI Sample No. ww 2941694

Collected: 6/ 4/98 at 17:00 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

RB/6-4-98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB-64 SDG#: HMS03-12RB

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	
		RESULTS	METHOD DETECTION LIMIT UNITS
4678	TCL Semivolatiles		See Page 2
4679	TCL Semivolatiles cont'd		See Page 3

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

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

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
02:24:32 D 0003 12 129915 618147
863 0.00 00029700 ASR000

Respectfully Submitted
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Group Leader, GC/MS SVOA



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LLI Sample No. WW 2941694

Collected: 6/ 4/98 at 17:00 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

RB/6-4-98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
 RB-64 SDG#: HMS03-12RB

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

P.O. GULF STATES CREOSOT
 ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethyl phthalate	N.D.	2.	ug/l
3951	acernaphthylene	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

MEMBER

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see reverse side for explanation of symbols and abbreviations

20 21 22 23 24





LLI Sample No. WW 2941694

Collected: 6/ 4/98 at 17:00 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

RB/6-4-98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB-64 SDG#: HMS03-12RB

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		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	16.	ug/l
3932	4-nitrophenol	N.D.	11.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethyl phthalate	N.D.	2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butyl phthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butyl benzyl phthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo (a) anthracene	N.D.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	N.D.	1.	ug/l
3976	benzo (k) fluoranthene	N.D.	1.	ug/l
3977	benzo (a) pyrene	N.D.	1.	ug/l
3978	indeno (1,2,3-cd) pyrene	N.D.	1.	ug/l
3979	dibenz (a,h) anthracene	N.D.	1.	ug/l
3980	benzo (ghi) perylene	N.D.	1.	ug/l

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

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

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22/6/98 11:11





LLI Sample No. WW 2941694

Collected: 6/ 4/98 at 17:00 by ACT

Submitted: 6/ 6/98 Reported: 7/18/98

Discard: 8/18/98

RB/6-4-98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB-64 SDG#: HMS03-12RB

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

P.O. GULF STATES CREOSOT
ReI.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine.
The result reported for N-nitrosodiphenylamine represents the combined
total of both compounds.
Due to insufficient sample, the quantitation limits for the GC/MS
semivolatile compounds were raised.

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

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



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1998 Rev. 3.0 31





LJI Sample No. WW 2941694

Collected: 06/04/98 at 17:00 by ACT

Submitted: 06/06/98

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

RB/6-4-98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB-64 SDG#: HMS03-12RB

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
0813	BNA Water Extraction	SW-846 3510C	1	06/10/98 0800	Denise L. Trimby
4678	TCL Semivolatiles	SW-846 8270C	1	07/12/98 1354	Teresa A. Perros
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	07/12/98 1354	Teresa A. Perros



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215-941-1111





LLI Sample No. 2941694
 RB/6-4-98 Rinseate Blank Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
 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: 98161WAC026									
3925	phenol										
	1. ug/l	N.D.		46	45	2	44			5	83
3936	bis (2-chloroethyl) ether										
	1. ug/l	N.D.		98	100	2	80			66	106
3924	2-chlorophenol										
	1. ug/l	N.D.		86	87	1	80			62	107
3937	1,3-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	91
3938	1,4-dichlorobenzene										
	1. ug/l	N.D.		80	86	7	59			45	94
3939	1,2-dichlorobenzene										
	1. ug/l	N.D.		84	89	7	62			52	97
4680	2-methylphenol										
	1. ug/l	N.D.		92	86	6	83			55	96
4681	2,2'oxybis (1-chloropropane)										
	2. ug/l	N.D.		115	116	1	89			43	118
4682	4-methylphenol										
	3. ug/l	N.D.		86	85	2	80			48	99
3942	N-nitrosodi-n-propylamine										
	1. ug/l	N.D.		94	94	1	81			62	118
3941	hexachloroethane										
	1. ug/l	N.D.		69	74	6	51			40	84
3943	nitrobenzene										
	1. ug/l	N.D.		101	105	4	82			61	113
3944	isophorone										
	1. ug/l	N.D.		108	114	5	94			66	113
3926	2-nitrophenol										
	1. ug/l	N.D.		89	88	2	83			67	104
3927	2,4-dimethylphenol										
	1. ug/l	N.D.		90	91	1	83			52	99
3945	bis (2-chloroethoxy) methane										
	1. ug/l	N.D.		98	102	4	84			64	103
3928	2,4-dichlorophenol										
	1. ug/l	N.D.		91	90	1	85			65	98
3946	1,2,4-trichlorobenzene										
	1. ug/l	N.D.		86	91	6	65			52	93
3947	naphthalene										
	1. ug/l	N.D.		88	93	5	69			60	97
3871	4-chloroaniline										
	1. ug/l	N.D.		81	77	5	67			34	101
3948	hexachlorobutadiene										
	2. ug/l	N.D.		59	62	5	45			24	86
3929	4-chloro-3-methylphenol										
	1. ug/l	N.D.		100	102	2	97			60	111
3905	2-methylnaphthalene										
	1. ug/l	N.D.		88	91	3	71			62	98



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22 of 24





LLI Sample No. 2941694
 RB/6-4-98 Rinseate Blank Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
 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.		47	44	7	38			17	80
3930	2,4,6-trichlorophenol										
	2. ug/l	N.D.		88	83	5	84			66	105
3922	2,4,5-trichlorophenol										
	2. ug/l	N.D.		85	82	4	83			67	103
3950	2-chloronaphthalene										
	1. ug/l	N.D.		87	89	3	73			61	103
3907	2-nitroaniline										
	2. ug/l	N.D.		108	111	3	99			58	112
3952	dimethyl phthalate										
	2. ug/l	N.D.		89	87	3	48			1	90
3951	acenaphthylene										
	1. ug/l	N.D.		81	82	1	70			64	100

4679	TCL Semivolatiles cont'd	Batch: 98161WAC026									

3908	3-nitroaniline										
	2. ug/l	N.D.		85	86	2	75			40	108
3954	acenaphthene										
	1. ug/l	N.D.		84	85	1	73			61	100
3931	2,4-dinitrophenol										
	16. ug/l	N.D.		74	50	39	86			25	124
3932	4-nitrophenol										
	11. ug/l	N.D.		50	42	18	55			3	83
3879	dibenzofuran										
	1. ug/l	N.D.		81	83	3	73			67	99
3955	2,4-dinitrotoluene										
	1. ug/l	N.D.		90	92	2	84			64	112
3953	2,6-dinitrotoluene										
	2. ug/l	N.D.		104	106	2	94			66	113
3958	diethyl phthalate										
	2. ug/l	N.D.		95	95	0	74			30	99
3957	4-chlorophenyl phenyl ether										
	1. ug/l	N.D.		83	84	0	76			62	104
3956	fluorene										
	1. ug/l	N.D.		85	86	1	78			61	108
3909	4-nitroaniline										
	2. ug/l	N.D.		103	106	3	97			55	116
3933	4,6-dinitro-2-methylphenol										
	5. ug/l	N.D.		80	71	13	84			43	120
3960	N-nitrosodiphenylamine										
	1. ug/l	N.D.		84	84	0	77			64	103
3961	4-bromophenyl phenyl ether										
	2. ug/l	N.D.		87	86	1	79			69	102
3962	hexachlorobenzene										
	2. ug/l	N.D.		92	92	0	86			62	109
3934	pentachlorophenol										
	3. ug/l	N.D.		74	59	23	86			46	114



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LLI Sample No. 2941694
 RB/6-4-98 Rinseate Blank Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
 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.		87	88	1	81			68	102
3964	anthracene										
	1. ug/l	N.D.		88	87	1	81			66	101
4684	carbazole										
	1. ug/l	N.D.		88	91	3	83			66	110
3965	di-n-butyl phthalate										
	2. ug/l	10. ug/l		90	90	0	81			61	105
3966	fluoranthene										
	1. ug/l	N.D.		87	87	0	81			66	106
3967	pyrene										
	1. ug/l	N.D.		93	95	2	85			58	112
3969	butyl benzyl phthalate										
	2. ug/l	6. ug/l		94	96	2	77			48	105
3972	3,3'-dichlorobenzidine										
	2. ug/l	N.D.		95	96	0	86			37	104
3970	benzo (a) anthracene										
	1. ug/l	N.D.		98	99	1	92			69	101
3973	bis (2-ethylhexyl) phthalate										
	2. ug/l	N.D.		98	99	2	91			64	113
3971	chrysene										
	1. ug/l	N.D.		96	97	1	90			67	101
3974	di-n-octyl phthalate										
	2. ug/l	N.D.		90	90	0	83			59	118
3975	benzo (b) fluoranthene										
	1. ug/l	N.D.		77	77	0	71			64	101
3976	benzo (k) fluoranthene										
	1. ug/l	N.D.		100	98	2	90			67	105
3977	benzo (a) pyrene										
	1. ug/l	N.D.		96	96	0	89			65	101
3978	indeno (1,2,3-cd) pyrene										
	1. ug/l	N.D.		103	100	3	96			59	111
3979	dibenz (a,h) anthracene										
	1. ug/l	N.D.		105	102	3	97			66	117
3980	benzo (ghi) perylene										
	1. ug/l	N.D.		105	102	2	99			55	115



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2015-08-11 10:00





LLI Sample No. 2941694
 RB/6-4-98 Rinseate Blank Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS

Group No. 618147
 Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
4678 TCL Semivolatiles		2-F1pheno1	55	7 74
		Pheno1-d6	38	25 88
		2,4,6-TBP	87	34 125
4679 TCL Semivolatiles cont'd		Nitrobz-d5	84	47 114
		2-Fbiphny1	82	51 106
		Tpheny1d14	83	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
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		DETECTION LIMIT UNITS
		RESULTS	METHOD	
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 ATTN: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

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



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Respectfully Submitted
 Charles J. Nestlund, 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
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Volatiles				
5385	Chloromethane	N.D.	3.	ug/l
5387	Bromomethane	N.D.	3.	ug/l
5386	Vinyl Chloride	N.D.	2.	ug/l
5388	Chloroethane	N.D.	3.	ug/l
5391	Methylene Chloride	N.D.	2.	ug/l
6302	Acetone	N.D.	6.	ug/l
6303	Carbon Disulfide	N.D.	3.	ug/l
5390	1,1-Dichloroethene	N.D.	1.	ug/l
5393	1,1-Dichloroethane	N.D.	2.	ug/l
5396	Chloroform	N.D.	1.	ug/l
5402	1,2-Dichloroethane	N.D.	2.	ug/l
6305	2-Butanone	N.D.	3.	ug/l
5398	1,1,1-Trichloroethane	N.D.	1.	ug/l
5399	Carbon Tetrachloride	N.D.	1.	ug/l
5406	Bromodichloromethane	N.D.	1.	ug/l
5421	1,1,2,2-Tetrachloroethane	N.D.	2.	ug/l
5404	1,2-Dichloropropane	N.D.	1.	ug/l
6306	trans-1,3-Dichloropropene	N.D.	1.	ug/l
5403	Trichloroethene	N.D.	1.	ug/l
5411	Dibromochloromethane	N.D.	2.	ug/l
5408	1,1,2-Trichloroethane	N.D.	2.	ug/l
5401	Benzene	N.D.	1.	ug/l
6307	cis-1,3-Dichloropropene	N.D.	1.	ug/l
5419	Bromoform	N.D.	1.	ug/l
6308	4-Methyl-2-pentanone	N.D.	5.	ug/l
6309	2-Hexanone	N.D.	7.	ug/l
5409	Tetrachloroethene	N.D.	1.	ug/l
5407	Toluene	N.D.	2.	ug/l
5413	Chlorobenzene	N.D.	1.	ug/l
5415	Ethylbenzene	N.D.	2.	ug/l
5418	Styrene	N.D.	1.	ug/l
6310	Xylene (Total)	N.D.	1.	ug/l
5392	trans-1,2-Dichloroethene*	N.D.	2.	ug/l
5395	cis-1,2-Dichloroethene	N.D.	2.	ug/l

Questions? Contact your Client Services Representative
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.

2215 Rev. 1/1/97





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.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenoI	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenoI	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-methylphenoI	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenoI	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-nitrophenoI	N.D.	1.	ug/l
3927	2,4-dimethylphenoI	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenoI	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-methylphenoI	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenoI	N.D.	2.	ug/l
3922	2,4,5-trichlorophenoI	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethyl phthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

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

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

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





LLI Sample No. WW 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.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	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	di-benz (a,h) anthracene *	N.D.	1.	ug/l
3980	benzo (ghi) perylene	N.D.	1.	ug/l

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



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





LLI Sample No. WW 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
Re1.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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

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



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





LLI Sample No. WW 2946085

Collected: 06/11/98 at 09:15 by DU

Submitted: 06/13/98

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

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS		ANALYST
				ID	DATE AND TIME	
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. Esbshade
4679	TCL Semivolatiles cont'd	SW-846 8270C	1		06/26/98 1808	Phillip R. Esbshade



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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
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
5393	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	1,1,1,2,2-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	1,1,1,2-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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2015 10/23/15 11:11



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	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
5392	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



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2016 06/15/2017





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
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
3929	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. 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
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-methylpheno										
	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
3962	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 benzy										
	2. ug/l	N.D.		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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2210 10/10/01





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



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0216 11/11/11





LLI Sample No. 2946085

GEO-16-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flphenol	53	7	74
	Phenol-d6	33	25	88
	2,4,6-TBP	103	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	89	47	114
	2-Fbiphenyl	96	51	106
	Tphenylid14	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



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2215 Rev. 1/97





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
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD 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



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Respectfully Submitted
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Group Leader, GC/MS SVOA





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.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD 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

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
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	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

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





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.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	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
at (717) 656-2300



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



**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
Re1.CAT
NO. ANALYSIS NAME

	AS RECEIVED	METHOD	
RESULTS	DETECTION	LIMIT	UNITS

TCL Semivolatiles cont'd

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

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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 2946086

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

Submitted: 06/13/98

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		
			TRIAL ID	DATE AND TIME	ANALYST
6291	TCL Volatiles	SW-846 8260B	1	06/24/98 0801	Joe 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. Esbshade
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/26/98 1900	Phillip R. Esbshade



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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 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
5390	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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2215 7/31/11





L/LI 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	LIMITS 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
5392	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



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2015 07 31 11:47





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
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
3948	hexachlorobutadiene										
	2. ug/l	N.D.		80	65	21	53	59	10	24	86
3929	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: 98168MAB026									

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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0216-10-11



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
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
3962	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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2015 11/16/17





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
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. 2946086

GEO-17-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			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-Fbiphnyl	87	51	106
	Tphenylid14	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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2016-06-14 10:11





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 Uptegrove

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



Lancaster Laboratories
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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#: HMS03-15

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	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-Dichloroethane	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





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	Joe1 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										
	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
5393	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	1,1,1,2,2-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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2010 06/15/11





L.L.I 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	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
6310	Xylene (Total)										
	1. ug/l	N.D.		113	112	1	110			57	138
5392	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



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12/11/01 10:11:11 AM





LLI Sample No. 2946087
GEO-18-GW Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

6291 TCL Volatiles	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
		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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21 5 1997 3:00 PM





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.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD 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 ATTN: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:26:47 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

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

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

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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
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	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

P.O. GULF STATES CREOSOT
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	3.	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	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.	J 1.	ug/l

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

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





LLI Sample No. 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.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	140.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	16.	ug/l
3932	4-nitrophenol	N.D.	11.	ug/l
3879	dibenzofuran	48.	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	67.	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	140.	1.	ug/l
3964	anthracene	26.	1.	ug/l
4684	carbazole	77.	1.	ug/l
3965	di-n-butyl phthalate	N.D.	2.	ug/l
3966	fluoranthene	100.	1.	ug/l
3967	pyrene	76.	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	17.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3971	chrysene	15.	1.	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	13.	1.	ug/l
3976	benzo (k) fluoranthene	4.	J	ug/l
3977	benzo (a) pyrene	8.	J	ug/l
3978	indeno (1,2,3-cd) pyrene	4.	J	ug/l
3979	dibenz (a,h) anthracene *	1.	J	ug/l
3980	benzo (ghi) perylene	3.	J	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 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
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AS RECEIVED

CAT			
NO.	ANALYSIS NAME	RESULTS	METHOD DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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

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

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



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2275 01/11/98





LLI Sample No. WW 2946088

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

Submitted: 06/13/98

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
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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2216 10/1/94





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
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
5390	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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2215 7-9 8-0001



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
5392	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



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2275 11/11/97 02





L/LI 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
3929	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	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										
	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
3962	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			85	78	8	71	71	0	48	105
3972	3,3'-dichlorobenzidine		5. J ug/l								
	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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2025 04/11/25





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
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
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TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	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-Fbiphny1	83	51	106
	Tphenyld14	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
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CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD 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 ATTN: Garet Van de Steeg, PhD
 1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
 1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
 Kay G. Hower at (717) 656-2300
 20:28:31 D 0003 10 129915 619183
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Respectfully Submitted
 Charles J. Neslund, B.S.
 Group Leader, GC/MS SVOA





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
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Volatiles				
5385	Chloromethane	N.D.	3.	ug/l
5387	Bromomethane	N.D.	3.	ug/l
5386	Vinyl Chloride	N.D.	2.	ug/l
5388	Chloroethane	N.D.	3.	ug/l
5391	Methylene Chloride	N.D.	2.	ug/l
6302	Acetone	N.D.	6.	ug/l
6303	Carbon Disulfide	N.D.	3.	ug/l
5390	1,1-Dichloroethane	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
at (717) 656-2300



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





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
Rel.

GEO-20-GW Unspiked Grab Water Sample

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

Table with columns: CAT NO., ANALYSIS NAME, AS RECEIVED RESULTS, METHOD DETECTION, LIMIT UNITS. Lists various chemical analyses such as phenol, chlorophenols, and nitrobenzenes.

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

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

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

See reverse side for explanation of symbols and abbreviations

2015-09-30 14:17





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
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	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

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





LLI Sample No. WW 2946089

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

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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.

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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LLI Sample No. WW 2946089

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

Submitted: 06/13/98

Account No: 07802
Kerr-McGee Corporation
P.O. Box 25861
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	Joe I 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. Esbshade
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/23/98 0531	Phillip R. Esbshade



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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	LCS 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
5393	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	1,1,1,2,2-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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L/LI 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
5392	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



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12/13 26/11/07





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	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										
	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
3929	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	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										
	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
3962	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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11/16 10:24 AM





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	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



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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

TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			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 2946090

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

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

Discard: 8/ 3/98

GEO-20-GW Matrix Spike Grab Water Sample

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

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	
		RESULTS	METHOD 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
20:30:25 D 0003 10 129915 619183
0.00 00045300 ASR000



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Respectfully Submitted
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Group Leader, GC/MS SVOA





LLI Sample No. WW 2946090

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

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GEO-20-GW Matrix Spike Grab Water Sample

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

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		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Volatiles				
5385	Chloromethane	19.	3.	ug/l
5387	Bromomethane	14.	3.	ug/l
5386	Vinyl Chloride	21.	2.	ug/l
5388	Chloroethane	19.	3.	ug/l
5391	Methylene Chloride	22.	2.	ug/l
6302	Acetone	160.	6.	ug/l
6303	Carbon Disulfide	20.	3.	ug/l
5390	1,1-Dichloroethene	23.	1.	ug/l
5393	1,1-Dichloroethane	23.	2.	ug/l
5396	Chloroform	23.	1.	ug/l
5402	1,2-Dichloroethane	23.	2.	ug/l
6305	2-Butanone	160.	3.	ug/l
5398	1,1,1-Trichloroethane	24.	1.	ug/l
5399	Carbon Tetrachloride	24.	1.	ug/l
5406	Bromodichloromethane	23.	1.	ug/l
5421	1,1,2,2-Tetrachloroethane	21.	2.	ug/l
5404	1,2-Dichloropropane	21.	1.	ug/l
6306	trans-1,3-Dichloropropene	23.	1.	ug/l
5403	Trichloroethene	23.	1.	ug/l
5411	Dibromochloromethane	24.	2.	ug/l
5408	1,1,2-Trichloroethane	22.	2.	ug/l
5401	Benzene	22.	1.	ug/l
6307	cis-1,3-Dichloropropene	22.	1.	ug/l
5419	Bromoform	24.	1.	ug/l
6308	4-Methyl-2-pentanone	100.	5.	ug/l
6309	2-Hexanone	98.	7.	ug/l
5409	Tetrachloroethene	25.	1.	ug/l
5407	Toluene	22.	2.	ug/l
5413	Chlorobenzene	22.	1.	ug/l
5415	Ethylbenzene	23.	2.	ug/l
5418	Styrene	22.	1.	ug/l
6310	Xylene (Total)	68.	1.	ug/l
5392	trans-1,2-Dichloroethene	23.	2.	ug/l
5395	cis-1,2-Dichloroethene	22.	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





LLI Sample No. **WW 2946090**

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

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

Discard: 8/ 3/98

GEO-20-GW Matrix Spike Grab Water Sample

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

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		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	38.	1.	ug/l
3936	bis (2-chloroethyl) ether	85.	1.	ug/l
3924	2-chlorophenol	85.	1.	ug/l
3937	1,3-dichlorobenzene	84.	1.	ug/l
3938	1,4-dichlorobenzene	84.	1.	ug/l
3939	1,2-dichlorobenzene	89.	1.	ug/l
4680	2-methylphenol	76.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	95.	2.	ug/l
4682	4-methylphenol	71.	3.	ug/l
3942	N-nitrosodi-n-propylamine	94.	1.	ug/l
3941	hexachloroethane	77.	1.	ug/l
3943	nitrobenzene	90.	1.	ug/l
3944	isophorone	92.	1.	ug/l
3926	2-nitrophenol	88.	1.	ug/l
3927	2,4-dimethylphenol	81.	1.	ug/l
3945	bis (2-chloroethoxy) methane	86.	1.	ug/l
3928	2,4-dichlorophenol	86.	1.	ug/l
3946	1,2,4-trichlorobenzene	85.	1.	ug/l
3947	naphthalene	82.	1.	ug/l
3871	4-chloroaniline	81.	1.	ug/l
3948	hexachlorobutadiene	80.	2.	ug/l
3929	4-chloro-3-methylphenol	88.	1.	ug/l
3905	2-methylnaphthalene	84.	1.	ug/l
3949	hexachlorocyclopentadiene	140.	5.	ug/l
3930	2,4,6-trichlorophenol	88.	2.	ug/l
3922	2,4,5-trichlorophenol	92.	2.	ug/l
3950	2-chloronaphthalene	87.	1.	ug/l
3907	2-nitroaniline	73.	2.	ug/l
3952	dimethyl phthalate	68.	2.	ug/l
3951	acenaphthylene	80.	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 2946090

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

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

Discard: 8/ 3/98

GEO-20-GW Matrix Spike Grab Water Sample

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

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	METHOD		
		RESULTS	DETECTION	LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	73.	2.	ug/l
3954	acenaphthene	82.	1.	ug/l
3931	2,4-dinitrophenol	85.	15.	ug/l
3932	4-nitrophenol	45.	J 10.	ug/l
3879	dibenzofuran	84.	1.	ug/l
3955	2,4-dinitrotoluene	93.	1.	ug/l
3953	2,6-dinitrotoluene	95.	2.	ug/l
3958	diethyl phthalate	83.	2.	ug/l
3957	4-chlorophenyl phenyl ether	90.	1.	ug/l
3956	fluorene	87.	1.	ug/l
3909	4-nitroaniline	83.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	87.	5.	ug/l
3960	N-nitrosodiphenylamine	86.	1.	ug/l
3961	4-bromophenyl phenyl ether	90.	2.	ug/l
3962	hexachlorobenzene	96.	2.	ug/l
3934	pentachlorophenol	91.	3.	ug/l
3963	phenanthrene	85.	1.	ug/l
3964	anthracene	89.	1.	ug/l
4684	carbazole	87.	1.	ug/l
3965	di-n-butyl phthalate	88.	2.	ug/l
3966	fluoranthene	90.	1.	ug/l
3967	pyrene	88.	1.	ug/l
3969	butyl benzyl phthalate	85.	2.	ug/l
3972	3,3'-dichlorobenzidine	72.	2.	ug/l
3970	benzo (a) anthracene	86.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	83.	2.	ug/l
3971	chrysene	85.	1.	ug/l
3974	di-n-octyl phthalate	95.	2.	ug/l
3975	benzo (b) fluoranthene	87.	1.	ug/l
3976	benzo (k) fluoranthene	90.	1.	ug/l
3977	benzo (a) pyrene	88.	1.	ug/l
3978	indeno (1,2,3-cd) pyrene	87.	1.	ug/l
3979	dibenz (a,h) anthracene	89.	1.	ug/l
3980	benzo (ghi) perylene	87.	1.	ug/l

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



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





LLI Sample No. WW 2946090

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

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

Discard: 8/ 3/98

GEO-20-GW Matrix Spike Grab Water Sample

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

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

P.O. GULF STATES CREOSOT
Rel.

AS RECEIVED

CAT			METHOD
NO.	ANALYSIS NAME	RESULTS	DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds. Butylbenzylphthalate was detected in the method blank at a concentration of 5. ug/l. The blank value was not subtracted from the analytical result.

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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2275





LLI Sample No. WW 2946090

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

Submitted: 06/13/98

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

GEO-20-GW Matrix Spike Grab Water Sample

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

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS		ANALYST
				ID	DATE AND TIME	
6291	TCL Volatiles	SW-846 8260B	1		06/24/98 0101	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 0631	Phillip R. Esbshade
4679	TCL Semivolatiles cont'd	SW-846 8270C	1		06/23/98 0631	Phillip R. Esbshade



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2215-949-1212





LLI Sample No. 2946090
 GEO-20-GW Matrix Spike 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: 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
5393	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	1,1,1,2,2-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	1,1,1,2-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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LII Sample No. 2946090
 GEO-20-GW Matrix Spike 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
5392	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



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See reverse side for explanation of symbols and abbreviations





LLI Sample No. 2946090
 GEO-20-GW Matrix Spike 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										
	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
3929	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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3215 9/94 11/12/97





LLI Sample No. 2946090
 GEO-20-GW Matrix Spike 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
3962	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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See reverse side for explanation of symbols and abbreviations.





LLI Sample No. 2946090
 GEO-20-GW Matrix Spike 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



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LLI Sample No. 2946090
 GEO-20-GW Matrix Spike Grab Water Sample
 Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
 Kerr-McGee Corporation

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Fiphenol	53	7	74
	Phenol-d6	35	25	88
	2,4,6-TBP	97	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	87	47	114
	2-Fbiphenyl	85	51	106
	Tphenylid14	83	37	119
6291 TCL Volatiles	DBFM	105	86	118
	d4-1,2-DCA	98	80	120
	d8-toluene	101	88	110
	4-BFB	102	86	115



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2015-06-23 11:17





LLI Sample No. WW 2946091

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

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

Discard: 8/ 3/98

GEO-20-GW Matrix Spike Dup. Grab Water Sample

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

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	
		RESULTS	METHOD 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 ATTN: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:32:13 D 0003 10 129915 619183
0.00 00045300 ASR000



Lancaster Laboratories
2425 New Holland Pike
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 2946091

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.

GEO-20-GW Matrix Spike Dup. Grab Water Sample

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

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Volatiles				
5385	Chloromethane	19.	3.	ug/l
5387	Bromomethane	13.	3.	ug/l
5386	Vinyl Chloride	21.	2.	ug/l
5388	Chloroethane	19.	3.	ug/l
5391	Methylene Chloride	22.	2.	ug/l
6302	Acetone	160.	6.	ug/l
6303	Carbon Disulfide	20.	3.	ug/l
5390	1,1-Dichloroethane	23.	1.	ug/l
5393	1,1-Dichloroethane	22.	2.	ug/l
5396	Chloroform	23.	1.	ug/l
5402	1,2-Dichloroethane	24.	2.	ug/l
6305	2-Butanone	160.	3.	ug/l
5398	1,1,1-Trichloroethane	24.	1.	ug/l
5399	Carbon Tetrachloride	24.	1.	ug/l
5406	Bromodichloromethane	23.	1.	ug/l
5421	1,1,2,2-Tetrachloroethane	21.	2.	ug/l
5404	1,2-Dichloropropane	22.	1.	ug/l
6306	trans-1,3-Dichloropropene	22.	1.	ug/l
5403	Trichloroethene	22.	1.	ug/l
5411	Dibromochloromethane	23.	2.	ug/l
5408	1,1,2-Trichloroethane	22.	2.	ug/l
5401	Benzene	21.	1.	ug/l
6307	cis-1,3-Dichloropropene	22.	1.	ug/l
5419	Bromoform	24.	1.	ug/l
6308	4-Methyl-2-pentanone	100.	5.	ug/l
6309	2-Hexanone	98.	7.	ug/l
5409	Tetrachloroethene	25.	1.	ug/l
5407	Toluene	22.	2.	ug/l
5413	Chlorobenzene	22.	1.	ug/l
5415	Ethylbenzene	22.	2.	ug/l
5418	Styrene	22.	1.	ug/l
6310	Xylene (Total)	67.	1.	ug/l
5392	trans-1,2-Dichloroethene *	23.	2.	ug/l
5395	cis-1,2-Dichloroethene	22.	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





LLI Sample No. WW 2946091

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
 Rel.


GEO-20-GW Matrix Spike Dup. Grab Water Sample

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

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	40.	1.	ug/l
3936	bis (2-chloroethyl) ether	71.	1.	ug/l
3924	2-chlorophenol	78.	1.	ug/l
3937	1,3-dichlorobenzene	68.	1.	ug/l
3938	1,4-dichlorobenzene	68.	1.	ug/l
3939	1,2-dichlorobenzene	70.	1.	ug/l
4680	2-methylphenol	72.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	74.	2.	ug/l
4682	4-methylphenol	69.	3.	ug/l
3942	N-nitrosodi-n-propylamine	81.	1.	ug/l
3941	hexachloroethane	61.	1.	ug/l
3943	nitrobenzene	75.	1.	ug/l
3944	isophorone	82.	1.	ug/l
3926	2-nitrophenol	82.	1.	ug/l
3927	2,4-dimethylphenol	76.	1.	ug/l
3945	bis (2-chloroethoxy) methane	76.	1.	ug/l
3928	2,4-dichlorophenol	81.	1.	ug/l
3946	1,2,4-trichlorobenzene	68.	1.	ug/l
3947	naphthalene	66.	1.	ug/l
3871	4-chloroaniline	74.	1.	ug/l
3948	hexachlorobutadiene	65.	2.	ug/l
3929	4-chloro-3-methylphenol	83.	1.	ug/l
3905	2-methylnaphthalene	68.	1.	ug/l
3949	hexachlorocyclopentadiene	120.	5.	ug/l
3930	2,4,6-trichlorophenol	86.	2.	ug/l
3922	2,4,5-trichlorophenol	88.	2.	ug/l
3950	2-chloronaphthalene	73.	1.	ug/l
3907	2-nitroaniline	69.	2.	ug/l
3952	dimethyl phthalate	68.	2.	ug/l
3951	acenaphthylene	70.	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

MEMBER

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2215 11/98 010





LLI Sample No. WW 2946091

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

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

Discard: 8/ 3/98

GEO-20-GW Matrix Spike Dup. Grab Water Sample

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

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

P.O. GULF STATES CREOSOT
Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	68.	2.	ug/l
3954	acenaphthene	71.	1.	ug/l
3931	2,4-dinitrophenol	86.	15.	ug/l
3932	4-nitrophenol	48.	J 10.	ug/l
3879	dibenzofuran	74.	1.	ug/l
3955	2,4-dinitrotoluene	87.	1.	ug/l
3953	2,6-dinitrotoluene	86.	2.	ug/l
3958	diethyl phthalate	78.	2.	ug/l
3957	4-chlorophenyl phenyl ether	80.	1.	ug/l
3956	fluorene	78.	1.	ug/l
3909	4-nitroaniline	78.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	83.	5.	ug/l
3960	N-nitrosodiphenylamine	79.	1.	ug/l
3961	4-bromophenyl phenyl ether	82.	2.	ug/l
3962	hexachlorobenzene	88.	2.	ug/l
3934	pentachlorophenol	89.	3.	ug/l
3963	phenanthrene	78.	1.	ug/l
3964	anthracene	80.	1.	ug/l
4684	carbazole	80.	1.	ug/l
3965	di-n-butyl phthalate	81.	2.	ug/l
3966	fluoranthene	81.	1.	ug/l
3967	pyrene	82.	1.	ug/l
3969	butyl benzyl phthalate	78.	2.	ug/l
3972	3,3'-dichlorobenzidine	67.	2.	ug/l
3970	benzo (a) anthracene	81.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	74.	2.	ug/l
3971	chrysene	78.	1.	ug/l
3974	di-n-octyl phthalate	84.	2.	ug/l
3975	benzo (b) fluoranthene	78.	1.	ug/l
3976	benzo (k) fluoranthene	84.	1.	ug/l
3977	benzo (a) pyrene	82.	1.	ug/l
3978	indeno (1,2,3-cd) pyrene	80.	1.	ug/l
3979	dibenz (a,h) anthracene	81.	1.	ug/l
3980	benzo (ghi) perylene	79.	1.	ug/l

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



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





LLI Sample No. WW 2946091

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

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

Discard: 8/ 3/98

GEO-20-GW Matrix Spike Dup. Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

GW20- SDG#: HMS03-17MSD

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	
		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. Butylbenzylphthalate was detected in the method blank at a concentration of 5. ug/l. The blank value was not subtracted from the analytical result.

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 SVOA





LLI Sample No. WW 2946091

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

Submitted: 06/13/98

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

GEO-20-GW Matrix Spike Dup. Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS

GW20- SDG#: HMS03-17MSD

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
6291	TCL Volatiles	SW-846 8260B	1	06/24/98 0135	Joe 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 0826	Phillip R. Esbshade
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/23/98 0826	Phillip R. Esbshade



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LLI Sample No. 2946091
 GEO-20-GW Matrix Spike Dup. 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: 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
5393	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	1,1,1,2-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	1,1,1,2-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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02 05 1998 11:11





LLI Sample No. 2946091
 GEO-20-GW Matrix Spike Dup. 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
6310	Xylene (Total)										
	1. ug/l	N.D.		113	112	1	110			57	138
5392	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



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 717-656-2300 Fax 717-656-2681

See reverse side for explanation of symbols and abbreviations.

2215 7/17/01





LLI Sample No. 2946091
 GEO-20-GW Matrix Spike Dup. 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										
	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
3929	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



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

02/98 Rev. 9/01/07





LLI Sample No. 2946091
 GEO-20-GW Matrix Spike Dup. 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
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
3962	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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See reverse side for explanation of symbols and abbreviations.

LLI 10-10-11





LLI Sample No. 2946091
 GEO-20-GW Matrix Spike Dup. 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



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2312 11/11/11





LLI Sample No. 2946091
GEO-20-GW Matrix Spike Dup. Grab Water Sample
Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

TRIAL ID	SURROGATE	SUMMARY	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	57	7	74
	Pheno1-d6	39	25	88
	2,4,6-TBP	103	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	89	47	114
	2-Fbiphny1	86	51	106
	Tphenyld14	87	37	119
6291 TCL Volatiles	DBFM	108	86	118
	d4-1,2-DCA	98	80	120
	d8-toluene	100	88	110
	4-BFB	103	86	115



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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

P.O. GULF STATES CREOSOT
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		DETECTION LIMIT UNITS
		RESULTS	METHOD	
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 ATTN: Garet Van de Steeg, PhD
1 COPY TO Michael Pisani & Associates ATTN: Mr. David Upthegrove
1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:33:58 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 2946092

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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

P.O. GULF STATES CREOSOT
Rel.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	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)	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



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

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

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

P.O. GULF STATES CREOSOT
 Re1.

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	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. Nestlund, B.S.
 Group Leader, GC/MS SVOA

MEMBER

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2010 04 14 11:07





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

P.O. GULF STATES CREOSOT
 Rel.

AS RECEIVED

CAT NO.	ANALYSIS NAME	METHOD		
		RESULTS	DETECTION LIMIT	UNITS
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
3934	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
 Kay G. Hower at (717) 656-2300

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



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07/16/98 10:01 AM





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

P.O. GULF STATES CREOSOT
ReI.

AS RECEIVED

METHOD

CAT

NO. ANALYSIS NAME

RESULTS

DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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

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

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



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2011-09-01 11:01





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	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
6291	TCL Volatiles	SW-846 8260B	1	06/24/98 0943	Joe1 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. Esbshade
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/26/98 2233	Phillip R. Esbshade



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2015-06-15 14:27





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	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
5390	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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3215 04/11/01





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	LCS 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
5392	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



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2210 11/13/07





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	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										
	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
3929	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



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2215 04/15





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	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										
	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
3962	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	N.D.		85	78	8	71	71	0	48	105
3972	3,3'-dichlorobenzidine	5. J ug/l									
	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	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



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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

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS	
			LOW	HIGH
4678 TCL Semivolatiles	2-Flpheno1	54	7	74
	Pheno1-d6	37	25	88
	2,4,6-TBP	108	34	125
4679 TCL Semivolatiles cont'd	Nitrobz-d5	96	47	114
	2-Fbiphny1	91	51	106
	Tphenyl14	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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2216 2000 4 21





LLI Sample No. ww 2946093

Collected: 6/11/98 at 15:42 by DU

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

Discard: 8/ 3/98

RB/6-11-98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB611 SDG#: HMS03-19RB

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

P.O. GULF STATES CREOSOT
ReI.

CAT NO.	ANALYSIS NAME	AS RECEIVED	
		RESULTS	METHOD 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
20:35:42 D 0003 10 129915 619183
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA





LLI Sample No. WW 2946093

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RB611 SDG#: HMS03-19RB

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		
		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) 656-2300



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





LLI Sample No. **WW 2946093**

Collected: 6/11/98 at 15:42 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.

RB/6-11-98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
 RB611 SDG#: HMS03-19RB

CAT NO.	ANALYSIS NAME	AS RECEIVED		
		RESULTS	METHOD	DETECTION LIMIT UNITS
TCL Semivolatiles				
3925	phenol	N.D.	1.	ug/l
3936	bis (2-chloroethyl) ether	N.D.	1.	ug/l
3924	2-chlorophenol	N.D.	1.	ug/l
3937	1,3-dichlorobenzene	N.D.	1.	ug/l
3938	1,4-dichlorobenzene	N.D.	1.	ug/l
3939	1,2-dichlorobenzene	N.D.	1.	ug/l
4680	2-methylphenol	N.D.	1.	ug/l
4681	2,2'oxybis (1-chloropropane)	N.D.	2.	ug/l
4682	4-methylphenol	N.D.	3.	ug/l
3942	N-nitrosodi-n-propylamine	N.D.	1.	ug/l
3941	hexachloroethane	N.D.	1.	ug/l
3943	nitrobenzene	N.D.	1.	ug/l
3944	isophorone	N.D.	1.	ug/l
3926	2-nitrophenol	N.D.	1.	ug/l
3927	2,4-dimethylphenol	N.D.	1.	ug/l
3945	bis (2-chloroethoxy) methane	N.D.	1.	ug/l
3928	2,4-dichlorophenol	N.D.	1.	ug/l
3946	1,2,4-trichlorobenzene	N.D.	1.	ug/l
3947	naphthalene	N.D.	1.	ug/l
3871	4-chloroaniline	N.D.	1.	ug/l
3948	hexachlorobutadiene	N.D.	2.	ug/l
3929	4-chloro-3-methylphenol	N.D.	1.	ug/l
3905	2-methylnaphthalene	N.D.	1.	ug/l
3949	hexachlorocyclopentadiene	N.D.	5.	ug/l
3930	2,4,6-trichlorophenol	N.D.	2.	ug/l
3922	2,4,5-trichlorophenol	N.D.	2.	ug/l
3950	2-chloronaphthalene	N.D.	1.	ug/l
3907	2-nitroaniline	N.D.	2.	ug/l
3952	dimethyl phthalate	N.D.	2.	ug/l
3951	acenaphthylene	N.D.	1.	ug/l

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



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





LLI Sample No. WW 2946093

Collected: 6/11/98 at 15:42 by DU

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

Discard: 8/ 3/98

RB/6-11-98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB611 SDG#: HMS03-19RB

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		
		RESULTS	METHOD DETECTION LIMIT	UNITS
TCL Semivolatiles cont'd				
3908	3-nitroaniline	N.D.	2.	ug/l
3954	acenaphthene	N.D.	1.	ug/l
3931	2,4-dinitrophenol	N.D.	15.	ug/l
3932	4-nitrophenol	N.D.	10.	ug/l
3879	dibenzofuran	N.D.	1.	ug/l
3955	2,4-dinitrotoluene	N.D.	1.	ug/l
3953	2,6-dinitrotoluene	N.D.	2.	ug/l
3958	diethyl phthalate	N.D.	2.	ug/l
3957	4-chlorophenyl phenyl ether	N.D.	1.	ug/l
3956	fluorene	N.D.	1.	ug/l
3909	4-nitroaniline	N.D.	2.	ug/l
3933	4,6-dinitro-2-methylphenol	N.D.	5.	ug/l
3960	N-nitrosodiphenylamine	N.D.	1.	ug/l
3961	4-bromophenyl phenyl ether	N.D.	2.	ug/l
3962	hexachlorobenzene	N.D.	2.	ug/l
3934	pentachlorophenol	N.D.	3.	ug/l
3963	phenanthrene	N.D.	1.	ug/l
3964	anthracene	N.D.	1.	ug/l
4684	carbazole	N.D.	1.	ug/l
3965	di-n-butyl phthalate	N.D.	2.	ug/l
3966	fluoranthene	N.D.	1.	ug/l
3967	pyrene	N.D.	1.	ug/l
3969	butyl benzyl phthalate	N.D.	2.	ug/l
3972	3,3'-dichlorobenzidine	N.D.	2.	ug/l
3970	benzo (a) anthracene	N.D.	1.	ug/l
3973	bis (2-ethylhexyl) phthalate	N.D.	2.	ug/l
3971	chrysene	N.D.	1.	ug/l
3974	di-n-octyl phthalate	N.D.	2.	ug/l
3975	benzo (b) fluoranthene	N.D.	1.	ug/l
3976	benzo (k) fluoranthene	N.D.	1.	ug/l
3977	benzo (a) pyrene	N.D.	1.	ug/l
3978	indeno (1,2,3-cd) pyrene	N.D.	1.	ug/l
3979	dibenz (a,h) anthracene	N.D.	1.	ug/l
3980	benzo (ghi) perylene	N.D.	1.	ug/l

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



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





LLI Sample No. WW 2946093

Collected: 6/11/98 at 15:42 by DU

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

Discard: 8/ 3/98

RB/6-11-98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB611 SDG#: HMS03-19RB

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

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Re1.

CAT
NO. ANALYSIS NAME

AS RECEIVED
METHOD
RESULTS DETECTION LIMIT UNITS

TCL Semivolatiles cont'd

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

Questions? Contact your Client Services Representative
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 2946093

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Submitted: 06/13/98

RB/6-11-98 Rinseate Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
RB611 SDG#: HMS03-19RB

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

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
6291	TCL Volatiles	SW-846 8260B	1	06/24/98 1017	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 2325	Phillip R. Esbenshade
4679	TCL Semivolatiles cont'd	SW-846 8270C	1	06/26/98 2325	Phillip R. Esbenshade



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See reverse side for explanation of symbols and abbreviations.

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LLI Sample No. 2946093
 RB/6-11-98 Rinseate Blank 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										
	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
5393	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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LLI Sample No. 2946093
 RB/6-11-98 Rinseate Blank 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
6310	Xylene (Total)										
	1. ug/l	N.D.		113	112	1	110			57	138
5392	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



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LLI Sample No. 2946093
 RB/6-11-98 Rinseate Blank 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										
	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
3929	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. 2946093
 RB/6-11-98 Rinseate Blank 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
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
3962	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. 2946093
 RB/6-11-98 Rinseate Blank 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



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LLI Sample No. 2946093
 RB/6-11-98 Rinseate Blank 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-F1pheno1	45	7	74
		Pheno1-d6	31	25	88
		2,4,6-TBP	74	34	125
4679 TCL Semivolatiles cont'd		Nitrobz-d5	74	47	114
		2-Fbiphny1	78	51	106
		Tphenyld14	75	37	119
6291 TCL Volatiles		DBFM	112	86	118
		d4-1,2-DCA	96	80	120
		d8-toTuene	92	88	110
		4-BFB	97	86	115



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LLI Sample No. **WW 2946094**

Collected: 6/11/98 by DU

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

Discard: 8/ 3/98

TB/6-11-98 Trip Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
TB611 SDG#: HMS03-20TB*

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

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 Uptegrove

Questions? Contact your Client Services Representative
Kay G. Hower at (717) 656-2300
20:37:26 D 0003 10 129915 619183
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Respectfully Submitted
Charles J. Neslund, B.S.
Group Leader, GC/MS SVOA



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LLI Sample No. **WW 2946094**
 Collected: 6/11/98 by DU

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

TB/6-11-98 Trip Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
 TB611 SDG#: HMS03-20TB*

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		
		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-Dichloroethane	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





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LABORATORY CHRONICLE

Page: 3 of 6

LLI Sample No. WW 2946094

Collected: 06/11/98 by DU

Submitted: 06/13/98

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

TB/6-11-98 Trip Blank Grab Water Sample

Gulf States Creosoting - Hattiesburg, MS
TB611 SDG#: HMS03-20TB*

CAT NO	ANALYSIS NAME	METHOD	ANALYSIS		ANALYST
			TRIAL ID	DATE AND TIME	
6291	TCL Volatiles	SW-846 8260B	1	06/24/98 1051	Joe1 R. Nace



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LLI Sample No. 2946094
 TB/6-11-98 Trip Blank 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										
	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
5393	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	1,1,1,2,2-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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See reverse side for explanation of symbols and abbreviations

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LLI Sample No. **2946094**
 TB/6-11-98 Trip Blank 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
6310	Xylene (Total)										
	1. ug/l	N.D.		113	112	1	110			57	138
5392	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



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2275 11/15/98



LLI Sample No. 2946094
TB/6-11-98 Trip Blank Grab Water Sample
Gulf States Creosoting - Hattiesburg, MS

Group No. 619183
Kerr-McGee Corporation

	SURROGATE SUMMARY		SURROGATE LIMITS	
	TRIAL ID	SURROGATE	RECOVERY %	LOW HIGH
6291 TCL Volatiles		DBFM	113	86 118
		d4-1,2-DCA	93	80 120
		d8-toluene	91	88 110
		4-BFB	98	86 115



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2215-1047-610-01

