EPA METHOD 8270 (Semivolatile Organics)

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB3SD01(01)	LAL Sample ID:	L8849-2
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	26.33	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	66%	15-111
Phenol-d5	85%	21-110
Nitrobenzene-d5	72%	17-114
2-Fluorobiphenyl	94%	29-114
2,4,6-Tribromophenol	84%	33-136
Terphenyl-d14	117%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<900	900	
bis(2-Chloroethyl)ether	111-44-4	<900	900	
2-Chlorophenol	95-57-8	<900	900	
1,3-Dichlorobenzene	541-73-1	<900	900	
1,4-Dichlorobenzene	106-46-7	<900	900	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<900	900	
2-Methylphenol	95-48-7	<900	900	
bis(2-chloroisopropyl)ether	108-60-1	<900	900	
4-Methylphenol	106-44-5	<900	900	
N-Nitroso-di-n-propylamine	621-64-7	<900	900	
Hexachloroethane	67-72-1	<900	900	
Nitrobenzene	98-95-3	<900	900	
Isophorone	78-59-1	<900	900	
2-Nitrophenol	88-75-5	<900	900	
2,4-Dimethylphenol	105-67-9	<900	900	
Benzoic acid	65-85-0	<4500	4500	
bis(2-Chloroethoxy)methane	111-91-1	<900	900	
2,4-Dichlorophenol	120-83-2	<900	900	
1,2,4-Trichlorobenzene	120-82-1	<900	900	
Naphthalene	91-20-3	<900	900	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<900	900	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<900	900	
Hexachlorocyclopentadiene	77-47-4	<900	900	
2,4,6-Trichlorophenol	88-06-2	<900	900	
2,4,5-Trichlorophenol	95-95-4	<900	900	
2-Chloronaphthalene	91-58-7	<900	900	
2-Nitroaniline	88-74-4	<4500	4500	
Dimethylphthalate	131-11-3	<900	900	
Acenaphthylene	208-96-8	<900	900	
2,6-Dinitrotoluene	606-20-2	<900	900	
3-Nitroaniline	99-09-2	<4500	4500	
Acenaphthene	83-32-9	<900	900	
2,4-Dinitrophenol	51-28-5	<4500	4500	
4-Nitrophenol	100-02-7	<4500	4500	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB3SD01(01)	LAL Sample ID:	L8849-2
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	26.33	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s
Dibenzofuran	132-64-9	<900	900	
2,4-Dinitrotoluene	121-14-2	<900	900	
Diethylphthalate	84-66-2	<900	900	
4-Chlorophenyl-phenylether	7005-72-3	<900	900	
Fluorene	86-73-7	<900	900	
4-Nitroaniline	100-01-6	<4500	4500	
4,6-Dinitro-2-methylphenol	534-52-1	<4500	4500	
N-Nitrosodiphenylamine (1)	86-30-6	<900	900	
4-Bromophenyl-phenylether	101-55-3	<900	900	
Hexachlorobenzene	118-74-1	<900	900	
Pentachlorophenol	87-86-5	<4500	4500	
Phenanthrene	85-01-8	<900	900	
Anthracene	120-12-7	<900	900	
Carbazole	86-74-8	<900	900	
Di-n-butylphthalate	84-74-2	<900	900	
Fluoranthene	206-44-0	<900	900	
Pyrene	129-00-0	<900	900	
Butylbenzylphthalate	85-68-7	<900	900	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<900	900	
Chrysene	218-01-9	<900	900	
bis(2-Ethylhexyl)phthalate	117-81-7	<900	900	
Di-n-octylphthalate	117-84-0	<900	900	
Benzo(b)fluoranthene	205-99-2	<900	900	
Benzo(k)fluoranthene	207-08-9	<900	900	
Benzo(a)pyrene	50-32-8	<900	900	
Indeno(1,2,3-cd)pyrene	193-39-5	<900	900	
Dibenz(a,h)anthracene	53-70-3	<900	900	
Benzo(g,h,i)perylene	191-24-2	<900	900	

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SEMI-VOLATILE ORGANICS BY GC/MS
J270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB3SD02(08)	LAL Sample ID:	L8849-6
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	18.83	Preparation Dilution:	0.997

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	64%	15-111
Phenol-d5	80%	21-110
Nitrobenzene-d5	73%	17-114
2-Fluorobiphenyl	95%	29-114
2,4,6-Tribromophenol	90%	33-136
Terphenyl-d14	119%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<810	810	
bis(2-Chloroethyl)ether	111-44-4	<810	810	
2-Chlorophenol	95-57-8	<810	810	
1,3-Dichlorobenzene	541-73-1	<810	810	
1,4-Dichlorobenzene	106-46-7	<810	810	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<810	810	
2-Methylphenol	95-48-7	<810	810	
bis(2-chloroisopropyl)ether	108-60-1	<810	810	
4-Methylphenol	106-44-5	<810	810	
N-Nitroso-di-n-propylamine	621-64-7	<810	810	
Hexachloroethane	67-72-1	<810	810	
Nitrobenzene	98-95-3	<810	810	
Isophorone	78-59-1	<810	810	
2-Nitrophenol	88-75-5	<810	810	
2,4-Dimethylphenol	105-67-9	<810	810	
Benzoic acid	65-85-0	<4100	4100	
bis(2-Chloroethoxy)methane	111-91-1	<810	810	
2,4-Dichlorophenol	120-83-2	<810	810	
1,2,4-Trichlorobenzene	120-82-1	<810	810	
Naphthalene	91-20-3	<810	810	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<810	810	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<810	810	
Hexachlorocyclopentadiene	77-47-4	<810	810	
2,4,6-Trichlorophenol	88-06-2	<810	810	
2,4,5-Trichlorophenol	95-95-4	<810	810	
2-Chloronaphthalene	91-58-7	<810	810	
2-Nitroaniline	88-74-4	<4100	4100	
Dimethylphthalate	131-11-3	<810	810	
Acenaphthylene	208-96-8	<810	810	
2,6-Dinitrotoluene	606-20-2	<810	810	
3-Nitroaniline	99-09-2	<4100	4100	
Acenaphthene	83-32-9	<810	810	
2,4-Dinitrophenol	51-28-5	<4100	4100	
4-Nitrophenol	100-02-7	<4100	4100	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB3SD02(08)	LAL Sample ID:	L8849-6
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	18.83	Preparation Dilution:	0.997

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<810	810	
2,4-Dinitrotoluene	121-14-2	<810	810	
Diethylphthalate	84-66-2	<810	810	
4-Chlorophenyl-phenylether	7005-72-3	<810	810	
Fluorene	86-73-7	<810	810	
4-Nitroaniline	100-01-6	<4100	4100	
4,6-Dinitro-2-methylphenol	534-52-1	<4100	4100	
N-Nitrosodiphenylamine (1)	86-30-6	<810	810	
4-Bromophenyl-phenylether	101-55-3	<810	810	
Hexachlorobenzene	118-74-1	<810	810	
Pentachlorophenol	87-86-5	<4100	4100	
Phenanthrene	85-01-8	<810	810	
Anthracene	120-12-7	<810	810	
Carbazole	86-74-8	<810	810	
Di-n-butylphthalate	84-74-2	<810	810	
Fluoranthene	206-44-0	<810	810	
Pyrene	129-00-0	<810	810	
Butylbenzylphthalate	85-68-7	<810	810	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<810	810	
Chrysene	218-01-9	<810	810	
bis(2-Ethylhexyl)phthalate	117-81-7	<810	810	
Di-n-octylphthalate	117-84-0	<810	810	
Benzo(b)fluoranthene	205-99-2	<810	810	
Benzo(k)fluoranthene	207-08-9	<810	810	
Benzo(a)pyrene	50-32-8	<810	810	
Indeno(1,2,3-cd)pyrene	193-39-5	<810	810	
Dibenz(a,h)anthracene	53-70-3	<810	810	
Benzo(g,h,i)perylene	191-24-2	<810	810	

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SEMI-VOLATILE ORGANICS BY GC/MS
3270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB6SD01(01)	LAL Sample ID:	L8849-10
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	32.2	Preparation Dilution:	0.994

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	65%	15-111
Phenol-d5	80%	21-110
Nitrobenzene-d5	70%	17-114
2-Fluorobiphenyl	94%	29-114
2,4,6-Tribromophenol	81%	33-136
Terphenyl-d14	100%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<970	970	
bis(2-Chloroethyl)ether	111-44-4	<970	970	
2-Chlorophenol	95-57-8	<970	970	
1,3-Dichlorobenzene	541-73-1	<970	970	
1,4-Dichlorobenzene	106-46-7	<970	970	
Benzyl alcohol	100-51-6	<1900	1900	
1,2-Dichlorobenzene	95-50-1	<970	970	
2-Methylphenol	95-48-7	<970	970	
bis(2-chloroisopropyl)ether	108-60-1	<970	970	
4-Methylphenol	106-44-5	<970	970	
N-Nitroso-di-n-propylamine	621-64-7	<970	970	
Hexachloroethane	67-72-1	<970	970	
Nitrobenzene	98-95-3	<970	970	
Isophorone	78-59-1	<970	970	
2-Nitrophenol	88-75-5	<970	970	
2,4-Dimethylphenol	105-67-9	<970	970	
Benzoic acid	65-85-0	<4900	4900	
bis(2-Chloroethoxy)methane	111-91-1	<970	970	
2,4-Dichlorophenol	120-83-2	<970	970	
1,2,4-Trichlorobenzene	120-82-1	<970	970	
Naphthalene	91-20-3	<970	970	
4-Chloroaniline	106-47-8	<1900	1900	
Hexachlorobutadiene	87-68-3	<970	970	
4-Chloro-3-methylphenol	59-50-7	<1900	1900	
2-Methylnaphthalene	91-57-6	<970	970	
Hexachlorocyclopentadiene	77-47-4	<970	970	
2,4,6-Trichlorophenol	88-06-2	<970	970	
2,4,5-Trichlorophenol	95-95-4	<970	970	
2-Chloronaphthalene	91-58-7	<970	970	
2-Nitroaniline	88-74-4	<4900	4900	
Dimethylphthalate	131-11-3	<970	970	
Acenaphthylene	208-96-8	<970	970	
2,6-Dinitrotoluene	606-20-2	<970	970	
3-Nitroaniline	99-09-2	<4900	4900	
Acenaphthene	83-32-9	<970	970	
2,4-Dinitrophenol	51-28-5	<4900	4900	
4-Nitrophenol	100-02-7	<4900	4900	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB6SD01(01)	LAL Sample ID:	L8849-10
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	32.2	Preparation Dilution:	0.994

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<970	970	
2,4-Dinitrotoluene	121-14-2	<970	970	
Diethylphthalate	84-66-2	<970	970	
4-Chlorophenyl-phenylether	7005-72-3	<970	970	
Fluorene	86-73-7	<970	970	
4-Nitroaniline	100-01-6	<4900	4900	
4,6-Dinitro-2-methylphenol	534-52-1	<4900	4900	
N-Nitrosodiphenylamine (1)	86-30-6	<970	970	
4-Bromophenyl-phenylether	101-55-3	<970	970	
Hexachlorobenzene	118-74-1	<970	970	
Pentachlorophenol	87-86-5	<4900	4900	
Phenanthrene	85-01-8	<970	970	
Anthracene	120-12-7	<970	970	
Carbazole	86-74-8	<970	970	
Di-n-butylphthalate	84-74-2	<970	970	
Fluoranthene	206-44-0	<970	970	
Pyrene	129-00-0	<970	970	
Butylbenzylphthalate	85-68-7	<970	970	
3,3'-Dichlorobenzidine	91-94-1	<1900	1900	
Benzo(a)anthracene	56-55-3	<970	970	
Chrysene	218-01-9	<970	970	
bis(2-Ethylhexyl)phthalate	117-81-7	<970	970	
Di-n-octylphthalate	117-84-0	<970	970	
Benzo(b)fluoranthene	205-99-2	<970	970	
Benzo(k)fluoranthene	207-08-9	<970	970	
Benzo(a)pyrene	50-32-8	<970	970	
Indeno(1,2,3-cd)pyrene	193-39-5	<970	970	
Dibenz(a,h)anthracene	53-70-3	<970	970	
Benzo(g,h,i)perylene	191-24-2	<970	970	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
70 SEMI-VOLATILES

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	L8849-14
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	22.03	Preparation Dilution:	0.993

SURROGATE	%RECOVERY	QC Limits
2-Fluorophenol	65%	15-111
Phenol-d5	79%	21-110
Nitrobenzene-d5	74%	17-114
2-Fluorobiphenyl	94%	29-114
2,4,6-Tribromophenol	86%	33-136
Terphenyl-d14	104%	32-151

CONSTITUENT	CAS NO	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<840	840	
bis(2-Chloroethyl)ether	111-44-4	<840	840	
2-Chlorophenol	95-57-8	<840	840	
1,3-Dichlorobenzene	541-73-1	<840	840	
1,4-Dichlorobenzene	106-46-7	<840	840	
Benzyl alcohol	100-51-6	<1700	1700	
1,2-Dichlorobenzene	95-50-1	<840	840	
2-Methylphenol	95-48-7	<840	840	
bis(2-chloroisopropyl)ether	108-60-1	<840	840	
4-Methylphenol	106-44-5	<840	840	
N-Nitroso-di-n-propylamine	621-64-7	<840	840	
Hexachloroethane	67-72-1	<840	840	
Nitrobenzene	98-95-3	<840	840	
Isophorone	78-59-1	<840	840	
2-Nitrophenol	88-75-5	<840	840	
2,4-Dimethylphenol	105-67-9	<840	840	
Benzoic acid	65-85-0	<4200	4200	
bis(2-Chloroethoxy)methane	111-91-1	<840	840	
2,4-Dichlorophenol	120-83-2	<840	840	
1,2,4-Trichlorobenzene	120-82-1	<840	840	
Naphthalene	91-20-3	<840	840	
4-Chloroaniline	106-47-8	<1700	1700	
Hexachlorobutadiene	87-68-3	<840	840	
4-Chloro-3-methylphenol	59-50-7	<1700	1700	
2-Methylnaphthalene	91-57-6	<840	840	
Hexachlorocyclopentadiene	77-47-4	<840	840	
2,4,6-Trichlorophenol	88-06-2	<840	840	
2,4,5-Trichlorophenol	95-95-4	<840	840	
2-Chloronaphthalene	91-58-7	<840	840	
2-Nitroaniline	88-74-4	<4200	4200	
Dimethylphthalate	131-11-3	<840	840	
Acenaphthylene	208-96-8	<840	840	
2,6-Dinitrotoluene	606-20-2	<840	840	
3-Nitroaniline	99-09-2	<4200	4200	
Acenaphthene	83-32-9	<840	840	
2,4-Dinitrophenol	51-28-5	<4200	4200	
4-Nitrophenol	100-02-7	<4200	4200	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	L8849-14
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	22.03	Preparation Dilution:	0.993

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<840	840	
2,4-Dinitrotoluene	121-14-2	<840	840	
Diethylphthalate	84-66-2	<840	840	
4-Chlorophenyl-phenylether	7005-72-3	<840	840	
Fluorene	86-73-7	<840	840	
4-Nitroaniline	100-01-6	<4200	4200	
4,6-Dinitro-2-methylphenol	534-52-1	<4200	4200	
N-Nitrosodiphenylamine (1)	86-30-6	<840	840	
4-Bromophenyl-phenylether	101-55-3	<840	840	
Hexachlorobenzene	118-74-1	<840	840	
Pentachlorophenol	87-86-5	<4200	4200	
Phenanthrene	85-01-8	<840	840	
Anthracene	120-12-7	<840	840	
Carbazole	86-74-8	<840	840	
Di-n-butylphthalate	84-74-2	<840	840	
Fluoranthene	206-44-0	<840	840	
Pyrene	129-00-0	<840	840	
Butylbenzylphthalate	85-68-7	<840	840	
3,3'-Dichlorobenzidine	91-94-1	<1700	1700	
Benzo(a)anthracene	56-55-3	<840	840	
Chrysene	218-01-9	<840	840	
bis(2-Ethylhexyl)phthalate	117-81-7	<840	840	
Di-n-octylphthalate	117-84-0	<840	840	
Benzo(b)fluoranthene	205-99-2	<840	840	
Benzo(k)fluoranthene	207-08-9	<840	840	
Benzo(a)pyrene	50-32-8	<840	840	
Indeno(1,2,3-cd)pyrene	193-39-5	<840	840	
Dibenz(a,h)anthracene	53-70-3	<840	840	
Benzo(g,h,i)perylene	191-24-2	<840	840	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
70 SEMI-VOLATILES

Client Sample ID:	97BPXLIB10SD01(01)	LAL Sample ID:	L8849-18
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	20.06	Preparation Dilution:	0.995

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	66%	15-111
Phenol-d5	76%	21-110
Nitrobenzene-d5	91%	17-114
2-Fluorobiphenyl	97%	29-114
2,4,6-Tribromophenol	88%	33-136
Terphenyl-d14	106%	32-151

CONSTITUENT	CAS NO	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<830	830	
bis(2-Chloroethyl)ether	111-44-4	<830	830	
2-Chlorophenol	95-57-8	<830	830	
1,3-Dichlorobenzene	541-73-1	<830	830	
1,4-Dichlorobenzene	106-46-7	<830	830	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<830	830	
2-Methylphenol	95-48-7	<830	830	
bis(2-chloroisopropyl)ether	108-60-1	<830	830	
4-Methylphenol	106-44-5	<830	830	
N-Nitroso-di-n-propylamine	621-64-7	<830	830	
Hexachloroethane	67-72-1	<830	830	
Nitrobenzene	98-95-3	<830	830	
Isophorone	78-59-1	<830	830	
2-Nitrophenol	88-75-5	<830	830	
2,4-Dimethylphenol	105-67-9	<830	830	
Benzoic acid	65-85-0	<4100	4100	
bis(2-Chloroethoxy)methane	111-91-1	<830	830	
2,4-Dichlorophenol	120-83-2	<830	830	
1,2,4-Trichlorobenzene	120-82-1	<830	830	
Naphthalene	91-20-3	<830	830	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<830	830	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<830	830	
Hexachlorocyclopentadiene	77-47-4	<830	830	
2,4,6-Trichlorophenol	88-06-2	<830	830	
2,4,5-Trichlorophenol	95-95-4	<830	830	
2-Chloronaphthalene	91-58-7	<830	830	
2-Nitroaniline	88-74-4	<4100	4100	
Dimethylphthalate	131-11-3	<830	830	
Acenaphthylene	208-96-8	<830	830	
2,6-Dinitrotoluene	606-20-2	<830	830	
3-Nitroaniline	99-09-2	<4100	4100	
Acenaphthene	83-32-9	<830	830	
2,4-Dinitrophenol	51-28-5	<4100	4100	
4-Nitrophenol	100-02-7	<4100	4100	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB10SD01(01)	LAL Sample ID:	L8849-18
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	20.06	Preparation Dilution:	0.995

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<830	830	
2,4-Dinitrotoluene	121-14-2	<830	830	
Diethylphthalate	84-66-2	<830	830	
4-Chlorophenyl-phenylether	7005-72-3	<830	830	
Fluorene	86-73-7	<830	830	
4-Nitroaniline	100-01-6	<4100	4100	
4,6-Dinitro-2-methylphenol	534-52-1	<4100	4100	
N-Nitrosodiphenylamine (1)	86-30-6	<830	830	
4-Bromophenyl-phenylether	101-55-3	<830	830	
Hexachlorobenzene	118-74-1	<830	830	
Pentachlorophenol	87-86-5	<4100	4100	
Phenanthrene	85-01-8	<830	830	
Anthracene	120-12-7	<830	830	
Carbazole	86-74-8	<830	830	
Di-n-butylphthalate	84-74-2	<830	830	
Fluoranthene	206-44-0	<830	830	
Pyrene	129-00-0	<830	830	
Butylbenzylphthalate	85-68-7	<830	830	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<830	830	
Chrysene	218-01-9	<830	830	
bis(2-Ethylhexyl)phthalate	117-81-7	<830	830	
Di-n-octylphthalate	117-84-0	<830	830	
Benzo(b)fluoranthene	205-99-2	<830	830	
Benzo(k)fluoranthene	207-08-9	<830	830	
Benzo(a)pyrene	50-32-8	<830	830	
Indeno(1,2,3-cd)pyrene	193-39-5	<830	830	
Dibenz(a,h)anthracene	53-70-3	<830	830	
Benzo(g,h,i)perylene	191-24-2	<830	830	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB10SD02(08)	LAL Sample ID:	L8849-22
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	27.19	Preparation Dilution:	0.996

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	68%	15-111
Phenol-d5	80%	21-110
Nitrobenzene-d5	79%	17-114
2-Fluorobiphenyl	94%	29-114
2,4,6-Tribromophenol	80%	33-136
Terphenyl-d14	108%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<900	900	
bis(2-Chloroethyl)ether	111-44-4	<900	900	
2-Chlorophenol	95-57-8	<900	900	
1,3-Dichlorobenzene	541-73-1	<900	900	
1,4-Dichlorobenzene	106-46-7	<900	900	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<900	900	
2-Methylphenol	95-48-7	<900	900	
bis(2-chloroisopropyl)ether	108-60-1	<900	900	
4-Methylphenol	106-44-5	<900	900	
N-Nitroso-di-n-propylamine	621-64-7	<900	900	
Hexachloroethane	67-72-1	<900	900	
Nitrobenzene	98-95-3	<900	900	
Isophorone	78-59-1	<900	900	
2-Nitrophenol	88-75-5	<900	900	
2,4-Dimethylphenol	105-67-9	<900	900	
Benzoic acid	65-85-0	<4500	4500	
bis(2-Chloroethoxy)methane	111-91-1	<900	900	
2,4-Dichlorophenol	120-83-2	<900	900	
1,2,4-Trichlorobenzene	120-82-1	<900	900	
Naphthalene	91-20-3	<900	900	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<900	900	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<900	900	
Hexachlorocyclopentadiene	77-47-4	<900	900	
2,4,6-Trichlorophenol	88-06-2	<900	900	
2,4,5-Trichlorophenol	95-95-4	<900	900	
2-Chloronaphthalene	91-58-7	<900	900	
2-Nitroaniline	88-74-4	<4500	4500	
Dimethylphthalate	131-11-3	<900	900	
Acenaphthylene	208-96-8	<900	900	
2,6-Dinitrotoluene	606-20-2	<900	900	
3-Nitroaniline	99-09-2	<4500	4500	
Acenaphthene	83-32-9	<900	900	
2,4-Dinitrophenol	51-28-5	<4500	4500	
4-Nitrophenol	100-02-7	<4500	4500	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB10SD02(08)	LAL Sample ID:	L8849-22
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	27.19	Preparation Dilution:	0.996

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<900	900	
2,4-Dinitrotoluene	121-14-2	<900	900	
Diethylphthalate	84-66-2	<900	900	
4-Chlorophenyl-phenylether	7005-72-3	<900	900	
Fluorene	86-73-7	<900	900	
4-Nitroaniline	100-01-6	<4500	4500	
4,6-Dinitro-2-methylphenol	534-52-1	<4500	4500	
N-Nitrosodiphenylamine (1)	86-30-6	<900	900	
4-Bromophenyl-phenylether	101-55-3	<900	900	
Hexachlorobenzene	118-74-1	<900	900	
Pentachlorophenol	87-86-5	<4500	4500	
Phenanthrene	85-01-8	<900	900	
Anthracene	120-12-7	<900	900	
Carbazole	86-74-8	<900	900	
Di-n-butylphthalate	84-74-2	<900	900	
Fluoranthene	206-44-0	<900	900	
Pyrene	129-00-0	<900	900	
Butylbenzylphthalate	85-68-7	<900	900	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<900	900	
Chrysene	218-01-9	<900	900	
bis(2-Ethylhexyl)phthalate	117-81-7	<900	900	
Di-n-octylphthalate	117-84-0	<900	900	
Benzo(b)fluoranthene	205-99-2	<900	900	
Benzo(k)fluoranthene	207-08-9	<900	900	
Benzo(a)pyrene	50-32-8	<900	900	
Indeno(1,2,3-cd)pyrene	193-39-5	<900	900	
Dibenz(a,h)anthracene	53-70-3	<900	900	
Benzo(g,h,i)perylene	191-24-2	<900	900	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
70 SEMI-VOLATILES

Client Sample ID:	97BPXLIB10SD62(08)	LAL Sample ID:	L8849-26
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	26.49	Preparation Dilution:	0.994

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	66%	15-111
Phenol-d5	81%	21-110
Nitrobenzene-d5	72%	17-114
2-Fluorobiphenyl	92%	29-114
2,4,6-Tribromophenol	86%	33-136
Terphenyl-d14	102%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<890	890	
bis(2-Chloroethyl)ether	111-44-4	<890	890	
2-Chlorophenol	95-57-8	<890	890	
1,3-Dichlorobenzene	541-73-1	<890	890	
1,4-Dichlorobenzene	106-46-7	<890	890	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<890	890	
2-Methylphenol	95-48-7	<890	890	
bis(2-chloroisopropyl)ether	108-60-1	<890	890	
4-Methylphenol	106-44-5	<890	890	
N-Nitroso-di-n-propylamine	621-64-7	<890	890	
Hexachloroethane	67-72-1	<890	890	
Nitrobenzene	98-95-3	<890	890	
Isophorone	78-59-1	<890	890	
2-Nitrophenol	88-75-5	<890	890	
2,4-Dimethylphenol	105-67-9	<890	890	
Benzoic acid	65-85-0	<4500	4500	
bis(2-Chloroethoxy)methane	111-91-1	<890	890	
2,4-Dichlorophenol	120-83-2	<890	890	
1,2,4-Trichlorobenzene	120-82-1	<890	890	
Naphthalene	91-20-3	<890	890	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<890	890	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<890	890	
Hexachlorocyclopentadiene	77-47-4	<890	890	
2,4,6-Trichlorophenol	88-06-2	<890	890	
2,4,5-Trichlorophenol	95-95-4	<890	890	
2-Chloronaphthalene	91-58-7	<890	890	
2-Nitroaniline	88-74-4	<4500	4500	
Dimethylphthalate	131-11-3	<890	890	
Acenaphthylene	208-96-8	<890	890	
2,6-Dinitrotoluene	606-20-2	<890	890	
3-Nitroaniline	99-09-2	<4500	4500	
Acenaphthene	83-32-9	<890	890	
2,4-Dinitrophenol	51-28-5	<4500	4500	
4-Nitrophenol	100-02-7	<4500	4500	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB10SD62(08)	LAL Sample ID:	L8849-26
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	26.49	Preparation Dilution:	0.994

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<890	890	
2,4-Dinitrotoluene	121-14-2	<890	890	
Diethylphthalate	84-66-2	<890	890	
4-Chlorophenyl-phenylether	7005-72-3	<890	890	
Fluorene	86-73-7	<890	890	
4-Nitroaniline	100-01-6	<4500	4500	
4,6-Dinitro-2-methylphenol	534-52-1	<4500	4500	
N-Nitrosodiphenylamine (1)	86-30-6	<890	890	
4-Bromophenyl-phenylether	101-55-3	<890	890	
Hexachlorobenzene	118-74-1	<890	890	
Pentachlorophenol	87-86-5	<4500	4500	
Phenanthrene	85-01-8	<890	890	
Anthracene	120-12-7	<890	890	
Carbazole	86-74-8	<890	890	
Di-n-butylphthalate	84-74-2	<890	890	
Fluoranthene	206-44-0	<890	890	
Pyrene	129-00-0	<890	890	
Butylbenzylphthalate	85-68-7	<890	890	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<890	890	
Chrysene	218-01-9	<890	890	
bis(2-Ethylhexyl)phthalate	117-81-7	<890	890	
Di-n-octylphthalate	117-84-0	<890	890	
Benzo(b)fluoranthene	205-99-2	<890	890	
Benzo(k)fluoranthene	207-08-9	<890	890	
Benzo(a)pyrene	50-32-8	<890	890	
Indeno(1,2,3-cd)pyrene	193-39-5	<890	890	
Dibenz(a,h)anthracene	53-70-3	<890	890	
Benzo(g,h,i)perylene	191-24-2	<890	890	

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SEMI-VOLATILE ORGANICS BY GC/MS
3270 SEMI-VOLATILES

Client Sample ID:	97BPXLII1SD01(01)	LAL Sample ID:	L8849-30
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	23.19	Preparation Dilution:	0.996

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	68%	15-111
Phenol-d5	82%	21-110
Nitrobenzene-d5	75%	17-114
2-Fluorobiphenyl	93%	29-114
2,4,6-Tribromophenol	85%	33-136
Terphenyl-d14	101%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<860	860	
bis(2-Chloroethyl)ether	111-44-4	<860	860	
2-Chlorophenol	95-57-8	<860	860	
1,3-Dichlorobenzene	541-73-1	<860	860	
1,4-Dichlorobenzene	106-46-7	<860	860	
Benzyl alcohol	100-51-6	<1700	1700	
1,2-Dichlorobenzene	95-50-1	<860	860	
2-Methylphenol	95-48-7	<860	860	
bis(2-chloroisopropyl)ether	108-60-1	<860	860	
4-Methylphenol	106-44-5	<860	860	
N-Nitroso-di-n-propylamine	621-64-7	<860	860	
Hexachloroethane	67-72-1	<860	860	
Nitrobenzene	98-95-3	<860	860	
Isophorone	78-59-1	<860	860	
2-Nitrophenol	88-75-5	<860	860	
2,4-Dimethylphenol	105-67-9	<860	860	
Benzoic acid	65-85-0	<4300	4300	
bis(2-Chloroethoxy)methane	111-91-1	<860	860	
2,4-Dichlorophenol	120-83-2	<860	860	
1,2,4-Trichlorobenzene	120-82-1	<860	860	
Naphthalene	91-20-3	<860	860	
4-Chloroaniline	106-47-8	<1700	1700	
Hexachlorobutadiene	87-68-3	<860	860	
4-Chloro-3-methylphenol	59-50-7	<1700	1700	
2-Methylnaphthalene	91-57-6	<860	860	
Hexachlorocyclopentadiene	77-47-4	<860	860	
2,4,6-Trichlorophenol	88-06-2	<860	860	
2,4,5-Trichlorophenol	95-95-4	<860	860	
2-Chloronaphthalene	91-58-7	<860	860	
2-Nitroaniline	88-74-4	<4300	4300	
Dimethylphthalate	131-11-3	<860	860	
Acenaphthylene	208-96-8	<860	860	
2,6-Dinitrotoluene	606-20-2	<860	860	
3-Nitroaniline	99-09-2	<4300	4300	
Acenaphthene	83-32-9	<860	860	
2,4-Dinitrophenol	51-28-5	<4300	4300	
4-Nitrophenol	100-02-7	<4300	4300	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLII1SD01(01)	LAL Sample ID:	L8849-30
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	23.19	Preparation Dilution:	0.996

CONSTITUENT	CAS NO	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DAT QUALIFIE
Dibenzofuran	132-64-9	<860	860	
2,4-Dinitrotoluene	121-14-2	<860	860	
Diethylphthalate	84-66-2	<860	860	
4-Chlorophenyl-phenylether	7005-72-3	<860	860	
Fluorene	86-73-7	<860	860	
4-Nitroaniline	100-01-6	<4300	4300	
4,6-Dinitro-2-methylphenol	534-52-1	<4300	4300	
N-Nitrosodiphenylamine (1)	86-30-6	<860	860	
4-Bromophenyl-phenylether	101-55-3	<860	860	
Hexachlorobenzene	118-74-1	<860	860	
Pentachlorophenol	87-86-5	<4300	4300	
Phenanthrene	85-01-8	<860	860	
Anthracene	120-12-7	<860	860	
Carbazole	86-74-8	<860	860	
Di-n-butylphthalate	84-74-2	<860	860	
Fluoranthene	206-44-0	<860	860	
Pyrene	129-00-0	<860	860	
Butylbenzylphthalate	85-68-7	<860	860	
3,3'-Dichlorobenzidine	91-94-1	<1700	1700	
Benzo(a)anthracene	56-55-3	<860	860	
Chrysene	218-01-9	<860	860	
bis(2-Ethylhexyl)phthalate	117-81-7	<860	860	
Di-n-octylphthalate	117-84-0	<860	860	
Benzo(b)fluoranthene	205-99-2	<860	860	
Benzo(k)fluoranthene	207-08-9	<860	860	
Benzo(a)pyrene	50-32-8	<860	860	
Indeno(1,2,3-cd)pyrene	193-39-5	<860	860	
Dibenz(a,h)anthracene	53-70-3	<860	860	
Benzo(g,h,i)perylene	191-24-2	<860	860	

LAS LABORATORIES

:EMI-VOLATILE ORGANICS BY GC/MS
'0 SEMI-VOLATILES

Client Sample ID:	97BPXLII1SD02(08)	LAL Sample ID:	L8849-34
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	21.34	Preparation Dilution:	0.995

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	70%	15-111
Phenol-d5	79%	21-110
Nitrobenzene-d5	87%	17-114
2-Fluorobiphenyl	95%	29-114
2,4,6-Tribromophenol	84%	33-136
Terphenyl-d14	109%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<830	830	
bis(2-Chloroethyl)ether	111-44-4	<830	830	
2-Chlorophenol	95-57-8	<830	830	
1,3-Dichlorobenzene	541-73-1	<830	830	
1,4-Dichlorobenzene	106-46-7	<830	830	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<830	830	
2-Methylphenol	95-48-7	<830	830	
bis(2-chloroisopropyl)ether	108-60-1	<830	830	
4-Methylphenol	106-44-5	<830	830	
N-Nitroso-di-n-propylamine	621-64-7	<830	830	
Hexachloroethane	67-72-1	<830	830	
Nitrobenzene	98-95-3	<830	830	
Isophorone	78-59-1	<830	830	
2-Nitrophenol	88-75-5	<830	830	
2,4-Dimethylphenol	105-67-9	<830	830	
Benzoic acid	65-85-0	<4200	4200	
bis(2-Chloroethoxy)methane	111-91-1	<830	830	
2,4-Dichlorophenol	120-83-2	<830	830	
1,2,4-Trichlorobenzene	120-82-1	<830	830	
Naphthalene	91-20-3	<830	830	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<830	830	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<830	830	
Hexachlorocyclopentadiene	77-47-4	<830	830	
2,4,6-Trichlorophenol	88-06-2	<830	830	
2,4,5-Trichlorophenol	95-95-4	<830	830	
2-Chloronaphthalene	91-58-7	<830	830	
2-Nitroaniline	88-74-4	<4200	4200	
Dimethylphthalate	131-11-3	<830	830	
Acenaphthylene	208-96-8	<830	830	
2,6-Dinitrotoluene	606-20-2	<830	830	
3-Nitroaniline	99-09-2	<4200	4200	
Acenaphthene	83-32-9	<830	830	
2,4-Dinitrophenol	51-28-5	<4200	4200	
4-Nitrophenol	100-02-7	<4200	4200	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLII1SD02(08)	LAL Sample ID:	L8849-34
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	21.34	Preparation Dilution:	0.995

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<830	830	
2,4-Dinitrotoluene	121-14-2	<830	830	
Diethylphthalate	84-66-2	<830	830	
4-Chlorophenyl-phenylether	7005-72-3	<830	830	
Fluorene	86-73-7	<830	830	
4-Nitroaniline	100-01-6	<4200	4200	
4,6-Dinitro-2-methylphenol	534-52-1	<4200	4200	
N-Nitrosodiphenylamine (1)	86-30-6	<830	830	
4-Bromophenyl-phenylether	101-55-3	<830	830	
Hexachlorobenzene	118-74-1	<830	830	
Pentachlorophenol	87-86-5	<4200	4200	
Phenanthrene	85-01-8	<830	830	
Anthracene	120-12-7	<830	830	
Carbazole	86-74-8	<830	830	
Di-n-butylphthalate	84-74-2	<830	830	
Fluoranthene	206-44-0	<830	830	
Pyrene	129-00-0	<830	830	
Butylbenzylphthalate	85-68-7	<830	830	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<830	830	
Chrysene	218-01-9	<830	830	
bis(2-Ethylhexyl)phthalate	117-81-7	<830	830	
Di-n-octylphthalate	117-84-0	<830	830	
Benzo(b)fluoranthene	205-99-2	<830	830	
Benzo(k)fluoranthene	207-08-9	<830	830	
Benzo(a)pyrene	50-32-8	<830	830	
Indeno(1,2,3-cd)pyrene	193-39-5	<830	830	
Dibenz(a,h)anthracene	53-70-3	<830	830	
Benzo(g,h,i)perylene	191-24-2	<830	830	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC2SD01(01)	LAL Sample ID:	L8849-38
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	26.72	Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	59%	15-111
Phenol-d5	71%	21-110
Nitrobenzene-d5	77%	17-114
2-Fluorobiphenyl	85%	29-114
2,4,6-Tribromophenol	86%	33-136
Terphenyl-d14	103%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<900	900	
bis(2-Chloroethyl)ether	111-44-4	<900	900	
2-Chlorophenol	95-57-8	<900	900	
1,3-Dichlorobenzene	541-73-1	<900	900	
1,4-Dichlorobenzene	106-46-7	<900	900	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<900	900	
2-Methylphenol	95-48-7	<900	900	
bis(2-chloroisopropyl)ether	108-60-1	<900	900	
4-Methylphenol	106-44-5	<900	900	
N-Nitroso-di-n-propylamine	621-64-7	<900	900	
Hexachloroethane	67-72-1	<900	900	
Nitrobenzene	98-95-3	<900	900	
Isophorone	78-59-1	<900	900	
2-Nitrophenol	88-75-5	<900	900	
2,4-Dimethylphenol	105-67-9	<900	900	
Benzoic acid	65-85-0	<4500	4500	
bis(2-Chloroethoxy)methane	111-91-1	<900	900	
2,4-Dichlorophenol	120-83-2	<900	900	
1,2,4-Trichlorobenzene	120-82-1	<900	900	
Naphthalene	91-20-3	<900	900	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<900	900	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<900	900	
Hexachlorocyclopentadiene	77-47-4	<900	900	
2,4,6-Trichlorophenol	88-06-2	<900	900	
2,4,5-Trichlorophenol	95-95-4	<900	900	
2-Chloronaphthalene	91-58-7	<900	900	
2-Nitroaniline	88-74-4	<4500	4500	
Dimethylphthalate	131-11-3	<900	900	
Acenaphthylene	208-96-8	<900	900	
2,6-Dinitrotoluene	606-20-2	<900	900	
3-Nitroaniline	99-09-2	<4500	4500	
Acenaphthene	83-32-9	<900	900	
2,4-Dinitrophenol	51-28-5	<4500	4500	
4-Nitrophenol	100-02-7	<4500	4500	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC2SD01(01)	LAL Sample ID:	L8849-38
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	26.72	Preparation Dilution:	0.999

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<900	900	
2,4-Dinitrotoluene	121-14-2	<900	900	
Diethylphthalate	84-66-2	<900	900	
4-Chlorophenyl-phenylether	7005-72-3	<900	900	
Fluorene	86-73-7	<900	900	
4-Nitroaniline	100-01-6	<4500	4500	
4,6-Dinitro-2-methylphenol	534-52-1	<4500	4500	
N-Nitrosodiphenylamine (1)	86-30-6	<900	900	
4-Bromophenyl-phenylether	101-55-3	<900	900	
Hexachlorobenzene	118-74-1	<900	900	
Pentachlorophenol	87-86-5	<4500	4500	
Phenanthrene	85-01-8	<900	900	
Anthracene	120-12-7	<900	900	
Carbazole	86-74-8	<900	900	
Di-n-butylphthalate	84-74-2	<900	900	
Fluoranthene	206-44-0	<900	900	
Pyrene	129-00-0	<900	900	
Butylbenzylphthalate	85-68-7	<900	900	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<900	900	
Chrysene	218-01-9	<900	900	
bis(2-Ethylhexyl)phthalate	117-81-7	<900	900	
Di-n-octylphthalate	117-84-0	<900	900	
Benzo(b)fluoranthene	205-99-2	<900	900	
Benzo(k)fluoranthene	207-08-9	<900	900	
Benzo(a)pyrene	50-32-8	<900	900	
Indeno(1,2,3-cd)pyrene	193-39-5	<900	900	
Dibenz(a,h)anthracene	53-70-3	<900	900	
Benzo(g,h,i)perylene	191-24-2	<900	900	

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SEMI-VOLATILE ORGANICS BY GC/MS
270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC2SD02(08)	LAL Sample ID:	L8849-42
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	19.74	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	66%	15-111
Phenol-d5	79%	21-110
Nitrobenzene-d5	76%	17-114
2-Fluorobiphenyl	90%	29-114
2,4,6-Tribromophenol	80%	33-136
Terphenyl-d14	111%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<830	830	
bis(2-Chloroethyl)ether	111-44-4	<830	830	
2-Chlorophenol	95-57-8	<830	830	
1,3-Dichlorobenzene	541-73-1	<830	830	
1,4-Dichlorobenzene	106-46-7	<830	830	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<830	830	
2-Methylphenol	95-48-7	<830	830	
bis(2-chloroisopropyl)ether	108-60-1	<830	830	
4-Methylphenol	106-44-5	<830	830	
N-Nitroso-di-n-propylamine	621-64-7	<830	830	
Hexachloroethane	67-72-1	<830	830	
Nitrobenzene	98-95-3	<830	830	
Isophorone	78-59-1	<830	830	
2-Nitrophenol	88-75-5	<830	830	
2,4-Dimethylphenol	105-67-9	<830	830	
Benzoic acid	65-85-0	<4100	4100	
bis(2-Chloroethoxy)methane	111-91-1	<830	830	
2,4-Dichlorophenol	120-83-2	<830	830	
1,2,4-Trichlorobenzene	120-82-1	<830	830	
Naphthalene	91-20-3	<830	830	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<830	830	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<830	830	
Hexachlorocyclopentadiene	77-47-4	<830	830	
2,4,6-Trichlorophenol	88-06-2	<830	830	
2,4,5-Trichlorophenol	95-95-4	<830	830	
2-Chloronaphthalene	91-58-7	<830	830	
2-Nitroaniline	88-74-4	<4100	4100	
Dimethylphthalate	131-11-3	<830	830	
Acenaphthylene	208-96-8	<830	830	
2,6-Dinitrotoluene	606-20-2	<830	830	
3-Nitroaniline	99-09-2	<4100	4100	
Acenaphthene	83-32-9	<830	830	
2,4-Dinitrophenol	51-28-5	<4100	4100	
4-Nitrophenol	100-02-7	<4100	4100	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC2SD02(08)	LAL Sample ID:	L8849-42
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	19.74	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<830	830	
2,4-Dinitrotoluene	121-14-2	<830	830	
Diethylphthalate	84-66-2	<830	830	
4-Chlorophenyl-phenylether	7005-72-3	<830	830	
Fluorene	86-73-7	<830	830	
4-Nitroaniline	100-01-6	<4100	4100	
4,6-Dinitro-2-methylphenol	534-52-1	<4100	4100	
N-Nitrosodiphenylamine (1)	86-30-6	<830	830	
4-Bromophenyl-phenylether	101-55-3	<830	830	
Hexachlorobenzene	118-74-1	<830	830	
Pentachlorophenol	87-86-5	<4100	4100	
Phenanthrene	85-01-8	<830	830	
Anthracene	120-12-7	<830	830	
Carbazole	86-74-8	<830	830	
Di-n-butylphthalate	84-74-2	<830	830	
Fluoranthene	206-44-0	<830	830	
Pyrene	129-00-0	<830	830	
Butylbenzylphthalate	85-68-7	<830	830	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<830	830	
Chrysene	218-01-9	<830	830	
bis(2-Ethylhexyl)phthalate	117-81-7	<830	830	
Di-n-octylphthalate	117-84-0	<830	830	
Benzo(b)fluoranthene	205-99-2	<830	830	
Benzo(k)fluoranthene	207-08-9	<830	830	
Benzo(a)pyrene	50-32-8	<830	830	
Indeno(1,2,3-cd)pyrene	193-39-5	<830	830	
Dibenz(a,h)anthracene	53-70-3	<830	830	
Benzo(g,h,i)perylene	191-24-2	<830	830	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC2SD61(08)	LAL Sample ID:	L8849-46
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	19.23	Preparation Dilution:	0.995

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	67%	15-111
Phenol-d5	79%	21-110
Nitrobenzene-d5	76%	17-114
2-Fluorobiphenyl	93%	29-114
2,4,6-Tribromophenol	78%	33-136
Terphenyl-d14	116%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<810	810	
bis(2-Chloroethyl)ether	111-44-4	<810	810	
2-Chlorophenol	95-57-8	<810	810	
1,3-Dichlorobenzene	541-73-1	<810	810	
1,4-Dichlorobenzene	106-46-7	<810	810	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<810	810	
2-Methylphenol	95-48-7	<810	810	
bis(2-chloroisopropyl)ether	108-60-1	<810	810	
4-Methylphenol	106-44-5	<810	810	
N-Nitroso-di-n-propylamine	621-64-7	<810	810	
Hexachloroethane	67-72-1	<810	810	
Nitrobenzene	98-95-3	<810	810	
Isophorone	78-59-1	<810	810	
2-Nitrophenol	88-75-5	<810	810	
2,4-Dimethylphenol	105-67-9	<810	810	
Benzoic acid	65-85-0	<4100	4100	
bis(2-Chloroethoxy)methane	111-91-1	<810	810	
2,4-Dichlorophenol	120-83-2	<810	810	
1,2,4-Trichlorobenzene	120-82-1	<810	810	
Naphthalene	91-20-3	<810	810	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<810	810	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<810	810	
Hexachlorocyclopentadiene	77-47-4	<810	810	
2,4,6-Trichlorophenol	88-06-2	<810	810	
2,4,5-Trichlorophenol	95-95-4	<810	810	
2-Chloronaphthalene	91-58-7	<810	810	
2-Nitroaniline	88-74-4	<4100	4100	
Dimethylphthalate	131-11-3	<810	810	
Acenaphthylene	208-96-8	<810	810	
2,6-Dinitrotoluene	606-20-2	<810	810	
3-Nitroaniline	99-09-2	<4100	4100	
Acenaphthene	83-32-9	<810	810	
2,4-Dinitrophenol	51-28-5	<4100	4100	
4-Nitrophenol	100-02-7	<4100	4100	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC2SD61(08)	LAL Sample ID:	L8849-46
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
Matrix:	Soil	Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	19.23	Preparation Dilution:	0.995

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s
Dibenzofuran	132-64-9	<810	810	
2,4-Dinitrotoluene	121-14-2	<810	810	
Diethylphthalate	84-66-2	<810	810	
4-Chlorophenyl-phenylether	7005-72-3	<810	810	
Fluorene	86-73-7	<810	810	
4-Nitroaniline	100-01-6	<4100	4100	
4,6-Dinitro-2-methylphenol	534-52-1	<4100	4100	
N-Nitrosodiphenylamine (1)	86-30-6	<810	810	
4-Bromophenyl-phenylether	101-55-3	<810	810	
Hexachlorobenzene	118-74-1	<810	810	
Pentachlorophenol	87-86-5	<4100	4100	
Phenanthrene	85-01-8	<810	810	
Anthracene	120-12-7	<810	810	
Carbazole	86-74-8	<810	810	
Di-n-butylphthalate	84-74-2	<810	810	
Fluoranthene	206-44-0	<810	810	
Pyrene	129-00-0	<810	810	
Butylbenzylphthalate	85-68-7	<810	810	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<810	810	
Chrysene	218-01-9	<810	810	
bis(2-Ethylhexyl)phthalate	117-81-7	<810	810	
Di-n-octylphthalate	117-84-0	<810	810	
Benzo(b)fluoranthene	205-99-2	<810	810	
Benzo(k)fluoranthene	207-08-9	<810	810	
Benzo(a)pyrene	50-32-8	<810	810	
Indeno(1,2,3-cd)pyrene	193-39-5	<810	810	
Dibenz(a,h)anthracene	53-70-3	<810	810	
Benzo(g,h,i)perylene	191-24-2	<810	810	

LAS

EMI-VOLATILE ORGANICS BY GC/MS
270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC4SD02(08)	LAL Sample ID:	L8849-50
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	23.85	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	32%	15-111
Phenol-d5	52%	21-110
Nitrobenzene-d5	36%	17-114
2-Fluorobiphenyl	59%	29-114
2,4,6-Tribromophenol	93%	33-136
Terphenyl-d14	87%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<860	860	
bis(2-Chloroethyl)ether	111-44-4	<860	860	
2-Chlorophenol	95-57-8	<860	860	
1,3-Dichlorobenzene	541-73-1	<860	860	
1,4-Dichlorobenzene	106-46-7	<860	860	
Benzyl alcohol	100-51-6	<1700	1700	
1,2-Dichlorobenzene	95-50-1	<860	860	
2-Methylphenol	95-48-7	<860	860	
bis(2-chloroisopropyl)ether	108-60-1	<860	860	
4-Methylphenol	106-44-5	<860	860	
N-Nitroso-di-n-propylamine	621-64-7	<860	860	
Hexachloroethane	67-72-1	<860	860	
Nitrobenzene	98-95-3	<860	860	
Isophorone	78-59-1	<860	860	
2-Nitrophenol	88-75-5	<860	860	
2,4-Dimethylphenol	105-67-9	<860	860	
Benzoic acid	65-85-0	<4300	4300	
bis(2-Chloroethoxy)methane	111-91-1	<860	860	
2,4-Dichlorophenol	120-83-2	<860	860	
1,2,4-Trichlorobenzene	120-82-1	<860	860	
Naphthalene	91-20-3	<860	860	
4-Chloroaniline	106-47-8	<1700	1700	
Hexachlorobutadiene	87-68-3	<860	860	
4-Chloro-3-methylphenol	59-50-7	<1700	1700	
2-Methylnaphthalene	91-57-6	<860	860	
Hexachlorocyclopentadiene	77-47-4	<860	860	
2,4,6-Trichlorophenol	88-06-2	<860	860	
2,4,5-Trichlorophenol	95-95-4	<860	860	
2-Chloronaphthalene	91-58-7	<860	860	
2-Nitroaniline	88-74-4	<4300	4300	
Dimethylphthalate	131-11-3	<860	860	
Acenaphthylene	208-96-8	<860	860	
2,6-Dinitrotoluene	606-20-2	<860	860	
3-Nitroaniline	99-09-2	<4300	4300	
Acenaphthene	83-32-9	<860	860	
2,4-Dinitrophenol	51-28-5	<4300	4300	
4-Nitrophenol	100-02-7	<4300	4300	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC4SD02(08)	LAL Sample ID:	L8849-50
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	23.85	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s
Dibenzofuran	132-64-9	<860	860	
2,4-Dinitrotoluene	121-14-2	<860	860	
Diethylphthalate	84-66-2	<860	860	
4-Chlorophenyl-phenylether	7005-72-3	<860	860	
Fluorene	86-73-7	<860	860	
4-Nitroaniline	100-01-6	<4300	4300	
4,6-Dinitro-2-methylphenol	534-52-1	<4300	4300	
N-Nitrosodiphenylamine (1)	86-30-6	<860	860	
4-Bromophenyl-phenylether	101-55-3	<860	860	
Hexachlorobenzene	118-74-1	<860	860	
Pentachlorophenol	87-86-5	<4300	4300	
Phenanthrene	85-01-8	<860	860	
Anthracene	120-12-7	<860	860	
Carbazole	86-74-8	<860	860	
Di-n-butylphthalate	84-74-2	<860	860	
Fluoranthene	206-44-0	<860	860	
Pyrene	129-00-0	<860	860	
Butylbenzylphthalate	85-68-7	<860	860	
3,3'-Dichlorobenzidine	91-94-1	<1700	1700	
Benzo(a)anthracene	56-55-3	<860	860	
Chrysene	218-01-9	<860	860	
bis(2-Ethylhexyl)phthalate	117-81-7	<860	860	
Di-n-octylphthalate	117-84-0	<860	860	
Benzo(b)fluoranthene	205-99-2	<860	860	
Benzo(k)fluoranthene	207-08-9	<860	860	
Benzo(a)pyrene	50-32-8	<860	860	
Indeno(1,2,3-cd)pyrene	193-39-5	<860	860	
Dibenz(a,h)anthracene	53-70-3	<860	860	
Benzo(g,h,i)perylene	191-24-2	<860	860	

LAS

EMI-VOLATILE ORGANICS BY GC/MS
3270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA4SD01(01)	LAL Sample ID:	L8849-54
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	17.13	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	44%	15-111
Phenol-d5	57%	21-110
Nitrobenzene-d5	50%	17-114
2-Fluorobiphenyl	68%	29-114
2,4,6-Tribromophenol	96%	33-136
Terphenyl-d14	83%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<800	800	
bis(2-Chloroethyl)ether	111-44-4	<800	800	
2-Chlorophenol	95-57-8	<800	800	
1,3-Dichlorobenzene	541-73-1	<800	800	
1,4-Dichlorobenzene	106-46-7	<800	800	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<800	800	
2-Methylphenol	95-48-7	<800	800	
bis(2-chloroisopropyl)ether	108-60-1	<800	800	
4-Methylphenol	106-44-5	<800	800	
N-Nitroso-di-n-propylamine	621-64-7	<800	800	
Hexachloroethane	67-72-1	<800	800	
Nitrobenzene	98-95-3	<800	800	
Isophorone	78-59-1	<800	800	
2-Nitrophenol	88-75-5	<800	800	
2,4-Dimethylphenol	105-67-9	<800	800	
Benzoic acid	65-85-0	<4000	4000	
bis(2-Chloroethoxy)methane	111-91-1	<800	800	
2,4-Dichlorophenol	120-83-2	<800	800	
1,2,4-Trichlorobenzene	120-82-1	<800	800	
Naphthalene	91-20-3	<800	800	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<800	800	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<800	800	
Hexachlorocyclopentadiene	77-47-4	<800	800	
2,4,6-Trichlorophenol	88-06-2	<800	800	
2,4,5-Trichlorophenol	95-95-4	<800	800	
2-Chloronaphthalene	91-58-7	<800	800	
2-Nitroaniline	88-74-4	<4000	4000	
Dimethylphthalate	131-11-3	<800	800	
Acenaphthylene	208-96-8	<800	800	
2,6-Dinitrotoluene	606-20-2	<800	800	
3-Nitroaniline	99-09-2	<4000	4000	
Acenaphthene	83-32-9	<800	800	
2,4-Dinitrophenol	51-28-5	<4000	4000	
4-Nitrophenol	100-02-7	<4000	4000	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA4SD01(01)	LAL Sample ID:	L8849-54
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	17.13	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s
Dibenzofuran	132-64-9	<800	800	
2,4-Dinitrotoluene	121-14-2	<800	800	
Diethylphthalate	84-66-2	<800	800	
4-Chlorophenyl-phenylether	7005-72-3	<800	800	
Fluorene	86-73-7	<800	800	
4-Nitroaniline	100-01-6	<4000	4000	
4,6-Dinitro-2-methylphenol	534-52-1	<4000	4000	
N-Nitrosodiphenylamine (1)	86-30-6	<800	800	
4-Bromophenyl-phenylether	101-55-3	<800	800	
Hexachlorobenzene	118-74-1	<800	800	
Pentachlorophenol	87-86-5	<4000	4000	
Phenanthrene	85-01-8	<800	800	
Anthracene	120-12-7	<800	800	
Carbazole	86-74-8	<800	800	
Di-n-butylphthalate	84-74-2	<800	800	
Fluoranthene	206-44-0	<800	800	
Pyrene	129-00-0	<800	800	
Butylbenzylphthalate	85-68-7	<800	800	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<800	800	
Chrysene	218-01-9	<800	800	
bis(2-Ethylhexyl)phthalate	117-81-7	<800	800	
Di-n-octylphthalate	117-84-0	<800	800	
Benzo(b)fluoranthene	205-99-2	<800	800	
Benzo(k)fluoranthene	207-08-9	<800	800	
Benzo(a)pyrene	50-32-8	<800	800	
Indeno(1,2,3-cd)pyrene	193-39-5	<800	800	
Dibenz(a,h)anthracene	53-70-3	<800	800	
Benzo(g,h,i)perylene	191-24-2	<800	800	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA4SD02(08)	LAL Sample ID:	L8849-57
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	18.66	Preparation Dilution:	0.997

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	46%	15-111
Phenol-d5	56%	21-110
Nitrobenzene-d5	51%	17-114
2-Fluorobiphenyl	59%	29-114
2,4,6-Tribromophenol	88%	33-136
Terphenyl-d14	78%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<810	810	
bis(2-Chloroethyl)ether	111-44-4	<810	810	
2-Chlorophenol	95-57-8	<810	810	
1,3-Dichlorobenzene	541-73-1	<810	810	
1,4-Dichlorobenzene	106-46-7	<810	810	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<810	810	
2-Methylphenol	95-48-7	<810	810	
bis(2-chloroisopropyl)ether	108-60-1	<810	810	
4-Methylphenol	106-44-5	<810	810	
N-Nitroso-di-n-propylamine	621-64-7	<810	810	
Hexachloroethane	67-72-1	<810	810	
Nitrobenzene	98-95-3	<810	810	
Isophorone	78-59-1	<810	810	
2-Nitrophenol	88-75-5	<810	810	
2,4-Dimethylphenol	105-67-9	<810	810	
Benzoic acid	65-85-0	<4100	4100	
bis(2-Chloroethoxy)methane	111-91-1	<810	810	
2,4-Dichlorophenol	120-83-2	<810	810	
1,2,4-Trichlorobenzene	120-82-1	<810	810	
Naphthalene	91-20-3	<810	810	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<810	810	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<810	810	
Hexachlorocyclopentadiene	77-47-4	<810	810	
2,4,6-Trichlorophenol	88-06-2	<810	810	
2,4,5-Trichlorophenol	95-95-4	<810	810	
2-Chloronaphthalene	91-58-7	<810	810	
2-Nitroaniline	88-74-4	<4100	4100	
Dimethylphthalate	131-11-3	<810	810	
Acenaphthylene	208-96-8	<810	810	
2,6-Dinitrotoluene	606-20-2	<810	810	
3-Nitroaniline	99-09-2	<4100	4100	
Acenaphthene	83-32-9	<810	810	
2,4-Dinitrophenol	51-28-5	<4100	4100	
4-Nitrophenol	100-02-7	<4100	4100	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA4SD02(08)	LAL Sample ID:	L8849-57
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	18.66	Preparation Dilution:	0.997

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<810	810	
2,4-Dinitrotoluene	121-14-2	<810	810	
Diethylphthalate	84-66-2	<810	810	
4-Chlorophenyl-phenylether	7005-72-3	<810	810	
Fluorene	86-73-7	<810	810	
4-Nitroaniline	100-01-6	<4100	4100	
4,6-Dinitro-2-methylphenol	534-52-1	<4100	4100	
N-Nitrosodiphenylamine (1)	86-30-6	<810	810	
4-Bromophenyl-phenylether	101-55-3	<810	810	
Hexachlorobenzene	118-74-1	<810	810	
Pentachlorophenol	87-86-5	<4100	4100	
Phenanthrene	85-01-8	<810	810	
Anthracene	120-12-7	<810	810	
Carbazole	86-74-8	<810	810	
Di-n-butylphthalate	84-74-2	<810	810	
Fluoranthene	206-44-0	<810	810	
Pyrene	129-00-0	<810	810	
Butylbenzylphthalate	85-68-7	<810	810	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<810	810	
Chrysene	218-01-9	<810	810	
bis(2-Ethylhexyl)phthalate	117-81-7	<810	810	
Di-n-octylphthalate	117-84-0	<810	810	
Benzo(b)fluoranthene	205-99-2	<810	810	
Benzo(k)fluoranthene	207-08-9	<810	810	
Benzo(a)pyrene	50-32-8	<810	810	
Indeno(1,2,3-cd)pyrene	193-39-5	<810	810	
Dibenz(a,h)anthracene	53-70-3	<810	810	
Benzo(g,h,i)perylene	191-24-2	<810	810	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
3270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA6SD01(01)	LAL Sample ID:	L8849-61
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	42.88	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	50%	15-111
Phenol-d5	67%	21-110
Nitrobenzene-d5	55%	17-114
2-Fluorobiphenyl	73%	29-114
2,4,6-Tribromophenol	95%	33-136
Terphenyl-d14	83%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<1200	1200	
bis(2-Chloroethyl)ether	111-44-4	<1200	1200	
2-Chlorophenol	95-57-8	<1200	1200	
1,3-Dichlorobenzene	541-73-1	<1200	1200	
1,4-Dichlorobenzene	106-46-7	<1200	1200	
Benzyl alcohol	100-51-6	<2300	2300	
1,2-Dichlorobenzene	95-50-1	<1200	1200	
2-Methylphenol	95-48-7	<1200	1200	
bis(2-chloroisopropyl)ether	108-60-1	<1200	1200	
4-Methylphenol	106-44-5	<1200	1200	
N-Nitroso-di-n-propylamine	621-64-7	<1200	1200	
Hexachloroethane	67-72-1	<1200	1200	
Nitrobenzene	98-95-3	<1200	1200	
Isophorone	78-59-1	<1200	1200	
2-Nitrophenol	88-75-5	<1200	1200	
2,4-Dimethylphenol	105-67-9	<1200	1200	
Benzoic acid	65-85-0	<5800	5800	
bis(2-Chloroethoxy)methane	111-91-1	<1200	1200	
2,4-Dichlorophenol	120-83-2	<1200	1200	
1,2,4-Trichlorobenzene	120-82-1	<1200	1200	
Naphthalene	91-20-3	<1200	1200	
4-Chloroaniline	106-47-8	<2300	2300	
Hexachlorobutadiene	87-68-3	<1200	1200	
4-Chloro-3-methylphenol	59-50-7	<2300	2300	
2-Methylnaphthalene	91-57-6	<1200	1200	
Hexachlorocyclopentadiene	77-47-4	<1200	1200	
2,4,6-Trichlorophenol	88-06-2	<1200	1200	
2,4,5-Trichlorophenol	95-95-4	<1200	1200	
2-Chloronaphthalene	91-58-7	<1200	1200	
2-Nitroaniline	88-74-4	<5800	5800	
Dimethylphthalate	131-11-3	<1200	1200	
Acenaphthylene	208-96-8	<1200	1200	
2,6-Dinitrotoluene	606-20-2	<1200	1200	
3-Nitroaniline	99-09-2	<5800	5800	
Acenaphthene	83-32-9	<1200	1200	
2,4-Dinitrophenol	51-28-5	<5800	5800	
4-Nitrophenol	100-02-7	<5800	5800	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA6SD01(01)	LAL Sample ID:	L8849-61
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	42.88	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<1200	1200	
2,4-Dinitrotoluene	121-14-2	<1200	1200	
Diethylphthalate	84-66-2	<1200	1200	
4-Chlorophenyl-phenylether	7005-72-3	<1200	1200	
Fluorene	86-73-7	<1200	1200	
4-Nitroaniline	100-01-6	<5800	5800	
4,6-Dinitro-2-methylphenol	534-52-1	<5800	5800	
N-Nitrosodiphenylamine (1)	86-30-6	<1200	1200	
4-Bromophenyl-phenylether	101-55-3	<1200	1200	
Hexachlorobenzene	118-74-1	<1200	1200	
Pentachlorophenol	87-86-5	<5800	5800	
Phenanthrene	85-01-8	<1200	1200	
Anthracene	120-12-7	<1200	1200	
Carbazole	86-74-8	<1200	1200	
Di-n-butylphthalate	84-74-2	<1200	1200	
Fluoranthene	206-44-0	<1200	1200	
Pyrene	129-00-0	<1200	1200	
Butylbenzylphthalate	85-68-7	<1200	1200	
3,3'-Dichlorobenzidine	91-94-1	<2300	2300	
Benzo(a)anthracene	56-55-3	<1200	1200	
Chrysene	218-01-9	<1200	1200	
bis(2-Ethylhexyl)phthalate	117-81-7	<1200	1200	
Di-n-octylphthalate	117-84-0	<1200	1200	
Benzo(b)fluoranthene	205-99-2	<1200	1200	
Benzo(k)fluoranthene	207-08-9	<1200	1200	
Benzo(a)pyrene	50-32-8	<1200	1200	
Indeno(1,2,3-cd)pyrene	193-39-5	<1200	1200	
Dibenz(a,h)anthracene	53-70-3	<1200	1200	
Benzo(g,h,i)perylene	191-24-2	<1200	1200	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
3270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA6SD02(08)	LAL Sample ID:	L8849-65
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	28.62	Preparation Dilution:	0.997

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	53%	15-111
Phenol-d5	69%	21-110
Nitrobenzene-d5	56%	17-114
2-Fluorobiphenyl	74%	29-114
2,4,6-Tribromophenol	93%	33-136
Terphenyl-d14	80%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s
Phenol	108-95-2	<920	920	
bis(2-Chloroethyl)ether	111-44-4	<920	920	
2-Chlorophenol	95-57-8	<920	920	
1,3-Dichlorobenzene	541-73-1	<920	920	
1,4-Dichlorobenzene	106-46-7	<920	920	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<920	920	
2-Methylphenol	95-48-7	<920	920	
bis(2-chloroisopropyl)ether	108-60-1	<920	920	
4-Methylphenol	106-44-5	<920	920	
N-Nitroso-di-n-propylamine	621-64-7	<920	920	
Hexachloroethane	67-72-1	<920	920	
Nitrobenzene	98-95-3	<920	920	
Isophorone	78-59-1	<920	920	
2-Nitrophenol	88-75-5	<920	920	
2,4-Dimethylphenol	105-67-9	<920	920	
Benzoic acid	65-85-0	<4600	4600	
bis(2-Chloroethoxy)methane	111-91-1	<920	920	
2,4-Dichlorophenol	120-83-2	<920	920	
1,2,4-Trichlorobenzene	120-82-1	<920	920	
Naphthalene	91-20-3	<920	920	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<920	920	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<920	920	
Hexachlorocyclopentadiene	77-47-4	<920	920	
2,4,6-Trichlorophenol	88-06-2	<920	920	
2,4,5-Trichlorophenol	95-95-4	<920	920	
2-Chloronaphthalene	91-58-7	<920	920	
2-Nitroaniline	88-74-4	<4600	4600	
Dimethylphthalate	131-11-3	<920	920	
Acenaphthylene	208-96-8	<920	920	
2,6-Dinitrotoluene	606-20-2	<920	920	
3-Nitroaniline	99-09-2	<4600	4600	
Acenaphthene	83-32-9	<920	920	
2,4-Dinitrophenol	51-28-5	<4600	4600	
4-Nitrophenol	100-02-7	<4600	4600	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA6SD02(08)	LAL Sample ID:	L8849-65
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	28.62	Preparation Dilution:	0.997

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<920	920	
2,4-Dinitrotoluene	121-14-2	<920	920	
Diethylphthalate	84-66-2	<920	920	
4-Chlorophenyl-phenylether	7005-72-3	<920	920	
Fluorene	86-73-7	<920	920	
4-Nitroaniline	100-01-6	<4600	4600	
4,6-Dinitro-2-methylphenol	534-52-1	<4600	4600	
N-Nitrosodiphenylamine (1)	86-30-6	<920	920	
4-Bromophenyl-phenylether	101-55-3	<920	920	
Hexachlorobenzene	118-74-1	<920	920	
Pentachlorophenol	87-86-5	<4600	4600	
Phenanthrene	85-01-8	<920	920	
Anthracene	120-12-7	<920	920	
Carbazole	86-74-8	<920	920	
Di-n-butylphthalate	84-74-2	<920	920	
Fluoranthene	206-44-0	<920	920	
Pyrene	129-00-0	<920	920	
Butylbenzylphthalate	85-68-7	<920	920	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<920	920	
Chrysene	218-01-9	<920	920	
bis(2-Ethylhexyl)phthalate	117-81-7	<920	920	
Di-n-octylphthalate	117-84-0	<920	920	
Benzo(b)fluoranthene	205-99-2	<920	920	
Benzo(k)fluoranthene	207-08-9	<920	920	
Benzo(a)pyrene	50-32-8	<920	920	
Indeno(1,2,3-cd)pyrene	193-39-5	<920	920	
Dibenz(a,h)anthracene	53-70-3	<920	920	
Benzo(g,h,i)perylene	191-24-2	<920	920	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA6SD62(08)	LAL Sample ID:	L8849-69
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	32.07	Preparation Dilution:	0.992

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	55%	15-111
Phenol-d5	68%	21-110
Nitrobenzene-d5	64%	17-114
2-Fluorobiphenyl	79%	29-114
2,4,6-Tribromophenol	90%	33-136
Terphenyl-d14	80%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<960	960	
bis(2-Chloroethyl)ether	111-44-4	<960	960	
2-Chlorophenol	95-57-8	<960	960	
1,3-Dichlorobenzene	541-73-1	<960	960	
1,4-Dichlorobenzene	106-46-7	<960	960	
Benzyl alcohol	100-51-6	<1900	1900	
1,2-Dichlorobenzene	95-50-1	<960	960	
2-Methylphenol	95-48-7	<960	960	
bis(2-chloroisopropyl)ether	108-60-1	<960	960	
4-Methylphenol	106-44-5	<960	960	
N-Nitroso-di-n-propylamine	621-64-7	<960	960	
Hexachloroethane	67-72-1	<960	960	
Nitrobenzene	98-95-3	<960	960	
Isophorone	78-59-1	<960	960	
2-Nitrophenol	88-75-5	<960	960	
2,4-Dimethylphenol	105-67-9	<960	960	
Benzoic acid	65-85-0	<4800	4800	
bis(2-Chloroethoxy)methane	111-91-1	<960	960	
2,4-Dichlorophenol	120-83-2	<960	960	
1,2,4-Trichlorobenzene	120-82-1	<960	960	
Naphthalene	91-20-3	<960	960	
4-Chloroaniline	106-47-8	<1900	1900	
Hexachlorobutadiene	87-68-3	<960	960	
4-Chloro-3-methylphenol	59-50-7	<1900	1900	
2-Methylnaphthalene	91-57-6	<960	960	
Hexachlorocyclopentadiene	77-47-4	<960	960	
2,4,6-Trichlorophenol	88-06-2	<960	960	
2,4,5-Trichlorophenol	95-95-4	<960	960	
2-Chloronaphthalene	91-58-7	<960	960	
2-Nitroaniline	88-74-4	<4800	4800	
Dimethylphthalate	131-11-3	<960	960	
Acenaphthylene	208-96-8	<960	960	
2,6-Dinitrotoluene	606-20-2	<960	960	
3-Nitroaniline	99-09-2	<4800	4800	
Acenaphthene	83-32-9	<960	960	
2,4-Dinitrophenol	51-28-5	<4800	4800	
4-Nitrophenol	100-02-7	<4800	4800	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA6SD62(08)	LAL Sample ID:	L8849-69
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	32.07	Preparation Dilution:	0.992

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<960	960	
2,4-Dinitrotoluene	121-14-2	<960	960	
Diethylphthalate	84-66-2	<960	960	
4-Chlorophenyl-phenylether	7005-72-3	<960	960	
Fluorene	86-73-7	<960	960	
4-Nitroaniline	100-01-6	<4800	4800	
4,6-Dinitro-2-methylphenol	534-52-1	<4800	4800	
N-Nitrosodiphenylamine (1)	86-30-6	<960	960	
4-Bromophenyl-phenylether	101-55-3	<960	960	
Hexachlorobenzene	118-74-1	<960	960	
Pentachlorophenol	87-86-5	<4800	4800	
Phenanthrene	85-01-8	<960	960	
Anthracene	120-12-7	<960	960	
Carbazole	86-74-8	<960	960	
Di-n-butylphthalate	84-74-2	<960	960	
Fluoranthene	206-44-0	<960	960	
Pyrene	129-00-0	<960	960	
Butylbenzylphthalate	85-68-7	<960	960	
3,3'-Dichlorobenzidine	91-94-1	<1900	1900	
Benzo(a)anthracene	56-55-3	<960	960	
Chrysene	218-01-9	<960	960	
bis(2-Ethylhexyl)phthalate	117-81-7	<960	960	
Di-n-octylphthalate	117-84-0	<960	960	
Benzo(b)fluoranthene	205-99-2	<960	960	
Benzo(k)fluoranthene	207-08-9	<960	960	
Benzo(a)pyrene	50-32-8	<960	960	
Indeno(1,2,3-cd)pyrene	193-39-5	<960	960	
Dibenz(a,h)anthracene	53-70-3	<960	960	
Benzo(g,h,i)perylene	191-24-2	<960	960	

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SEMI-VOLATILE ORGANICS BY GC/MS
3270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA8SD01(01)	LAL Sample ID:	L8849-77
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	38.38	Preparation Dilution:	0.996

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	49%	15-111
Phenol-d5	67%	21-110
Nitrobenzene-d5	55%	17-114
2-Fluorobiphenyl	73%	29-114
2,4,6-Tribromophenol	98%	33-136
Terphenyl-d14	81%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<1100	1100	
bis(2-Chloroethyl)ether	111-44-4	<1100	1100	
2-Chlorophenol	95-57-8	<1100	1100	
1,3-Dichlorobenzene	541-73-1	<1100	1100	
1,4-Dichlorobenzene	106-46-7	<1100	1100	
Benzyl alcohol	100-51-6	<2100	2100	
1,2-Dichlorobenzene	95-50-1	<1100	1100	
2-Methylphenol	95-48-7	<1100	1100	
bis(2-chloroisopropyl)ether	108-60-1	<1100	1100	
4-Methylphenol	106-44-5	<1100	1100	
N-Nitroso-di-n-propylamine	621-64-7	<1100	1100	
Hexachloroethane	67-72-1	<1100	1100	
Nitrobenzene	98-95-3	<1100	1100	
Isophorone	78-59-1	<1100	1100	
2-Nitrophenol	88-75-5	<1100	1100	
2,4-Dimethylphenol	105-67-9	<1100	1100	
Benzoic acid	65-85-0	<5300	5300	
bis(2-Chloroethoxy)methane	111-91-1	<1100	1100	
2,4-Dichlorophenol	120-83-2	<1100	1100	
1,2,4-Trichlorobenzene	120-82-1	<1100	1100	
Naphthalene	91-20-3	<1100	1100	
4-Chloroaniline	106-47-8	<2100	2100	
Hexachlorobutadiene	87-68-3	<1100	1100	
4-Chloro-3-methylphenol	59-50-7	<2100	2100	
2-Methylnaphthalene	91-57-6	<1100	1100	
Hexachlorocyclopentadiene	77-47-4	<1100	1100	
2,4,6-Trichlorophenol	88-06-2	<1100	1100	
2,4,5-Trichlorophenol	95-95-4	<1100	1100	
2-Chloronaphthalene	91-58-7	<1100	1100	
2-Nitroaniline	88-74-4	<5300	5300	
Dimethylphthalate	131-11-3	<1100	1100	
Acenaphthylene	208-96-8	<1100	1100	
2,6-Dinitrotoluene	606-20-2	<1100	1100	
3-Nitroaniline	99-09-2	<5300	5300	
Acenaphthene	83-32-9	<1100	1100	
2,4-Dinitrophenol	51-28-5	<5300	5300	
4-Nitrophenol	100-02-7	<5300	5300	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA8SD01(01)	LAL Sample ID:	L8849-77
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	38.38	Preparation Dilution:	0.996

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER
Dibenzofuran	132-64-9	<1100	1100	
2,4-Dinitrotoluene	121-14-2	<1100	1100	
Diethylphthalate	84-66-2	<1100	1100	
4-Chlorophenyl-phenylether	7005-72-3	<1100	1100	
Fluorene	86-73-7	<1100	1100	
4-Nitroaniline	100-01-6	<5300	5300	
4,6-Dinitro-2-methylphenol	534-52-1	<5300	5300	
N-Nitrosodiphenylamine (1)	86-30-6	<1100	1100	
4-Bromophenyl-phenylether	101-55-3	<1100	1100	
Hexachlorobenzene	118-74-1	<1100	1100	
Pentachlorophenol	87-86-5	<5300	5300	
Phenanthrene	85-01-8	<1100	1100	
Anthracene	120-12-7	<1100	1100	
Carbazole	86-74-8	<1100	1100	
Di-n-butylphthalate	84-74-2	<1100	1100	
Fluoranthene	206-44-0	<1100	1100	
Pyrene	129-00-0	<1100	1100	
Butylbenzylphthalate	85-68-7	<1100	1100	
3,3'-Dichlorobenzidine	91-94-1	<2100	2100	
Benzo(a)anthracene	56-55-3	<1100	1100	
Chrysene	218-01-9	<1100	1100	
bis(2-Ethylhexyl)phthalate	117-81-7	<1100	1100	
Di-n-octylphthalate	117-84-0	<1100	1100	
Benzo(b)fluoranthene	205-99-2	<1100	1100	
Benzo(k)fluoranthene	207-08-9	<1100	1100	
Benzo(a)pyrene	50-32-8	<1100	1100	
Indeno(1,2,3-cd)pyrene	193-39-5	<1100	1100	
Dibenz(a,h)anthracene	53-70-3	<1100	1100	
Benzo(g,h,i)perylene	191-24-2	<1100	1100	

LAS

EMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA8SD02(08)	LAL Sample ID:	L8849-73
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.987

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	46%	15-111
Phenol-d5	65%	21-110
Nitrobenzene-d5	48%	17-114
2-Fluorobiphenyl	73%	29-114
2,4,6-Tribromophenol	93%	33-136
Terphenyl-d14	79%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<890	890	
bis(2-Chloroethyl)ether	111-44-4	<890	890	
2-Chlorophenol	95-57-8	<890	890	
1,3-Dichlorobenzene	541-73-1	<890	890	
1,4-Dichlorobenzene	106-46-7	<890	890	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<890	890	
2-Methylphenol	95-48-7	<890	890	
bis(2-chloroisopropyl)ether	108-60-1	<890	890	
4-Methylphenol	106-44-5	<890	890	
N-Nitroso-di-n-propylamine	621-64-7	<890	890	
Hexachloroethane	67-72-1	<890	890	
Nitrobenzene	98-95-3	<890	890	
Isophorone	78-59-1	<890	890	
2-Nitrophenol	88-75-5	<890	890	
2,4-Dimethylphenol	105-67-9	<890	890	
Benzoic acid	65-85-0	<4500	4500	
bis(2-Chloroethoxy)methane	111-91-1	<890	890	
2,4-Dichlorophenol	120-83-2	<890	890	
1,2,4-Trichlorobenzene	120-82-1	<890	890	
Naphthalene	91-20-3	<890	890	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<890	890	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<890	890	
Hexachlorocyclopentadiene	77-47-4	<890	890	
2,4,6-Trichlorophenol	88-06-2	<890	890	
2,4,5-Trichlorophenol	95-95-4	<890	890	
2-Chloronaphthalene	91-58-7	<890	890	
2-Nitroaniline	88-74-4	<4500	4500	
Dimethylphthalate	131-11-3	<890	890	
Acenaphthylene	208-96-8	<890	890	
2,6-Dinitrotoluene	606-20-2	<890	890	
3-Nitroaniline	99-09-2	<4500	4500	
Acenaphthene	83-32-9	<890	890	
2,4-Dinitrophenol	51-28-5	<4500	4500	
4-Nitrophenol	100-02-7	<4500	4500	

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SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA8SD02(08)	LAL Sample ID:	L8849-73
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.987

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s
Dibenzofuran	132-64-9	<890	890	
2,4-Dinitrotoluene	121-14-2	<890	890	
Diethylphthalate	84-66-2	<890	890	
4-Chlorophenyl-phenylether	7005-72-3	<890	890	
Fluorene	86-73-7	<890	890	
4-Nitroaniline	100-01-6	<4500	4500	
4,6-Dinitro-2-methylphenol	534-52-1	<4500	4500	
N-Nitrosodiphenylamine (1)	86-30-6	<890	890	
4-Bromophenyl-phenylether	101-55-3	<890	890	
Hexachlorobenzene	118-74-1	<890	890	
Pentachlorophenol	87-86-5	<4500	4500	
Phenanthrene	85-01-8	<890	890	
Anthracene	120-12-7	<890	890	
Carbazole	86-74-8	<890	890	
Di-n-butylphthalate	84-74-2	<890	890	
Fluoranthene	206-44-0	<890	890	
Pyrene	129-00-0	<890	890	
Butylbenzylphthalate	85-68-7	<890	890	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<890	890	
Chrysene	218-01-9	<890	890	
bis(2-Ethylhexyl)phthalate	117-81-7	<890	890	
Di-n-octylphthalate	117-84-0	<890	890	
Benzo(b)fluoranthene	205-99-2	<890	890	
Benzo(k)fluoranthene	207-08-9	<890	890	
Benzo(a)pyrene	50-32-8	<890	890	
Indeno(1,2,3-cd)pyrene	193-39-5	<890	890	
Dibenz(a,h)anthracene	53-70-3	<890	890	
Benzo(g,h,i)perylene	191-24-2	<890	890	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA10SD01(01)	LAL Sample ID:	L8849-81
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	35.25	Preparation Dilution:	0.997

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	54%	15-111
Phenol-d5	69%	21-110
Nitrobenzene-d5	63%	17-114
2-Fluorobiphenyl	78%	29-114
2,4,6-Tribromophenol	92%	33-136
Terphenyl-d14	75%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<1000	1000	
bis(2-Chloroethyl)ether	111-44-4	<1000	1000	
2-Chlorophenol	95-57-8	<1000	1000	
1,3-Dichlorobenzene	541-73-1	<1000	1000	
1,4-Dichlorobenzene	106-46-7	<1000	1000	
Benzyl alcohol	100-51-6	<2000	2000	
1,2-Dichlorobenzene	95-50-1	<1000	1000	
2-Methylphenol	95-48-7	<1000	1000	
bis(2-chloroisopropyl)ether	108-60-1	<1000	1000	
4-Methylphenol	106-44-5	<1000	1000	
N-Nitroso-di-n-propylamine	621-64-7	<1000	1000	
Hexachloroethane	67-72-1	<1000	1000	
Nitrobenzene	98-95-3	<1000	1000	
Isophorone	78-59-1	<1000	1000	
2-Nitrophenol	88-75-5	<1000	1000	
2,4-Dimethylphenol	105-67-9	<1000	1000	
Benzoic acid	65-85-0	<5100	5100	
bis(2-Chloroethoxy)methane	111-91-1	<1000	1000	
2,4-Dichlorophenol	120-83-2	<1000	1000	
1,2,4-Trichlorobenzene	120-82-1	<1000	1000	
Naphthalene	91-20-3	<1000	1000	
4-Chloroaniline	106-47-8	<2000	2000	
Hexachlorobutadiene	87-68-3	<1000	1000	
4-Chloro-3-methylphenol	59-50-7	<2000	2000	
2-Methylnaphthalene	91-57-6	<1000	1000	
Hexachlorocyclopentadiene	77-47-4	<1000	1000	
2,4,6-Trichlorophenol	88-06-2	<1000	1000	
2,4,5-Trichlorophenol	95-95-4	<1000	1000	
2-Chloronaphthalene	91-58-7	<1000	1000	
2-Nitroaniline	88-74-4	<5100	5100	
Dimethylphthalate	131-11-3	<1000	1000	
Acenaphthylene	208-96-8	<1000	1000	
2,6-Dinitrotoluene	606-20-2	<1000	1000	
3-Nitroaniline	99-09-2	<5100	5100	
Acenaphthene	83-32-9	<1000	1000	
2,4-Dinitrophenol	51-28-5	<5100	5100	
4-Nitrophenol	100-02-7	<5100	5100	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA10SD01(01)	LAL Sample ID:	L8849-81
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	35.25	Preparation Dilution:	0.997

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s
Dibenzofuran	132-64-9	<1000	1000	
2,4-Dinitrotoluene	121-14-2	<1000	1000	
Diethylphthalate	84-66-2	<1000	1000	
4-Chlorophenyl-phenylether	7005-72-3	<1000	1000	
Fluorene	86-73-7	<1000	1000	
4-Nitroaniline	100-01-6	<5100	5100	
4,6-Dinitro-2-methylphenol	534-52-1	<5100	5100	
N-Nitrosodiphenylamine (1)	86-30-6	<1000	1000	
4-Bromophenyl-phenylether	101-55-3	<1000	1000	
Hexachlorobenzene	118-74-1	<1000	1000	
Pentachlorophenol	87-86-5	<5100	5100	
Phenanthrene	85-01-8	<1000	1000	
Anthracene	120-12-7	<1000	1000	
Carbazole	86-74-8	<1000	1000	
Di-n-butylphthalate	84-74-2	<1000	1000	
Fluoranthene	206-44-0	<1000	1000	
Pyrene	129-00-0	<1000	1000	
Butylbenzylphthalate	85-68-7	<1000	1000	
3,3'-Dichlorobenzidine	91-94-1	<2000	2000	
Benzo(a)anthracene	56-55-3	<1000	1000	
Chrysene	218-01-9	<1000	1000	
bis(2-Ethylhexyl)phthalate	117-81-7	<1000	1000	
Di-n-octylphthalate	117-84-0	<1000	1000	
Benzo(b)fluoranthene	205-99-2	<1000	1000	
Benzo(k)fluoranthene	207-08-9	<1000	1000	
Benzo(a)pyrene	50-32-8	<1000	1000	
Indeno(1,2,3-cd)pyrene	193-39-5	<1000	1000	
Dibenz(a,h)anthracene	53-70-3	<1000	1000	
Benzo(g,h,i)perylene	191-24-2	<1000	1000	

LAS LABORATORIES

MI-VOLATILE ORGANICS BY GC/MS
70 SEMI-VOLATILES

Client Sample ID:	97BPXLIA10SD02(08)	LAL Sample ID:	L8849-85
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	44.6	Preparation Dilution:	0.998

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	52%	15-111
Phenol-d5	71%	21-110
Nitrobenzene-d5	57%	17-114
2-Fluorobiphenyl	77%	29-114
2,4,6-Tribromophenol	95%	33-136
Terphenyl-d14	85%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Phenol	108-95-2	<1200	1200	
bis(2-Chloroethyl)ether	111-44-4	<1200	1200	
2-Chlorophenol	95-57-8	<1200	1200	
1,3-Dichlorobenzene	541-73-1	<1200	1200	
1,4-Dichlorobenzene	106-46-7	<1200	1200	
Benzyl alcohol	100-51-6	<2300	2300	
1,2-Dichlorobenzene	95-50-1	<1200	1200	
2-Methylphenol	95-48-7	<1200	1200	
bis(2-chloroisopropyl)ether	108-60-1	<1200	1200	
4-Methylphenol	106-44-5	<1200	1200	
N-Nitroso-di-n-propylamine	621-64-7	<1200	1200	
Hexachloroethane	67-72-1	<1200	1200	
Nitrobenzene	98-95-3	<1200	1200	
Isophorone	78-59-1	<1200	1200	
2-Nitrophenol	88-75-5	<1200	1200	
2,4-Dimethylphenol	105-67-9	<1200	1200	
Benzoic acid	65-85-0	<5900	5900	
bis(2-Chloroethoxy)methane	111-91-1	<1200	1200	
2,4-Dichlorophenol	120-83-2	<1200	1200	
1,2,4-Trichlorobenzene	120-82-1	<1200	1200	
Naphthalene	91-20-3	<1200	1200	
4-Chloroaniline	106-47-8	<2300	2300	
Hexachlorobutadiene	87-68-3	<1200	1200	
4-Chloro-3-methylphenol	59-50-7	<2300	2300	
2-Methylnaphthalene	91-57-6	<1200	1200	
Hexachlorocyclopentadiene	77-47-4	<1200	1200	
2,4,6-Trichlorophenol	88-06-2	<1200	1200	
2,4,5-Trichlorophenol	95-95-4	<1200	1200	
2-Chloronaphthalene	91-58-7	<1200	1200	
2-Nitroaniline	88-74-4	<5900	5900	
Dimethylphthalate	131-11-3	<1200	1200	
Acenaphthylene	208-96-8	<1200	1200	
2,6-Dinitrotoluene	606-20-2	<1200	1200	
3-Nitroaniline	99-09-2	<5900	5900	
Acenaphthene	83-32-9	<1200	1200	
2,4-Dinitrophenol	51-28-5	<5900	5900	
4-Nitrophenol	100-02-7	<5900	5900	

LAS LABORATORIES

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIA10SD02(08)	LAL Sample ID:	L8849-85
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	44.6	Preparation Dilution:	0.998

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<1200	1200	
2,4-Dinitrotoluene	121-14-2	<1200	1200	
Diethylphthalate	84-66-2	<1200	1200	
4-Chlorophenyl-phenylether	7005-72-3	<1200	1200	
Fluorene	86-73-7	<1200	1200	
4-Nitroaniline	100-01-6	<5900	5900	
4,6-Dinitro-2-methylphenol	534-52-1	<5900	5900	
N-Nitrosodiphenylamine (1)	86-30-6	<1200	1200	
4-Bromophenyl-phenylether	101-55-3	<1200	1200	
Hexachlorobenzene	118-74-1	<1200	1200	
Pentachlorophenol	87-86-5	<5900	5900	
Phenanthrene	85-01-8	<1200	1200	
Anthracene	120-12-7	<1200	1200	
Carbazole	86-74-8	<1200	1200	
Di-n-butylphthalate	84-74-2	<1200	1200	
Fluoranthene	206-44-0	<1200	1200	
Pyrene	129-00-0	<1200	1200	
Butylbenzylphthalate	85-68-7	<1200	1200	
3,3'-Dichlorobenzidine	91-94-1	<2300	2300	
Benzo(a)anthracene	56-55-3	<1200	1200	
Chrysene	218-01-9	<1200	1200	
bis(2-Ethylhexyl)phthalate	117-81-7	<1200	1200	
Di-n-octylphthalate	117-84-0	<1200	1200	
Benzo(b)fluoranthene	205-99-2	<1200	1200	
Benzo(k)fluoranthene	207-08-9	<1200	1200	
Benzo(a)pyrene	50-32-8	<1200	1200	
Indeno(1,2,3-cd)pyrene	193-39-5	<1200	1200	
Dibenz(a,h)anthracene	53-70-3	<1200	1200	
Benzo(g,h,i)perylene	191-24-2	<1200	1200	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB8SD02(08)	LAL Sample ID:	L8849-95
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	28.76	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	53%	15-111
Phenol-d5	69%	21-110
Nitrobenzene-d5	62%	17-114
2-Fluorobiphenyl	78%	29-114
2,4,6-Tribromophenol	95%	33-136
Terphenyl-d14	81%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<920	920	
bis(2-Chloroethyl)ether	111-44-4	<920	920	
2-Chlorophenol	95-57-8	<920	920	
1,3-Dichlorobenzene	541-73-1	<920	920	
1,4-Dichlorobenzene	106-46-7	<920	920	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<920	920	
2-Methylphenol	95-48-7	<920	920	
bis(2-chloroisopropyl)ether	108-60-1	<920	920	
4-Methylphenol	106-44-5	<920	920	
N-Nitroso-di-n-propylamine	621-64-7	<920	920	
Hexachloroethane	67-72-1	<920	920	
Nitrobenzene	98-95-3	<920	920	
Isophorone	78-59-1	<920	920	
2-Nitrophenol	88-75-5	<920	920	
2,4-Dimethylphenol	105-67-9	<920	920	
Benzoic acid	65-85-0	<4600	4600	
bis(2-Chloroethoxy)methane	111-91-1	<920	920	
2,4-Dichlorophenol	120-83-2	<920	920	
1,2,4-Trichlorobenzene	120-82-1	<920	920	
Naphthalene	91-20-3	<920	920	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<920	920	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<920	920	
Hexachlorocyclopentadiene	77-47-4	<920	920	
2,4,6-Trichlorophenol	88-06-2	<920	920	
2,4,5-Trichlorophenol	95-95-4	<920	920	
2-Chloronaphthalene	91-58-7	<920	920	
2-Nitroaniline	88-74-4	<4600	4600	
Dimethylphthalate	131-11-3	<920	920	
Acenaphthylene	208-96-8	<920	920	
2,6-Dinitrotoluene	606-20-2	<920	920	
3-Nitroaniline	99-09-2	<4600	4600	
Acenaphthene	83-32-9	<920	920	
2,4-Dinitrophenol	51-28-5	<4600	4600	
4-Nitrophenol	100-02-7	<4600	4600	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB8SD02(08)	LAL Sample ID:	L8849-95
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	28.76	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<920	920	
2,4-Dinitrotoluene	121-14-2	<920	920	
Diethylphthalate	84-66-2	<920	920	
4-Chlorophenyl-phenylether	7005-72-3	<920	920	
Fluorene	86-73-7	<920	920	
4-Nitroaniline	100-01-6	<4600	4600	
4,6-Dinitro-2-methylphenol	534-52-1	<4600	4600	
N-Nitrosodiphenylamine (1)	86-30-6	<920	920	
4-Bromophenyl-phenylether	101-55-3	<920	920	
Hexachlorobenzene	118-74-1	<920	920	
Pentachlorophenol	87-86-5	<4600	4600	
Phenanthrene	85-01-8	<920	920	
Anthracene	120-12-7	<920	920	
Carbazole	86-74-8	<920	920	
Di-n-butylphthalate	84-74-2	<920	920	
Fluoranthene	206-44-0	<920	920	
Pyrene	129-00-0	<920	920	
Butylbenzylphthalate	85-68-7	<920	920	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<920	920	
Chrysene	218-01-9	<920	920	
bis(2-Ethylhexyl)phthalate	117-81-7	<920	920	
Di-n-octylphthalate	117-84-0	<920	920	
Benzo(b)fluoranthene	205-99-2	<920	920	
Benzo(k)fluoranthene	207-08-9	<920	920	
Benzo(a)pyrene	50-32-8	<920	920	
Indeno(1,2,3-cd)pyrene	193-39-5	<920	920	
Dibenz(a,h)anthracene	53-70-3	<920	920	
Benzo(g,h,i)perylene	191-24-2	<920	920	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIBBSD01(01)	LAL Sample ID:	L8849-99
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	28.44	Preparation Dilution:	0.996

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	49%	15-111
Phenol-d5	67%	21-110
Nitrobenzene-d5	59%	17-114
2-Fluorobiphenyl	76%	29-114
2,4,6-Tribromophenol	99%	33-136
Terphenyl-d14	80%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<920	920	
bis(2-Chloroethyl)ether	111-44-4	<920	920	
2-Chlorophenol	95-57-8	<920	920	
1,3-Dichlorobenzene	541-73-1	<920	920	
1,4-Dichlorobenzene	106-46-7	<920	920	
Benzyl alcohol	100-51-6	<1800	1800	
1,2-Dichlorobenzene	95-50-1	<920	920	
2-Methylphenol	95-48-7	<920	920	
bis(2-chloroisopropyl)ether	108-60-1	<920	920	
4-Methylphenol	106-44-5	<920	920	
N-Nitroso-di-n-propylamine	621-64-7	<920	920	
Hexachloroethane	67-72-1	<920	920	
Nitrobenzene	98-95-3	<920	920	
Isophorone	78-59-1	<920	920	
2-Nitrophenol	88-75-5	<920	920	
2,4-Dimethylphenol	105-67-9	<920	920	
Benzoic acid	65-85-0	<4600	4600	
bis(2-Chloroethoxy)methane	111-91-1	<920	920	
2,4-Dichlorophenol	120-83-2	<920	920	
1,2,4-Trichlorobenzene	120-82-1	<920	920	
Naphthalene	91-20-3	<920	920	
4-Chloroaniline	106-47-8	<1800	1800	
Hexachlorobutadiene	87-68-3	<920	920	
4-Chloro-3-methylphenol	59-50-7	<1800	1800	
2-Methylnaphthalene	91-57-6	<920	920	
Hexachlorocyclopentadiene	77-47-4	<920	920	
2,4,6-Trichlorophenol	88-06-2	<920	920	
2,4,5-Trichlorophenol	95-95-4	<920	920	
2-Chloronaphthalene	91-58-7	<920	920	
2-Nitroaniline	88-74-4	<4600	4600	
Dimethylphthalate	131-11-3	<920	920	
Acenaphthylene	208-96-8	<920	920	
2,6-Dinitrotoluene	606-20-2	<920	920	
3-Nitroaniline	99-09-2	<4600	4600	
Acenaphthene	83-32-9	<920	920	
2,4-Dinitrophenol	51-28-5	<4600	4600	
4-Nitrophenol	100-02-7	<4600	4600	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIB8SD01(01)	LAL Sample ID:	L8849-99
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	28.44	Preparation Dilution:	0.996

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	<920	920	
2,4-Dinitrotoluene	121-14-2	<920	920	
Diethylphthalate	84-66-2	<920	920	
4-Chlorophenyl-phenylether	7005-72-3	<920	920	
Fluorene	86-73-7	<920	920	
4-Nitroaniline	100-01-6	<4600	4600	
4,6-Dinitro-2-methylphenol	534-52-1	<4600	4600	
N-Nitrosodiphenylamine (1)	86-30-6	<920	920	
4-Bromophenyl-phenylether	101-55-3	<920	920	
Hexachlorobenzene	118-74-1	<920	920	
Pentachlorophenol	87-86-5	<4600	4600	
Phenanthrene	85-01-8	<920	920	
Anthracene	120-12-7	<920	920	
Carbazole	86-74-8	<920	920	
Di-n-butylphthalate	84-74-2	<920	920	
Fluoranthene	206-44-0	<920	920	
Pyrene	129-00-0	<920	920	
Butylbenzylphthalate	85-68-7	<920	920	
3,3'-Dichlorobenzidine	91-94-1	<1800	1800	
Benzo(a)anthracene	56-55-3	<920	920	
Chrysene	218-01-9	<920	920	
bis(2-Ethylhexyl)phthalate	117-81-7	<920	920	
Di-n-octylphthalate	117-84-0	<920	920	
Benzo(b)fluoranthene	205-99-2	<920	920	
Benzo(k)fluoranthene	207-08-9	<920	920	
Benzo(a)pyrene	50-32-8	<920	920	
Indeno(1,2,3-cd)pyrene	193-39-5	<920	920	
Dibenz(a,h)anthracene	53-70-3	<920	920	
Benzo(g,h,i)perylene	191-24-2	<920	920	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
.270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC4SD01(01)	LAL Sample ID:	L8849-103
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	19.41	Preparation Dilution:	0.995

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	49%	15-111
Phenol-d5	61%	21-110
Nitrobenzene-d5	59%	17-114
2-Fluorobiphenyl	69%	29-114
2,4,6-Tribromophenol	92%	33-136
Terphenyl-d14	80%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<810	810	
bis(2-Chloroethyl)ether	111-44-4	<810	810	
2-Chlorophenol	95-57-8	<810	810	
1,3-Dichlorobenzene	541-73-1	<810	810	
1,4-Dichlorobenzene	106-46-7	<810	810	
Benzyl alcohol	100-51-6	<1600	1600	
1,2-Dichlorobenzene	95-50-1	<810	810	
2-Methylphenol	95-48-7	<810	810	
bis(2-chloroisopropyl)ether	108-60-1	<810	810	
4-Methylphenol	106-44-5	<810	810	
N-Nitroso-di-n-propylamine	621-64-7	<810	810	
Hexachloroethane	67-72-1	<810	810	
Nitrobenzene	98-95-3	<810	810	
Isophorone	78-59-1	<810	810	
2-Nitrophenol	88-75-5	<810	810	
2,4-Dimethylphenol	105-67-9	<810	810	
Benzoic acid	65-85-0	<4100	4100	
bis(2-Chloroethoxy)methane	111-91-1	<810	810	
2,4-Dichlorophenol	120-83-2	<810	810	
1,2,4-Trichlorobenzene	120-82-1	<810	810	
Naphthalene	91-20-3	<810	810	
4-Chloroaniline	106-47-8	<1600	1600	
Hexachlorobutadiene	87-68-3	<810	810	
4-Chloro-3-methylphenol	59-50-7	<1600	1600	
2-Methylnaphthalene	91-57-6	<810	810	
Hexachlorocyclopentadiene	77-47-4	<810	810	
2,4,6-Trichlorophenol	88-06-2	<810	810	
2,4,5-Trichlorophenol	95-95-4	<810	810	
2-Chloronaphthalene	91-58-7	<810	810	
2-Nitroaniline	88-74-4	<4100	4100	
Dimethylphthalate	131-11-3	<810	810	
Acenaphthylene	208-96-8	<810	810	
2,6-Dinitrotoluene	606-20-2	<810	810	
3-Nitroaniline	99-09-2	<4100	4100	
Acenaphthene	83-32-9	<810	810	
2,4-Dinitrophenol	51-28-5	<4100	4100	
4-Nitrophenol	100-02-7	<4100	4100	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS
8270 SEMI-VOLATILES

Client Sample ID:	97BPXLIC4SD01(01)	LAL Sample ID:	L8849-103
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Date Extracted:	20-FEB-97
Matrix:	Soil	Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	19.41	Preparation Dilution:	0.995

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<810	810	
2,4-Dinitrotoluene	121-14-2	<810	810	
Diethylphthalate	84-66-2	<810	810	
4-Chlorophenyl-phenylether	7005-72-3	<810	810	
Fluorene	86-73-7	<810	810	
4-Nitroaniline	100-01-6	<4100	4100	
4,6-Dinitro-2-methylphenol	534-52-1	<4100	4100	
N-Nitrosodiphenylamine (1)	86-30-6	<810	810	
4-Bromophenyl-phenylether	101-55-3	<810	810	
Hexachlorobenzene	118-74-1	<810	810	
Pentachlorophenol	87-86-5	<4100	4100	
Phenanthrene	85-01-8	<810	810	
Anthracene	120-12-7	<810	810	
Carbazole	86-74-8	<810	810	
Di-n-butylphthalate	84-74-2	<810	810	
Fluoranthene	206-44-0	<810	810	
Pyrene	129-00-0	<810	810	
Butylbenzylphthalate	85-68-7	<810	810	
3,3'-Dichlorobenzidine	91-94-1	<1600	1600	
Benzo(a)anthracene	56-55-3	<810	810	
Chrysene	218-01-9	<810	810	
bis(2-Ethylhexyl)phthalate	117-81-7	<810	810	
Di-n-octylphthalate	117-84-0	<810	810	
Benzo(b)fluoranthene	205-99-2	<810	810	
Benzo(k)fluoranthene	207-08-9	<810	810	
Benzo(a)pyrene	50-32-8	<810	810	
Indeno(1,2,3-cd)pyrene	193-39-5	<810	810	
Dibenz(a,h)anthracene	53-70-3	<810	810	
Benzo(g,h,i)perylene	191-24-2	<810	810	

LAS

SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Method Blank	LAL Sample ID:	45791MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	61%	15-111
Phenol-d5	69%	21-110
Nitrobenzene-d5	83%	17-114
2-Fluorobiphenyl	84%	29-114
2,4,6-Tribromophenol	95%	33-136
Terphenyl-d14	113%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<660	660	
bis(2-Chloroethyl)ether	111-44-4	<660	660	
2-Chlorophenol	95-57-8	<660	660	
1,3-Dichlorobenzene	541-73-1	<660	660	
1,4-Dichlorobenzene	106-46-7	<660	660	
Benzyl alcohol	100-51-6	<1300	1300	
1,2-Dichlorobenzene	95-50-1	<660	660	
2-Methylphenol	95-48-7	<660	660	
bis(2-chloroisopropyl)ether	108-60-1	<660	660	
4-Methylphenol	106-44-5	<660	660	
N-Nitroso-di-n-propylamine	621-64-7	<660	660	
Hexachloroethane	67-72-1	<660	660	
Nitrobenzene	98-95-3	<660	660	
Isophorone	78-59-1	<660	660	
2-Nitrophenol	88-75-5	<660	660	
2,4-Dimethylphenol	105-67-9	<660	660	
Benzoic acid	65-85-0	<3300	3300	
bis(2-Chloroethoxy)methane	111-91-1	<660	660	
2,4-Dichlorophenol	120-83-2	<660	660	
1,2,4-Trichlorobenzene	120-82-1	<660	660	
Naphthalene	91-20-3	<660	660	
4-Chloroaniline	106-47-8	<1300	1300	
Hexachlorobutadiene	87-68-3	<660	660	
4-Chloro-3-methylphenol	59-50-7	<1300	1300	
2-Methylnaphthalene	91-57-6	<660	660	
Hexachlorocyclopentadiene	77-47-4	<660	660	
2,4,6-Trichlorophenol	88-06-2	<660	660	
2,4,5-Trichlorophenol	95-95-4	<660	660	
2-Chloronaphthalene	91-58-7	<660	660	
2-Nitroaniline	88-74-4	<3300	3300	
Dimethylphthalate	131-11-3	<660	660	
Acenaphthylene	208-96-8	<660	660	
2,6-Dinitrotoluene	606-20-2	<660	660	
3-Nitroaniline	99-09-2	<3300	3300	
Acenaphthene	83-32-9	<660	660	
2,4-Dinitrophenol	51-28-5	<3300	3300	
4-Nitrophenol	100-02-7	<3300	3300	

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SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Method Blank	LAL Sample ID:	45791MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	0.999

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	<660	660	
2,4-Dinitrotoluene	121-14-2	<660	660	
Diethylphthalate	84-66-2	<660	660	
4-Chlorophenyl-phenylether	7005-72-3	<660	660	
Fluorene	86-73-7	<660	660	
4-Nitroaniline	100-01-6	<3300	3300	
4,6-Dinitro-2-methylphenol	534-52-1	<3300	3300	
N-Nitrosodiphenylamine (1)	86-30-6	<660	660	
4-Bromophenyl-phenylether	101-55-3	<660	660	
Hexachlorobenzene	118-74-1	<660	660	
Pentachlorophenol	87-86-5	<3300	3300	
Phenanthrene	85-01-8	<660	660	
Anthracene	120-12-7	<660	660	
Carbazole	86-74-8	<660	660	
Di-n-butylphthalate	84-74-2	<660	660	
Fluoranthene	206-44-0	<660	660	
Pyrene	129-00-0	<660	660	
Butylbenzylphthalate	85-68-7	<660	660	
3,3'-Dichlorobenzidine	91-94-1	<1300	1300	
Benzo(a)anthracene	56-55-3	<660	660	
Chrysene	218-01-9	<660	660	
bis(2-Ethylhexyl)phthalate	117-81-7	<660	660	
Di-n-octylphthalate	117-84-0	<660	660	
Benzo(b)fluoranthene	205-99-2	<660	660	
Benzo(k)fluoranthene	207-08-9	<660	660	
Benzo(a)pyrene	50-32-8	<660	660	
Indeno(1,2,3-cd)pyrene	193-39-5	<660	660	
Dibenz(a,h)anthracene	53-70-3	<660	660	
Benzo(g,h,i)perylene	191-24-2	<660	660	

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SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Method Blank	LAL Sample ID:	45795MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	49%	15-111
Phenol-d5	59%	21-110
Nitrobenzene-d5	57%	17-114
2-Fluorobiphenyl	64%	29-114
2,4,6-Tribromophenol	94%	33-136
Terphenyl-d14	93%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	<660	660	
bis(2-Chloroethyl)ether	111-44-4	<660	660	
2-Chlorophenol	95-57-8	<660	660	
1,3-Dichlorobenzene	541-73-1	<660	660	
1,4-Dichlorobenzene	106-46-7	<660	660	
Benzyl alcohol	100-51-6	<1300	1300	
1,2-Dichlorobenzene	95-50-1	<660	660	
2-Methylphenol	95-48-7	<660	660	
bis(2-chloroisopropyl)ether	108-60-1	<660	660	
4-Methylphenol	106-44-5	<660	660	
N-Nitroso-di-n-propylamine	621-64-7	<660	660	
Hexachloroethane	67-72-1	<660	660	
Nitrobenzene	98-95-3	<660	660	
Isophorone	78-59-1	<660	660	
2-Nitrophenol	88-75-5	<660	660	
2,4-Dimethylphenol	105-67-9	<660	660	
Benzoic acid	65-85-0	<3300	3300	
bis(2-Chloroethoxy)methane	111-91-1	<660	660	
2,4-Dichlorophenol	120-83-2	<660	660	
1,2,4-Trichlorobenzene	120-82-1	<660	660	
Naphthalene	91-20-3	<660	660	
4-Chloroaniline	106-47-8	<1300	1300	
Hexachlorobutadiene	87-68-3	<660	660	
4-Chloro-3-methylphenol	59-50-7	<1300	1300	
2-Methylnaphthalene	91-57-6	<660	660	
Hexachlorocyclopentadiene	77-47-4	<660	660	
2,4,6-Trichlorophenol	88-06-2	<660	660	
2,4,5-Trichlorophenol	95-95-4	<660	660	
2-Chloronaphthalene	91-58-7	<660	660	
2-Nitroaniline	88-74-4	<3300	3300	
Dimethylphthalate	131-11-3	<660	660	
Acenaphthylene	208-96-8	<660	660	
2,6-Dinitrotoluene	606-20-2	<660	660	
3-Nitroaniline	99-09-2	<3300	3300	
Acenaphthene	83-32-9	<660	660	
2,4-Dinitrophenol	51-28-5	<3300	3300	
4-Nitrophenol	100-02-7	<3300	3300	

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SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Method Blank	LAL Sample ID:	45795MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S
Dibenzofuran	132-64-9	<660	660	
2,4-Dinitrotoluene	121-14-2	<660	660	
Diethylphthalate	84-66-2	<660	660	
4-Chlorophenyl-phenylether	7005-72-3	<660	660	
Fluorene	86-73-7	<660	660	
4-Nitroaniline	100-01-6	<3300	3300	
4,6-Dinitro-2-methylphenol	534-52-1	<3300	3300	
N-Nitrosodiphenylamine (1)	86-30-6	<660	660	
4-Bromophenyl-phenylether	101-55-3	<660	660	
Hexachlorobenzene	118-74-1	<660	660	
Pentachlorophenol	87-86-5	<3300	3300	
Phenanthrene	85-01-8	<660	660	
Anthracene	120-12-7	<660	660	
Carbazole	86-74-8	<660	660	
Di-n-butylphthalate	84-74-2	<660	660	
Fluoranthene	206-44-0	<660	660	
Pyrene	129-00-0	<660	660	
Butylbenzylphthalate	85-68-7	<660	660	
3,3'-Dichlorobenzidine	91-94-1	<1300	1300	
Benzo(a)anthracene	56-55-3	<660	660	
Chrysene	218-01-9	<660	660	
bis(2-Ethylhexyl)phthalate	117-81-7	<660	660	
Di-n-octylphthalate	117-84-0	<660	660	
Benzo(b)fluoranthene	205-99-2	<660	660	
Benzo(k)fluoranthene	207-08-9	<660	660	
Benzo(a)pyrene	50-32-8	<660	660	
Indeno(1,2,3-cd)pyrene	193-39-5	<660	660	
Dibenz(a,h)anthracene	53-70-3	<660	660	
Benzo(g,h,i)perylene	191-24-2	<660	660	

LAS

SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	45791MS
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	22.03	Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	75%	15-111
Phenol-d5	84%	21-110
Nitrobenzene-d5	83%	17-114
2-Fluorobiphenyl	89%	29-114
2,4,6-Tribromophenol	97%	33-136
Terphenyl-d14	99%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	7800	840	
bis(2-Chloroethyl)ether	111-44-4	7900	840	
2-Chlorophenol	95-57-8	7200	840	
1,3-Dichlorobenzene	541-73-1	5200	840	
1,4-Dichlorobenzene	106-46-7	5700	840	
Benzyl alcohol	100-51-6	7900	1700	
1,2-Dichlorobenzene	95-50-1	5900	840	
2-Methylphenol	95-48-7	10000	840	
bis(2-chloroisopropyl)ether	108-60-1	9000	840	
4-Methylphenol	106-44-5	6100	840	
N-Nitroso-di-n-propylamine	621-64-7	7900	840	
Hexachloroethane	67-72-1	5100	840	
Nitrobenzene	98-95-3	6900	840	
Isophorone	78-59-1	7900	840	
2-Nitrophenol	88-75-5	7400	840	
2,4-Dimethylphenol	105-67-9	8700	840	
Benzoic acid	65-85-0	7800	4200	
bis(2-Chloroethoxy)methane	111-91-1	8100	840	
2,4-Dichlorophenol	120-83-2	8500	840	
1,2,4-Trichlorobenzene	120-82-1	6900	840	
Naphthalene	91-20-3	7700	840	
4-Chloroaniline	106-47-8	7800	1700	
Hexachlorobutadiene	87-68-3	6300	840	
4-Chloro-3-methylphenol	59-50-7	8000	1700	
2-Methylnaphthalene	91-57-6	7900	840	
Hexachlorocyclopentadiene	77-47-4	1200	840	
2,4,6-Trichlorophenol	88-06-2	8100	840	
2,4,5-Trichlorophenol	95-95-4	7900	840	
2-Chloronaphthalene	91-58-7	8000	840	
2-Nitroaniline	88-74-4	7100	4200	
Dimethylphthalate	131-11-3	8700	840	
Acenaphthylene	208-96-8	8400	840	
2,6-Dinitrotoluene	606-20-2	7400	840	
3-Nitroaniline	99-09-2	7700	4200	
Acenaphthene	83-32-9	8400	840	
2,4-Dinitrophenol	51-28-5	5500	4200	
4-Nitrophenol	100-02-7	7500	4200	

LAS

SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	45791MS
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	22.03	Preparation Dilution:	0.999

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S
Dibenzofuran	132-64-9	8200	840	
2,4-Dinitrotoluene	121-14-2	6200	840	
Diethylphthalate	84-66-2	8700	840	
4-Chlorophenyl-phenylether	7005-72-3	8100	840	
Fluorene	86-73-7	8500	840	
4-Nitroaniline	100-01-6	8900	4200	
4,6-Dinitro-2-methylphenol	534-52-1	5800	4200	
N-Nitrosodiphenylamine (1)	86-30-6	9100	840	
4-Bromophenyl-phenylether	101-55-3	8200	840	
Hexachlorobenzene	118-74-1	8500	840	
Pentachlorophenol	87-86-5	9500	4200	
Phenanthrene	85-01-8	9100	840	
Anthracene	120-12-7	8900	840	
Carbazole	86-74-8	9500	840	
Di-n-butylphthalate	84-74-2	9200	840	
Fluoranthene	206-44-0	9500	840	
Pyrene	129-00-0	7400	840	
Butylbenzylphthalate	85-68-7	7800	840	
3,3'-Dichlorobenzidine	91-94-1	8300	1700	
Benzo(a)anthracene	56-55-3	9200	840	
Chrysene	218-01-9	9200	840	
bis(2-Ethylhexyl)phthalate	117-81-7	8600	840	
Di-n-octylphthalate	117-84-0	7500	840	
Benzo(b)fluoranthene	205-99-2	8900	840	
Benzo(k)fluoranthene	207-08-9	8300	840	
Benzo(a)pyrene	50-32-8	8900	840	
Indeno(1,2,3-cd)pyrene	193-39-5	9100	840	
Dibenz(a,h)anthracene	53-70-3	9100	840	
Benzo(g,h,i)perylene	191-24-2	9000	840	

LAS

SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIA8SD02(08)	LAL Sample ID:	45795MS
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	38%	15-111
Phenol-d5	54%	21-110
Nitrobenzene-d5	44%	17-114
2-Fluorobiphenyl	71%	29-114
2,4,6-Tribromophenol	100%	33-136
Terphenyl-d14	87%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	5500	900	
bis(2-Chloroethyl)ether	111-44-4	3100	900	
2-Chlorophenol	95-57-8	4500	900	
1,3-Dichlorobenzene	541-73-1	2400	900	
1,4-Dichlorobenzene	106-46-7	2600	900	
Benzyl alcohol	100-51-6	6200	1800	
1,2-Dichlorobenzene	95-50-1	2700	900	
2-Methylphenol	95-48-7	6200	900	
bis(2-chloroisopropyl)ether	108-60-1	3900	900	
4-Methylphenol	106-44-5	7700	900	
N-Nitroso-di-n-propylamine	621-64-7	5200	900	
Hexachloroethane	67-72-1	2600	900	
Nitrobenzene	98-95-3	4200	900	
Isophorone	78-59-1	6200	900	
2-Nitrophenol	88-75-5	5000	900	
2,4-Dimethylphenol	105-67-9	6600	900	
Benzoic acid	65-85-0	8100	4500	
bis(2-Chloroethoxy)methane	111-91-1	5600	900	
2,4-Dichlorophenol	120-83-2	6900	900	
1,2,4-Trichlorobenzene	120-82-1	4500	900	
Naphthalene	91-20-3	5200	900	
4-Chloroaniline	106-47-8	3300	1800	
Hexachlorobutadiene	87-68-3	4200	900	
4-Chloro-3-methylphenol	59-50-7	7000	1800	
2-Methylnaphthalene	91-57-6	5900	900	
Hexachlorocyclopentadiene	77-47-4	1300	900	
2,4,6-Trichlorophenol	88-06-2	7900	900	
2,4,5-Trichlorophenol	95-95-4	7900	900	
2-Chloronaphthalene	91-58-7	6800	900	
2-Nitroaniline	88-74-4	8000	4500	
Dimethylphthalate	131-11-3	8300	900	
Acenaphthylene	208-96-8	7400	900	
2,6-Dinitrotoluene	606-20-2	8800	900	
3-Nitroaniline	99-09-2	7200	4500	
Acenaphthene	83-32-9	7600	900	
2,4-Dinitrophenol	51-28-5	11000	4500	
4-Nitrophenol	100-02-7	9700	4500	

LAS

SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIA8SD02(08)	LAL Sample ID:	45795MS
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.999

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s
Dibenzofuran	132-64-9	7700	900	
2,4-Dinitrotoluene	121-14-2	9200	900	
Diethylphthalate	84-66-2	8500	900	
4-Chlorophenyl-phenylether	7005-72-3	8200	900	
Fluorene	86-73-7	8000	900	
4-Nitroaniline	100-01-6	9300	4500	
4,6-Dinitro-2-methylphenol	534-52-1	10000	4500	
N-Nitrosodiphenylamine (1)	86-30-6	8100	900	
4-Bromophenyl-phenylether	101-55-3	7500	900	
Hexachlorobenzene	118-74-1	7800	900	
Pentachlorophenol	87-86-5	11000	4500	
Phenanthrene	85-01-8	8300	900	
Anthracene	120-12-7	8200	900	
Carbazole	86-74-8	8900	900	
Di-n-butylphthalate	84-74-2	8300	900	
Fluoranthene	206-44-0	9500	900	
Pyrene	129-00-0	7200	900	
Butylbenzylphthalate	85-68-7	7600	900	
3,3'-Dichlorobenzidine	91-94-1	5300	1800	
Benzo(a)anthracene	56-55-3	8500	900	
Chrysene	218-01-9	8600	900	
bis(2-Ethylhexyl)phthalate	117-81-7	7500	900	
Di-n-octylphthalate	117-84-0	6300	900	
Benzo(b)fluoranthene	205-99-2	7600	900	
Benzo(k)fluoranthene	207-08-9	7800	900	
Benzo(a)pyrene	50-32-8	8100	900	
Indeno(1,2,3-cd)pyrene	193-39-5	8400	900	
Dibenz(a,h)anthracene	53-70-3	8300	900	
Benzo(g,h,i)perylene	191-24-2	8500	900	

LAS

SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	45791MSD
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	22.03	Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	71%	15-111
Phenol-d5	75%	21-110
Nitrobenzene-d5	85%	17-114
2-Fluorobiphenyl	87%	29-114
2,4,6-Tribromophenol	97%	33-136
Terphenyl-d14	103%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	6500	840	
bis(2-Chloroethyl)ether	111-44-4	6600	840	
2-Chlorophenol	95-57-8	6600	840	
1,3-Dichlorobenzene	541-73-1	5000	840	
1,4-Dichlorobenzene	106-46-7	5100	840	
Benzyl alcohol	100-51-6	8300	1700	
1,2-Dichlorobenzene	95-50-1	5300	840	
2-Methylphenol	95-48-7	9400	840	
bis(2-chloroisopropyl)ether	108-60-1	8000	840	
4-Methylphenol	106-44-5	5700	840	
N-Nitroso-di-n-propylamine	621-64-7	7700	840	
Hexachloroethane	67-72-1	4400	840	
Nitrobenzene	98-95-3	7000	840	
Isophorone	78-59-1	7900	840	
2-Nitrophenol	88-75-5	7900	840	
2,4-Dimethylphenol	105-67-9	8600	840	
Benzoic acid	65-85-0	7600	4200	
bis(2-Chloroethoxy)methane	111-91-1	8100	840	
2,4-Dichlorophenol	120-83-2	8400	840	
1,2,4-Trichlorobenzene	120-82-1	7100	840	
Naphthalene	91-20-3	7500	840	
4-Chloroaniline	106-47-8	7400	1700	
Hexachlorobutadiene	87-68-3	6600	840	
4-Chloro-3-methylphenol	59-50-7	8000	1700	
2-Methylnaphthalene	91-57-6	7500	840	
Hexachlorocyclopentadiene	77-47-4	1500	840	
2,4,6-Trichlorophenol	88-06-2	8200	840	
2,4,5-Trichlorophenol	95-95-4	7600	840	
2-Chloronaphthalene	91-58-7	7900	840	
2-Nitroaniline	88-74-4	7600	4200	
Dimethylphthalate	131-11-3	8700	840	
Acenaphthylene	208-96-8	8200	840	
2,6-Dinitrotoluene	606-20-2	8100	840	
3-Nitroaniline	99-09-2	7700	4200	
Acenaphthene	83-32-9	8000	840	
2,4-Dinitrophenol	51-28-5	6700	4200	
4-Nitrophenol	100-02-7	7000	4200	

LAS

SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	45791MSD
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	22.03	Preparation Dilution:	0.999

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s
Dibenzofuran	132-64-9	8000	840	
2,4-Dinitrotoluene	121-14-2	7100	840	
Diethylphthalate	84-66-2	8400	840	
4-Chlorophenyl-phenylether	7005-72-3	7900	840	
Fluorene	86-73-7	8100	840	
4-Nitroaniline	100-01-6	8800	4200	
4,6-Dinitro-2-methylphenol	534-52-1	7000	4200	
N-Nitrosodiphenylamine (1)	86-30-6	8700	840	
4-Bromophenyl-phenylether	101-55-3	8300	840	
Hexachlorobenzene	118-74-1	8500	840	
Pentachlorophenol	87-86-5	9900	4200	
Phenanthrene	85-01-8	9000	840	
Anthracene	120-12-7	8600	840	
Carbazole	86-74-8	9100	840	
Di-n-butylphthalate	84-74-2	8900	840	
Fluoranthene	206-44-0	8900	840	
Pyrene	129-00-0	7700	840	
Butylbenzylphthalate	85-68-7	8100	840	
3,3'-Dichlorobenzidine	91-94-1	8200	1700	
Benzo(a)anthracene	56-55-3	9100	840	
Chrysene	218-01-9	9200	840	
bis(2-Ethylhexyl)phthalate	117-81-7	8400	840	
Di-n-octylphthalate	117-84-0	7200	840	
Benzo(b)fluoranthene	205-99-2	8100	840	
Benzo(k)fluoranthene	207-08-9	8800	840	
Benzo(a)pyrene	50-32-8	8800	840	
Indeno(1,2,3-cd)pyrene	193-39-5	9400	840	
Dibenz(a,h)anthracene	53-70-3	9500	840	
Benzo(g,h,i)perylene	191-24-2	9500	840	

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SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIA8SD02(08)	LAL Sample ID:	45795MSD
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.989

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	52%	15-111
Phenol-d5	64%	21-110
Nitrobenzene-d5	61%	17-114
2-Fluorobiphenyl	85%	29-114
2,4,6-Tribromophenol	110%	33-136
Terphenyl-d14	92%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s
Phenol	108-95-2	6400	890	
bis(2-Chloroethyl)ether	111-44-4	4400	890	
2-Chlorophenol	95-57-8	5600	890	
1,3-Dichlorobenzene	541-73-1	3400	890	
1,4-Dichlorobenzene	106-46-7	3600	890	
Benzyl alcohol	100-51-6	7200	1800	
1,2-Dichlorobenzene	95-50-1	3500	890	
2-Methylphenol	95-48-7	7600	890	
bis(2-chloroisopropyl)ether	108-60-1	5000	890	
4-Methylphenol	106-44-5	9200	890	
N-Nitroso-di-n-propylamine	621-64-7	6000	890	
Hexachloroethane	67-72-1	3400	890	
Nitrobenzene	98-95-3	5600	890	
Isophorone	78-59-1	7000	890	
2-Nitrophenol	88-75-5	6300	890	
2,4-Dimethylphenol	105-67-9	7400	890	
Benzoic acid	65-85-0	8400	4500	
bis(2-Chloroethoxy)methane	111-91-1	6600	890	
2,4-Dichlorophenol	120-83-2	7900	890	
1,2,4-Trichlorobenzene	120-82-1	5800	890	
Naphthalene	91-20-3	6400	890	
4-Chloroaniline	106-47-8	4100	1800	
Hexachlorobutadiene	87-68-3	5400	890	
4-Chloro-3-methylphenol	59-50-7	7500	1800	
2-Methylnaphthalene	91-57-6	7000	890	
Hexachlorocyclopentadiene	77-47-4	1900	890	
2,4,6-Trichlorophenol	88-06-2	8700	890	
2,4,5-Trichlorophenol	95-95-4	8200	890	
2-Chloronaphthalene	91-58-7	7900	890	
2-Nitroaniline	88-74-4	8700	4500	
Dimethylphthalate	131-11-3	8800	890	
Acenaphthylene	208-96-8	8300	890	
2,6-Dinitrotoluene	606-20-2	9600	890	
3-Nitroaniline	99-09-2	8100	4500	
Acenaphthene	83-32-9	8400	890	
2,4-Dinitrophenol	51-28-5	13000	4500	
4-Nitrophenol	100-02-7	11000	4500	

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SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIA8SD02(08)	LAL Sample ID:	45795MSD
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.989

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s
Dibenzofuran	132-64-9	8400	890	
2,4-Dinitrotoluene	121-14-2	9900	890	
Diethylphthalate	84-66-2	9000	890	
4-Chlorophenyl-phenylether	7005-72-3	8700	890	
Fluorene	86-73-7	8600	890	
4-Nitroaniline	100-01-6	9900	4500	
4,6-Dinitro-2-methylphenol	534-52-1	11000	4500	
N-Nitrosodiphenylamine (1)	86-30-6	8300	890	
4-Bromophenyl-phenylether	101-55-3	8100	890	
Hexachlorobenzene	118-74-1	8200	890	
Pentachlorophenol	87-86-5	11000	4500	
Phenanthrene	85-01-8	8600	890	
Anthracene	120-12-7	8500	890	
Carbazole	86-74-8	9100	890	
Di-n-butylphthalate	84-74-2	8600	890	
Fluoranthene	206-44-0	9500	890	
Pyrene	129-00-0	7600	890	
Butylbenzylphthalate	85-68-7	8100	890	
3,3'-Dichlorobenzidine	91-94-1	6200	1800	
Benzo(a)anthracene	56-55-3	9200	890	
Chrysene	218-01-9	9000	890	
bis(2-Ethylhexyl)phthalate	117-81-7	7900	890	
Di-n-octylphthalate	117-84-0	6500	890	
Benzo(b)fluoranthene	205-99-2	9000	890	
Benzo(k)fluoranthene	207-08-9	7700	890	
Benzo(a)pyrene	50-32-8	8700	890	
Indeno(1,2,3-cd)pyrene	193-39-5	8500	890	
Dibenz(a,h)anthracene	53-70-3	8800	890	
Benzo(g,h,i)perylene	191-24-2	9100	890	

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SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45791LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	73%	15-111
Phenol-d5	70%	21-110
Nitrobenzene-d5	88%	17-114
2-Fluorobiphenyl	95%	29-114
2,4,6-Tribromophenol	90%	33-136
Terphenyl-d14	103%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s
Phenol	108-95-2	5100	660	
bis(2-Chloroethyl)ether	111-44-4	5300	660	
2-Chlorophenol	95-57-8	4800	660	
1,3-Dichlorobenzene	541-73-1	4700	660	
1,4-Dichlorobenzene	106-46-7	4500	660	
Benzyl alcohol	100-51-6	5000	1300	
1,2-Dichlorobenzene	95-50-1	4400	660	
2-Methylphenol	95-48-7	5300	660	
bis(2-chloroisopropyl)ether	108-60-1	5100	660	
4-Methylphenol	106-44-5	4800	660	
N-Nitroso-di-n-propylamine	621-64-7	5000	660	
Hexachloroethane	67-72-1	4500	660	
Nitrobenzene	98-95-3	5600	660	
Isophorone	78-59-1	5900	660	
2-Nitrophenol	88-75-5	5600	660	
2,4-Dimethylphenol	105-67-9	5600	660	
Benzoic acid	65-85-0	5800	3300	
bis(2-Chloroethoxy)methane	111-91-1	5500	660	
2,4-Dichlorophenol	120-83-2	5300	660	
1,2,4-Trichlorobenzene	120-82-1	5400	660	
Naphthalene	91-20-3	5600	660	
4-Chloroaniline	106-47-8	4400	1300	
Hexachlorobutadiene	87-68-3	5300	660	
4-Chloro-3-methylphenol	59-50-7	5700	1300	
2-Methylnaphthalene	91-57-6	5200	660	
Hexachlorocyclopentadiene	77-47-4	5700	660	
2,4,6-Trichlorophenol	88-06-2	6400	660	
2,4,5-Trichlorophenol	95-95-4	6300	660	
2-Chloronaphthalene	91-58-7	6100	660	
2-Nitroaniline	88-74-4	6400	3300	
Dimethylphthalate	131-11-3	5900	660	
Acenaphthylene	208-96-8	6200	660	
2,6-Dinitrotoluene	606-20-2	6300	660	
3-Nitroaniline	99-09-2	4900	3300	
Acenaphthene	83-32-9	6200	660	
2,4-Dinitrophenol	51-28-5	6500	3300	
4-Nitrophenol	100-02-7	5500	3300	

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SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45791LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Dibenzofuran	132-64-9	5800	660	
2,4-Dinitrotoluene	121-14-2	6300	660	
Diethylphthalate	84-66-2	5800	660	
4-Chlorophenyl-phenylether	7005-72-3	6000	660	
Fluorene	86-73-7	6000	660	
4-Nitroaniline	100-01-6	6000	3300	
4,6-Dinitro-2-methylphenol	534-52-1	7500	3300	
N-Nitrosodiphenylamine (1)	86-30-6	6400	660	
4-Bromophenyl-phenylether	101-55-3	6400	660	
Hexachlorobenzene	118-74-1	6500	660	
Pentachlorophenol	87-86-5	6700	3300	
Phenanthrene	85-01-8	6600	660	
Anthracene	120-12-7	6500	660	
Carbazole	86-74-8	6700	660	
Di-n-butylphthalate	84-74-2	6400	660	
Fluoranthene	206-44-0	6900	660	
Pyrene	129-00-0	6100	660	
Butylbenzylphthalate	85-68-7	6200	660	
3,3'-Dichlorobenzidine	91-94-1	5800	1300	
Benzo(a)anthracene	56-55-3	6800	660	
Chrysene	218-01-9	6700	660	
bis(2-Ethylhexyl)phthalate	117-81-7	6100	660	
Di-n-octylphthalate	117-84-0	5500	660	
Benzo(b)fluoranthene	205-99-2	6300	660	
Benzo(k)fluoranthene	207-08-9	6500	660	
Benzo(a)pyrene	50-32-8	6900	660	
Indeno(1,2,3-cd)pyrene	193-39-5	7200	660	
Dibenz(a,h)anthracene	53-70-3	7200	660	
Benzo(g,h,i)perylene	191-24-2	7100	660	

LAS

SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45795LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	61%	15-111
Phenol-d5	65%	21-110
Nitrobenzene-d5	68%	17-114
2-Fluorobiphenyl	80%	29-114
2,4,6-Tribromophenol	103%	33-136
Terphenyl-d14	89%	32-151

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(s)
Phenol	108-95-2	4900	660	
bis(2-Chloroethyl)ether	111-44-4	4500	660	
2-Chlorophenol	95-57-8	4500	660	
1,3-Dichlorobenzene	541-73-1	4200	660	
1,4-Dichlorobenzene	106-46-7	4300	660	
Benzyl alcohol	100-51-6	4700	1300	
1,2-Dichlorobenzene	95-50-1	4100	660	
2-Methylphenol	95-48-7	5000	660	
bis(2-chloroisopropyl)ether	108-60-1	4700	660	
4-Methylphenol	106-44-5	5300	660	
N-Nitroso-di-n-propylamine	621-64-7	4600	660	
Hexachloroethane	67-72-1	3800	660	
Nitrobenzene	98-95-3	4800	660	
Isophorone	78-59-1	5400	660	
2-Nitrophenol	88-75-5	4900	660	
2,4-Dimethylphenol	105-67-9	4900	660	
Benzoic acid	65-85-0	4300	3300	
bis(2-Chloroethoxy)methane	111-91-1	5100	660	
2,4-Dichlorophenol	120-83-2	5600	660	
1,2,4-Trichlorobenzene	120-82-1	4800	660	
Naphthalene	91-20-3	5100	660	
4-Chloroaniline	106-47-8	3600	1300	
Hexachlorobutadiene	87-68-3	4600	660	
4-Chloro-3-methylphenol	59-50-7	5600	1300	
2-Methylnaphthalene	91-57-6	5100	660	
Hexachlorocyclopentadiene	77-47-4	3200	660	
2,4,6-Trichlorophenol	88-06-2	5900	660	
2,4,5-Trichlorophenol	95-95-4	5900	660	
2-Chloronaphthalene	91-58-7	5500	660	
2-Nitroaniline	88-74-4	6100	3300	
Dimethylphthalate	131-11-3	6400	660	
Acenaphthylene	208-96-8	5900	660	
2,6-Dinitrotoluene	606-20-2	6600	660	
3-Nitroaniline	99-09-2	5200	3300	
Acenaphthene	83-32-9	5900	660	
2,4-Dinitrophenol	51-28-5	7400	3300	
4-Nitrophenol	100-02-7	6500	3300	

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SPIKED SAMPLE RESULT
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45795LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	1.00

CONSTITUENT	CAS NO.	RESULT ug/Kg	PRACTICAL QUANTITATION LIMIT ug/Kg	DATA QUALIFIER(S)
Dibenzofuran	132-64-9	5700	660	
2,4-Dinitrotoluene	121-14-2	6600	660	
Diethylphthalate	84-66-2	6400	660	
4-Chlorophenyl-phenylether	7005-72-3	6100	660	
Fluorene	86-73-7	6200	660	
4-Nitroaniline	100-01-6	7100	3300	
4,6-Dinitro-2-methylphenol	534-52-1	7600	3300	
N-Nitrosodiphenylamine (1)	86-30-6	5900	660	
4-Bromophenyl-phenylether	101-55-3	5900	660	
Hexachlorobenzene	118-74-1	6100	660	
Pentachlorophenol	87-86-5	7800	3300	
Phenanthrene	85-01-8	6400	660	
Anthracene	120-12-7	6400	660	
Carbazole	86-74-8	6800	660	
Di-n-butylphthalate	84-74-2	6300	660	
Fluoranthene	206-44-0	7100	660	
Pyrene	129-00-0	5300	660	
Butylbenzylphthalate	85-68-7	5600	660	
3,3'-Dichlorobenzidine	91-94-1	5200	1300	
Benzo(a)anthracene	56-55-3	6600	660	
Chrysene	218-01-9	6500	660	
bis(2-Ethylhexyl)phthalate	117-81-7	5600	660	
Di-n-octylphthalate	117-84-0	4800	660	
Benzo(b)fluoranthene	205-99-2	6200	660	
Benzo(k)fluoranthene	207-08-9	5500	660	
Benzo(a)pyrene	50-32-8	6300	660	
Indeno(1,2,3-cd)pyrene	193-39-5	6100	660	
Dibenz(a,h)anthracene	53-70-3	7000	660	
Benzo(g,h,i)perylene	191-24-2	6900	660	

LAS

MATRIX SPIKE DATA SUMMARY
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	45791MS
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	22.03	Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	75%	15-111
Phenol-d5	84%	21-110
Nitrobenzene-d5	83%	17-114
2-Fluorobiphenyl	89%	29-114
2,4,6-Tribromophenol	97%	33-136
Terphenyl-d14	99%	32-151

Constituent	Spike Added ug/Kg	Sample Concentration ug/Kg	MS Concentration ug/Kg	% Recovery	QC Limits % Recovery
Phenol	8540	0.000	7830	92	28-110
2-Chlorophenol	8540	0.000	7210	84	22-110
1,4-Dichlorobenzene	8540	0.000	5650	66	21-110
N-Nitroso-di-n-propylamine	8540	0.000	7940	93	24-110
1,2,4-Trichlorobenzene	8540	0.000	6940	81	32-110
4-Chloro-3-methylphenol	8540	0.000	7970	93	35-112
Acenaphthene	8540	0.000	8360	98	31-117
4-Nitrophenol	8540	0.000	7530	88	29-127
2,4-Dinitrotoluene	8540	0.000	6170	72	51-112
Pentachlorophenol	8540	0.000	9530	112	41-133
Pyrene	8540	0.000	7420	87	45-135

LAS

MATRIX SPIKE DATA SUMMARY
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIA8SD02(08)	LAL Sample ID:	45795MS
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	38%	15-111
Phenol-d5	54%	21-110
Nitrobenzene-d5	44%	17-114
2-Fluorobiphenyl	71%	29-114
2,4,6-Tribromophenol	100%	33-136
Terphenyl-d14	87%	32-151

Constituent	Spike Added ug/Kg	Sample Concentration ug/Kg	MS Concentration ug/Kg	% Recovery	QC Limits % Recovery
Phenol	9080	0.000	5540	61	28-110
2-Chlorophenol	9080	0.000	4500	50	22-110
1,4-Dichlorobenzene	9080	0.000	2600	29	21-110
N-Nitroso-di-n-propylamine	9080	0.000	5200	57	24-110
1,2,4-Trichlorobenzene	9080	0.000	4530	50	32-110
4-Chloro-3-methylphenol	9080	0.000	7010	77	35-112
Acenaphthene	9080	0.000	7580	83	31-117
4-Nitrophenol	9080	0.000	9690	107	29-127
2,4-Dinitrotoluene	9080	0.000	9220	101	51-112
Pentachlorophenol	9080	0.000	10700	118	41-133
Pyrene	9080	0.000	7200	79	45-135

LAS

MATRIX SPIKE DUPLICATE DATA SUMMARY
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	45791MSD
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	22.03	Preparation Dilution:	0.999

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	71%	15-111
Phenol-d5	75%	21-110
Nitrobenzene-d5	85%	17-114
2-Fluorobiphenyl	87%	29-114
2,4,6-Tribromophenol	97%	33-136
Terphenyl-d14	103%	32-151

Constituent	Spike Added ug/Kg	MSD Concentration ug/Kg	% Recovery	RPD	QC Limits RPD	QC Limits % Recovery
Phenol	8540	6470	76	19	35	28-110
2-Chlorophenol	8540	6600	77	9	50	22-110
1,4-Dichlorobenzene	8540	5100	60	10	27	21-110
N-Nitroso-di-n-propylamine	8540	7670	90	3	38	24-110
1,2,4-Trichlorobenzene	8540	7060	83	2	23	32-110
4-Chloro-3-methylphenol	8540	8000	94	0	33	35-112
Acenaphthene	8540	8010	94	4	19	31-117
4-Nitrophenol	8540	6960	81	8	50	29-127
2,4-Dinitrotoluene	8540	7060	83	13	47	51-112
Pentachlorophenol	8540	9860	115	3	47	41-133
Pyrene	8540	7690	90	4	36	45-135

LAS

MATRIX SPIKE DUPLICATE DATA SUMMARY
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	97BPXLIA8SD02(08)	LAL Sample ID:	45795MSD
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	26.69	Preparation Dilution:	0.989

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	52%	15-111
Phenol-d5	64%	21-110
Nitrobenzene-d5	61%	17-114
2-Fluorobiphenyl	85%	29-114
2,4,6-Tribromophenol	110%	33-136
Terphenyl-d14	92%	32-151

Constituent	Spike Added ug/Kg	MSD Concentration ug/Kg	% Recovery	RPD	QC Limits RPD	QC Limits % Recove.
Phenol	9000	6410	71	16	35	28-1
2-Chlorophenol	9000	5570	62	22	50	22
1,4-Dichlorobenzene	9000	3640	40	34*	27	21
N-Nitroso-di-n-propylamine	9000	5980	66	15	38	24-1
1,2,4-Trichlorobenzene	9000	5840	65	26*	23	32-1
4-Chloro-3-methylphenol	9000	7450	83	7	33	35
Acenaphthene	9000	8400	93	11	19	31
4-Nitrophenol	9000	10600	118	10	50	29-1
2,4-Dinitrotoluene	9000	9880	110	8	47	51-1
Pentachlorophenol	9000	11200	124	6	47	41
Pyrene	9000	7610	85	6	36	45

LAS

LCS DATA SUMMARY
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45791LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	20-FEB-97	Date Extracted:	19-FEB-97
		Analytical Batch ID:	022097-8270-K
QC Group:	8270 SEMI-VOLATILES_45791	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	73%	15-111
Phenol-d5	70%	21-110
Nitrobenzene-d5	88%	17-114
2-Fluorobiphenyl	95%	29-114
2,4,6-Tribromophenol	90%	33-136
Terphenyl-d14	103%	32-151

Constituent	Spike Added ug/Kg	LCS Concentration ug/Kg	LCS % Recovery	QC Limits
Phenol	6660	5080	76	28-110
2-Chlorophenol	6660	4790	72	22-110
1,4-Dichlorobenzene	6660	4520	68	21-110
N-Nitroso-di-n-propylamine	6660	4980	75	24-110
1,2,4-Trichlorobenzene	6660	5360	80	32-110
4-Chloro-3-methylphenol	6660	5670	85	35-112
Acenaphthene	6660	6220	93	31-117
4-Nitrophenol	6660	5490	82	29-127
2,4-Dinitrotoluene	6660	6300	95	51-112
Pentachlorophenol	6660	6670	100	41-133
Pyrene	6660	6140	92	45-135

LAS

LCS DATA SUMMARY
SEMI-VOLATILE ORGANICS BY GC/MS

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45795LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Date Extracted:	20-FEB-97
		Analytical Batch ID:	022197-8270-K
QC Group:	8270 SEMI-VOLATILES_45795	Analytical Dilution:	1
Percent Moisture:	N/A	Preparation Dilution:	1.00

SURROGATE	RECOVERY	QC Limits
2-Fluorophenol	61%	15-111
Phenol-d5	65%	21-110
Nitrobenzene-d5	68%	17-114
2-Fluorobiphenyl	80%	29-114
2,4,6-Tribromophenol	103%	33-136
Terphenyl-d14	89%	32-151

Constituent	Spike Added ug/Kg	LCS Concentration ug/Kg	LCS % Recovery	QC Limits
Phenol	6670	4940	74	28-110
2-Chlorophenol	6670	4540	68	22-110
1,4-Dichlorobenzene	6670	4290	64	21-110
N-Nitroso-di-n-propylamine	6670	4630	69	24-110
1,2,4-Trichlorobenzene	6670	4750	71	32-110
4-Chloro-3-methylphenol	6670	5630	84	35-112
Acenaphthene	6670	5850	88	31-117
4-Nitrophenol	6670	6500	98	29-127
2,4-Dinitrotoluene	6670	6610	99	51-112
Pentachlorophenol	6670	7840	118	41-133
Pyrene	6670	5300	80	45-135

LAS

SEMI-VOLATILE INTERNAL STANDARD
AREA AND RT SUMMARY

Instrument ID: hpk

Date/Time Analyzed: 20-FEB-97 1440

Analytical Batch ID: 022097-8270-K

		IS1(DCB) Area	#	RT	#	IS2(NPT) Area	#	RT	#	IS3(ANT) Area	#	RT
12 HOUR STD		565022		5.04		2021689		6.26		1063913		8.61
UPPER LIMIT		1130044		5.54		4043378		6.76		2127826		9.11
LOWER LIMIT		282511		4.54		1010845		5.76		531957		8.11
CUSTOMER SAMPLE ID	LAS SAMPLE ID											
Method Blank	45791MB	628150		5.05		2071483		6.25		1040219		8.6
Lab Ctrl Sample	45791LCS	506987		5.05		1705860		6.26		754746		8.6
97BPXLIB10SD01(01)	L8849-18	592442		5.05		1859338		6.26		836694		8.6
97BPXLIC2SD01(01)	L8849-38	629323		5.04		2014669		6.26		962718		8.6
97BPXLII1SD02(08)	L8849-34	628333		5.04		1959962		6.26		844060		8.6
97BPXLIC2SD02(08)	L8849-42	599366		5.04		1989879		6.26		885860		8.6
97BPXLIB10SD02(08)	L8849-22	641808		5.04		2121371		6.26		948609		8.6
97BPXLIB3SD01(01)	L8849-2	536067		5.04		1820796		6.26		806125		8.6
97BPXLIC2SD61(08)	L8849-46	577706		5.04		1869444		6.26		803005		8.6
97BPXLII1SD01(01)	L8849-30	625722		5.04		2155549		6.26		962680		8.6
97BPXLIB10SD62(08)	L8849-26	508559		5.04		1700156		6.26		730981		8.6
97BPXLIB3SD02(08)	L8849-6	527296		5.04		1684088		6.26		726963		8.6
97BPXLIB6SD01(01)	L8849-10	574876		5.04		1985604		6.26		844800		8.6
97BPXLIB6SD02(08)	L8849-14	559786		5.04		1872700		6.26		811484		8.6
97BPXLIB6SD02(08)MS	45791MS	430316		5.04		1515285		6.25		756186		8.6
97BPXLIB6SD02(08)MSD	45791MSD	564420		5.04		1904863		6.26		952458		8.6

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside of QC limits with an asterisk.
* Values outside of QC limits.

LAS

SEMI-VOLATILE INTERNAL STANDARD
AREA AND RT SUMMARY

Instrument ID: hpk

Date/Time Analyzed: 20-FEB-97 1440

Analytical Batch ID: 022097-8270-K

		IS4 (PHN) Area	#	RT	#	IS5 (CRY) Area	#	RT	#	IS6 (PRY) Area	#	RT
12 HOUR STD		1524389		11.18		619835		16.33		426275		18.94
UPPER LIMIT		3048778		11.68		1239670		16.83		852550		19.44
LOWER LIMIT		762195		10.68		309918		15.83		213138		18.44
CUSTOMER SAMPLE ID	LAS SAMPLE ID											
Method Blank	45791MB	1337376		11.17		552251		16.32		383231		18.9
Lab Ctrl Sample	45791LCS	926786		11.18		470568		16.33		365810		18.94
97BPXLIB10SD01(01)	L8849-18	963662		11.17		459702		16.32		352241		18.9
97BPXLIC2SD01(01)	L8849-38	1120575		11.17		503866		16.32		401176		18.9
97BPXLII1SD02(08)	L8849-34	971275		11.17		426920		16.32		341524		18.94
97BPXLIC2SD02(08)	L8849-42	953143		11.17		411586		16.32		317836		18.94
97BPXLIB10SD02(08)	L8849-22	1034013		11.17		457463		16.32		389046		18.9
97BPXLIB3SD01(01)	L8849-2	916219		11.17		379944		16.31		301640		18.9
97BPXLIC2SD61(08)	L8849-46	860904		11.17		335840		16.32		254943		18.94
97BPXLII1SD01(01)	L8849-30	1054436		11.17		465178		16.32		395643		18.95
97BPXLIB10SD62(08)	L8849-26	852343		11.17		430005		16.32		371113		18
97BPXLIB3SD02(08)	L8849-6	889549		11.17		365844		16.31		282443		18
97BPXLIB6SD01(01)	L8849-10	910297		11.18		425529		16.32		365964		18.94
97BPXLIB6SD02(08)	L8849-14	945108		11.17		460210		16.32		388517		18.95
97BPXLIB6SD02(08)MS	45791MS	994881		11.18		593233		16.33		494065		18.9
97BPXLIB6SD02(08)MSD	45791MSD	1219402		11.19		653574		16.34		542701		18.9

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside of QC limits with an asterisk.
* Values outside of QC limits.

LAS

SEMI-VOLATILE INTERNAL STANDARD
AREA AND RT SUMMARY

Instrument ID: hpk

Date/Time Analyzed: 21-FEB-97 1805

Analytical Batch ID: 022197-8270-K

		IS1(DCB) Area #	RT #	IS2(NPT) Area #	RT #	IS3(ANT) Area #	RT #
12 HOUR STD		558085	4.99	1868845	6.22	925684	8.57
UPPER LIMIT		1116170	5.49	3737690	6.72	1851368	9.07
LOWER LIMIT		279043	4.49	934423	5.72	462842	8.07
CUSTOMER SAMPLE ID	LAS SAMPLE ID						
Method Blank	45795MB	571119	4.99	1884012	6.21	978463	8.56
Lab Ctrl Sample	45795LCS	497850	4.99	1640537	6.22	809315	8.56
97BPXLIA4SD01(01)	L8849-54	489003	4.99	1588131	6.21	794623	8.55
97BPXLIA6SD01(01)	L8849-61	500771	4.99	1645651	6.21	823288	8.55
97BPXLIA4SD02(08)	L8849-57	529082	4.99	1749642	6.21	914226	8.56
97BPXLIC4SD02(08)	L8849-50	556620	4.99	1928429	6.21	990977	8.55
97BPXLIA6SD02(08)	L8849-65	498029	4.99	1636992	6.21	821777	8.56
97BPXLIA8SD01(01)	L8849-77	536313	4.99	1755635	6.20	906185	8.56
97BPXLIA8SD02(08)	L8849-73	550899	4.99	1784542	6.21	897337	8.56
97BPXLIA8SD02(08)MS	45795MS	466533	4.99	1504401	6.21	733129	8.56
97BPXLIA8SD02(08)MSD	45795MSD	478522	4.99	1549906	6.22	744512	8.56
97BPXLIA6SD62(08)	L8849-69	525230	4.99	1684371	6.22	791805	8.56
97BPXLIA10SD01(01)	L8849-81	504850	4.99	1627635	6.22	812539	8.56
97BPXLIA10SD02(08)	L8849-85	529747	4.99	1721164	6.22	852885	8.56
97BPXLIB8SD01(01)	L8849-99	476343	4.99	1520679	6.21	780023	8.56
97BPXLIB8SD02(08)	L8849-95	546362	4.99	1746942	6.22	882952	8.56
97BPXLIC4SD01(01)	L8849-103	515497	4.99	1653301	6.21	835440	8.56

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

' Column used to flag values outside of QC limits with an asterisk.
Values outside of QC limits.

LAS

SEMI-VOLATILE INTERNAL STANDARD
AREA AND RT SUMMARY

Instrument ID: hpk

Date/Time Analyzed: 21-FEB-97 1805

Analytical Batch ID: Q22197-8270-K

		IS4 (PHN) Area #	RT #	IS5 (CRY) Area #	RT #	IS6 (PRY) Area #	RT
12 HOUR STD		1342588	11.12	843660	16.28	689219	18.90
UPPER LIMIT		2685176	11.62	1687320	16.78	1378438	19.40
LOWER LIMIT		671294	10.62	421830	15.78	344610	18.40
CUSTOMER SAMPLE ID	LAS SAMPLE ID						
Method Blank	45795MB	1370064	11.12	808392	16.27	661525	18.4
Lab Ctrl Sample	45795LCS	1181022	11.12	724230	16.29	623412	18.9
97BPXLIA4SD01(01)	L8849-54	1119803	11.11	750541	16.27	630131	18.8
97BPXLIA6SD01(01)	L8849-61	1169963	11.11	723816	16.27	601976	18.8
97BPXLIA4SD02(08)	L8849-57	1316845	11.11	848794	16.27	710093	18.9
97BPXLIC4SD02(08)	L8849-50	1331892	11.11	743017	16.27	616451	18.9
97BPXLIA6SD02(08)	L8849-65	1141275	11.12	733986	16.27	625439	18.9
97BPXLIA8SD01(01)	L8849-77	1277700	11.11	834840	16.27	707450	18.9
97BPXLIA8SD02(08)	L8849-73	1290875	11.11	809069	16.27	670780	18.9
97BPXLIA8SD02(08)MS	45795MS	1091161	11.13	664470	16.29	579933	18.9
97BPXLIA8SD02(08)MSD	45795MSD	1127610	11.12	658063	16.29	577065	18.
97BPXLIA6SD62(08)	L8849-69	1051539	11.11	661772	16.28	560951	18.
97BPXLIA10SD01(01)	L8849-81	1140042	11.11	757037	16.28	638527	18.9
97BPXLIA10SD02(08)	L8849-85	1174078	11.12	714287	16.28	627323	18.9
97BPXLIB8SD01(01)	L8849-99	1115919	11.12	764065	16.27	637506	18.9
97BPXLIB8SD02(08)	L8849-95	1264841	11.12	800457	16.28	650853	18.9
97BPXLIC4SD01(01)	L8849-103	1100039	11.12	768155	16.29	627685	18.9

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside of QC limits with an asterisk.
* Values outside of QC limits.

RUN LOGS/EXTRACTION SHEETS

OCKHEED ANALY1 ERVICES REVIEWED BY [illegible] 2-21-97 INSTRUMENT ID GC-MS K OIL LOGBOOK# LAL-96-LOG-0900 PAGE # 000099

ANALYST	DATE OF INJ	TIME OF INJ	LAS SAMPLE ID	DESCRIPTION/ CLIENT SAMPLE ID	SOLUTION ID	MATRIX/ DILUTION	DATA FILE	BATCH ID	METHOD FILE	TAPE ID	DR?	COMMENTS
[illegible]	2/1/97	1344		50 [illegible]	0339-41-1		5010101	[illegible]	[illegible]		OK	[illegible]
		1413		[illegible]	0766-53-20		5020102		[illegible]		DNR	#2[illegible]
		1436		[illegible]	0766-53-20		5030103				OK	[illegible]
		1510	45453-L	LCS	[illegible]	[illegible] RE	5040104				Rep	[illegible] w/ DRG
		1531	45178-33	VP27B4-5			5050105				OK	
		1603	45178-35	VP56B1-5			5060106				OK	
		1624	45178-40	VP56B1-2.5			5070107				Rep	[illegible] w/ DRG
		1706	45178-34	VP27B4-10			5080108				DNR	Entire [illegible] - [illegible]
			45178-46	VP56B1-0			5090109				DNR	not analyzed [illegible]
			45178-37	VP2701			5100110					
			4717[illegible]	VP2701			5110111					
			4717[illegible]	VP2701			5120112					
			45178-16	VP56D1			5130113					
			45178-32	VP27B4-0			5140114					
				[illegible]			5150115					
				[illegible]			5160116					
[illegible]	2/1/97			50 [illegible]		[illegible]	[illegible]	[illegible]	[illegible]			not analyzed
				[illegible]		[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	2/1/97		[illegible]	[illegible]		[illegible]	[illegible]					
[illegible]	2/1/97			[illegible]	0339-41-1	[illegible]	5010101	[illegible]	[illegible]		DNR	Tuned - [illegible]
				[illegible]	0766-53-20		5020102		[illegible]			
				[illegible]	0339-41-4		5030103					not [illegible]
				[illegible]	0339-41-6		5040104					
				[illegible]	0339-41-7		5050105					
				[illegible]	0766-45-12		5060106					
				[illegible]	0339-41-3		5070107					
[illegible]	2/1/97	1036		50 [illegible]	0339-41-1		5010101	[illegible]	[illegible]			passed - Tuned
		1111		[illegible]	0766-53-20		5020102		[illegible]		DNR	[illegible] file
		1146		[illegible]	0339-41-4		5030103				OK	[illegible]
		1811		[illegible]	0339-41-6		5040104				OK	[illegible]

Data Reportable? (DR?) Column: DNR = Do Not Report; Rep = Report (QC failure, report with another analysis); OK = Report (No QC failure)

GC/MS SVOA UNIX

LOCKHEED ANALYTICAL SERVICES REVIEWED BY ______ INSTRUMENT ID QC-MS [illegible] LOGBOOK# LAL-[illegible]-LOG-0900 PAGE # 000100

ANALYST	DATE OF INJ	TIME OF INJ.	LAS SAMPLE ID	DESCRIPTION/ CLIENT SAMPLE ID	SOLUTION ID	MATRIX/ DILUTION	DATA FILE	BATCH ID	METHOD FILE	TAPE ID	DR?	COMMENTS
[illegible]	2/4/[illegible]	1843		[illegible]D120	0339-41-7		5050D005	[illegible]	K[illegible]		OK	good [illegible]
		1913		[illegible]D160	0766-45-12		5060D006				OK	
		1945		[illegible]D050	0766-53-12		5070D007				OK	
		2016		[illegible]D012	0339-41-3		5080D008				DNR	[illegible]
[illegible]	2/5/[illegible]	1429		[illegible]D120	0339-41-1		5010D001	[illegible]	K[illegible]		OK	passed
		1440		[illegible]D050	0766-53-20		5020D002		K[illegible]		OK	[illegible]
		1513	4579103	Method Blank	B0339-44-4	soil	5030D003				OK	
		1541	4579113	LCS			5040D004				OK	
		1612	L4449-18	9708XLEB1050011(01)			5050D005				OK	
		1647	L4449-38	9708XLEC2500(01)			5060D006				OK	
		1717	L4449-34	9708XLEI1500(00)			5070D007				OK	
		1752	L4449-42	9708XLEC2500(00)			5080D008				OK	
		1821	L4449-22	9708XLEB1050(00)			5090D009				OK	
		1852	L4449-2	9708XLEB3500(01)			5100D010				OK	
		1926	L4449-46	9708XLEC2500(00)			5110D011				OK	
		1956	L4449-30	9708XLEI1500(01)			5120D012				OK	
		2026	L4449-26	9708XLEB1050(00)			5130D013				OK	
		2058	L4449-6	9708XLEB3500(00)			5140D014				OK	
		2128	L4449-10	9708XLEH1500(0)			5150D015				OK	
		2201	L4449-14	9708XLED6500(00)			5160D016				OK	
		2232	4579110[illegible]	9708XLEB6500(00)			5170D017				OK	
		2315	4579114[illegible]	9708XLEB6500(00)			5180D018				OK	
		2344		[illegible] blank	[illegible]-53-3		5190D019				DNR	check only
		[illegible]		[illegible]			5200D020				DNR	
				[illegible]			5210D021				DNR	
[illegible]	2/[illegible]	1533		[illegible]D120	0339-41-1		5010D001	[illegible]	K[illegible]		DNR	[illegible] passed - [illegible]
		1704		[illegible]D050	0766-53-20		5020D002		K[illegible]		DNR	check one
		1735		[illegible]D120	0339-41-1		5030D003		K[illegible]			passed
		1805		[illegible]D050	0766-53-20		5040D004		K[illegible]			[illegible]
		1842	4579[illegible]	Method blank	B0339-44-4	soil	5050D005				OK	

Data Reportable? (DR?) Column: DNR = Do Not Report; Rep = Report (QC failure, report with another analysis); OK = Report (No QC failure)

GC/MS SVOA UNIX

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LOCKHEED / CAL SERVICES   REVIEWED BY ____________   INSTRUMENT ID __GC-[illegible]__   LOGBOOK# __LAS-87400-1016__   PAGE # __000001__

ANALYST	DATE OF INJ.	TIME OF INJ.	LAS SAMPLE ID	DESCRIPTION/ CLIENT SAMPLE ID	SOLUTION ID	MATRIX/ DILUTION	DATA FILE	BATCH ID	METHOD FILE	TAPE ID	DR?	COMMENTS
[illegible]	2/2/97	1904	[illegible]	LCS	[illegible]-44-4	soil	S0601006	KFeb[illegible]97	K[illegible]		OK	
		1939	L6444-54	976P XLIA 45001(01)			S0701007				OK	
		2011	L6444-61	976P XLIA 65001(01)			S0801008				OK	
		2045	L6444-65	976P XLIA 45002(08)			S0901009				OK	
		2114	L6444-50	976P XLIC 45002(08)			S1001010				OK	
		2146	L6444-16	976P XLIA 65002(08)			S1101011				OK	
		2219	L6444-33	976P XLIA 85001(01)			S1201012				OK	
		2251	L6444-73	976P XLIA 85002(08)			S1301013				OK	
		2323	[illegible]	976P XLIA 85002(08)			S1401014				OK	
		2354	[illegible]	976P XLIA 85002(08)			S1501015				OK	
	2/3/97	0026	L6444-69	976P XLIA 65002(08)			S1601016				OK	
		0057	L6444-81	976P XLIA 105001(01)			S1701017				OK	
		0129	L6444-46	976P XLIA 105002(08)			S1801018				OK	
		0200	L6444-19	976P XLIB 85001(01)			S1901019				OK	
		0232	L6444-95	976P XLIC 45002(08)			S2001020				OK	
		0303	L6444-103	976P XLIC 45001(01)			S2101021				OK	
				hexane			S2201022				DNR	
				[illegible]			S2301023				DNR	
[illegible]	2/21/97	1712		SOLV OFF[illegible]	0339-41-1		S0101001	KFeb[illegible]97	K[illegible]		OK	[illegible]
		1119		[illegible]	0[illegible]-33-20	[illegible]-44-4	S0201002		K[illegible]		OK	[illegible] K[illegible]
				SOLV 20.0	0339-43-8	[illegible]-44-1	S0301003		K[illegible]			
				SOLV 10.0	0339-43-7		S0401004					
				SOLV 5.0	0339-43-6		S0501005					
				SOLV 1.0	0339-43-5		S0601006					
				SOLV 0.5	0339-43-4		S0701007					
				SOLV 0.1	0339-43-3		S0801008					

For Data Reportable? (DR?) Column: DNR = Do Not Report; Rep = Report (QC failure, report with another analysis); OK = Report (No QC failure)

GC/MS SVOA UNIX

FULL TAL MATRIX SPIKE

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (bs08)

EXTRACTION SHEET FOR: 8270 SEMI-VOLATILES Extraction

WORKSHEET NUMBER: 8270 SEMI-VOLATILES_45791

7 DAY TAT !!

AL #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/ CREATED	VOL OF EXTR 2-19-97	SAMPLE pH	SURR ML	MS ML	1ST COOK FINAL VOL MLS	TOTAL VOL ON GPC	2ND COOK FINAL VOL MLS	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
8849-18	2	97BPXLIB10SD01(01)	15-FEB-97	19-FEB-97	30.14	N/A	2.0		1 ml	N/A	N/A	2.0ml	≈2ml
8849-38		97BPXLIC2SD01(01)	15-FEB-97	19-FEB-97	30.04								
8849-34		97BPXLIT1SD02(08)	15-FEB-97	19-FEB-97	30.16								
8849-42		97BPXLIC2SD02(08)	15-FEB-97	19-FEB-97	30.00								
8849-22		97BPXLIB10SD02(08)	15-FEB-97	19-FEB-97	30.12								
8849-2		97BPXLIB3SD01(01)	14-FEB-97	19-FEB-97	30.00								
8849-46		97BPXLIC2SD61(08)	15-FEB-97	19-FEB-97	30.14								
8849-30		97BPXLIT1SD01(01)	15-FEB-97	19-FEB-97	30.11								
8849-26		97BPXLIB10SD62(08)	15-FEB-97	19-FEB-97	30.18								
8849-6		97BPXLIB3SD02(08)	14-FEB-97	19-FEB-97	30.10								
8849-10		97BPXLIB6SD01(01)	15-FEB-97	19-FEB-97	30.19								
8849-14		97BPXLIB6SD02(08)	15-FEB-97	19-FEB-97	30.20								
45791MB	MB	Method Blank		19-FEB-97	30.02	6	6		6	6	6	6	6

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XTRACTION METHOD: Sonication - 3550

XTRACTION STARTED : 2-19-97 EXTRACTION COMPLETED : 2-19-97

ATE & TIME STARTED (acid): N/A DATE & TIME COMPLETED (acid): N/A SIGNED:

ATE & TIME STARTED (BN) : N/A DATE & TIME COMPLETED (BN) : N/A SIGNED:

C BATCH# : 8270 SEMI-VOLATILES_45791 LOT #'S SPIKED WITNESS: David L Hay

URR ID # : 0859-56-1 CONC: 100-150 ug/ml MECL2 : 36240 SIGNED:

S ID # : 0766-65-18 CONC: 100 ug/ml ACETONE: 36079 NA2SO4 : K39635

R16467

REVIEWED BY: 02-20-97

ARRATIVE EXTRACT COC: RECIEVED BY: DATE: 2/20/97

GPC was skipped. Samples were micron-filtered after they were brought up to final concentration. DLH 2-19-97

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (bs08)

EXTRACTION SHEET FOR: 8270 SEMI-VOLATILES Extraction

WORKSHEET NUMBER: 8270 SEMI-VOLATILES_45791

AL #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/ CREATED	VOL/WT EXTR	SAMPLE pH	SURR ML	MS ML	1ST COOK FINAL VOL MLS	TOTAL VOL ON GPC	2ND COOK FINAL VOL MLS	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
5791LCS	LCS	Lab Ctrl Sample		19-FEB-97	30.01	N/A	2.0	2.0	1 ml	N/A	N/A	2.0 ml	≈ 2 ml
5791MS L8849-14	MS	Matrix Spike	15-Feb-97	19-FEB-97	30.03	↓	2.0	2.0	↓	↓	↓	↓	↓
5791MSD L8849-14	MSD	Matrix Spike Dup	15-Feb-97	19-FEB-97	30.02	↓	2.0	2.0	↓	↓	↓	↓	↓
~~5791LOT45791~~	SPIKELOT	Spike Lot Sample		~~19-FEB-97~~									

VLB 02 19-97

EXTRACTION METHOD: _____

EXTRACTION STARTED : _____ EXTRACTION COMPLETED : _____

DATE & TIME STARTED (acid): _____ DATE & TIME COMPLETED (acid): _____ SIGNED: _____

DATE & TIME STARTED (BN) : _____ DATE & TIME COMPLETED (BN) : _____ SIGNED: _____

BATCH# : 8270 SEMI-VOLATILES_45791 LOT #'S SPIKED WITNESS: _____

SURR ID # : _____ CONC: _____ MECL2 : _____ SIGNED: _____

MS ID # : _____ CONC: _____ ACETONE: _____ NA2SO4 : _____

REVIEWED BY: _____

NARRATIVE EXTRACT COC: RECIEVED BY: _____ DATE: _____

FULL TAL
MATRIX SPIKE

FB

7 day TAT!!

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (bs08)

EXTRACTION SHEET FOR: 8270 SEMI-VOLATILES Extraction

WORKSHEET NUMBER: 8270 SEMI-VOLATILES_45795

L #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/ CREATED	VOL/WT EXTR	SAMPLE pH	SURR ML	MS ML	1ST CONC FINAL VOL MLS	TOTAL VOL ON GPC	2ND CONC FINAL VOL MLS	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
					LK 2-20-97				→	SP 2-21-97	→	→	→
849-54		97BPXLIA4SD01(01)	16-FEB-97	19-FEB-97	30.01	N/A	2.0		4.0mL	2ml	0.5ml	1.0 ml	1ml
849-61		97BPXLIA6SD01(01)	16-FEB-97	19-FEB-97	30.00	↓	↓		↓	↓	↓	↓	↓
849-57		97BPXLIA4SD02(08)	16-FEB-97	19-FEB-97	30.08								
849-50		97BPXLIC4SD02(08)	15-FEB-97	19-FEB-97	30.00								
849-65		97BPXLIA6SD02(08)	16-FEB-97	19-FEB-97	30.09								
849-77		97BPXLIA8SD01(01)	16-FEB-97	19-FEB-97	30.13								
849-73		97BPXLIA8SD02(08)	16-FEB-97	19-FEB-97	30.40								
849-69		97BPXLIA6SD62(08)	16-FEB-97	19-FEB-97	30.24								
849-81		97BPXLIA10SD01(01)	16-FEB-97	19-FEB-97	30.08								
849-85		97BPXLIA10SD02(08)	16-FEB-97	19-FEB-97	30.07								
849-99		97BPXLIB8SD01(01)	15-FEB-97	19-FEB-97	30.13								
849-95		97BPXLIB8SD02(08)	15-FEB-97	19-FEB-97	30.00								
849-103		97BPXLIC4SD01(01)	15-FEB-97	19-FEB-97	30.15	↓	↓		↓	↓	↓	↓	↓

RACTION METHOD: Sonication - Method 3550

RACTION STARTED : 2-20-97 EXTRACTION COMPLETED : 2/21/97

E & TIME STARTED (acid): N/A DATE & TIME COMPLETED (acid): N/A SIGNED: Chris Kurantko

E & TIME STARTED (BN) : N/A DATE & TIME COMPLETED (BN) : N/A SIGNED:

BATCH# : 8270 SEMI-VOLATILES_45795 LOT #'S SPIKED WITNESS: Lance Nicholls

R ID # : 0859-83-3 CONC: 100/150 µg/ml MECL2 : 36240 SIGNED: Steve Polley

ID # : 0766-65-18 CONC: 100µg/ml ACETONE: 36079 NA2SO4 : K39635

REVIEWED BY: Meredith L Bowens 02-21-97

RATIVE EXTRACT COC: RECIEVED BY: [signature] DATE: 2/21/97

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (ba08)

EXTRACTION SHEET FOR: 8270 SEMI-VOLATILES Extraction

WORKSHEET NUMBER: 8270 SEMI-VOLATILES_45795

#	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/ CREATED	VOL/WT EXTR	SAMPLE pH	SURR ML	MS ML	1ST COOK FINAL VOL MLS	TOTAL VOL ON GPC	2ND COOK FINAL VOL MLS	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
95MB	MB	Method Blank		19-FEB-97	30.00	N/A	2.0		4.0mL	2 ml	0.5ml	1.0 ml	1 ml
95LCS	LCS	Lab Ctrl Sample		19-FEB-97	30.00			2.0					
95MS L8849-73	MS	Matrix Spike	14-FEB-97	19-FEB-97	30.03								
95MSD L8849-73	MSD	Matrix Spike Dup	14-FEB-97	19-FEB-97	30.32								
~~IKELOT45795~~	~~SPIKELOT~~	~~Spike Lot Sample~~		~~19-FEB-97~~									
													WLB 02-19-97

RACTION METHOD: _____

RACTION STARTED : _____ EXTRACTION COMPLETED : _____

E & TIME STARTED (acid): _____ DATE & TIME COMPLETED (acid): _____ SIGNED: _____

E & TIME STARTED (BN) : _____ DATE & TIME COMPLETED (BN) : _____ SIGNED: _____

BATCH# : 8270 SEMI-VOLATILES_45795 LOT #'S SPIKED WITNESS: _____

R ID # : _____ CONC: _____ MECL2 : _____ SIGNED: _____

ID # : _____ CONC: _____ ACETONE: _____ NA2SO4 : _____

REVIEWED BY: _____

RRATIVE EXTRACT COC: RECIEVED BY: _____ DATE: _____

AK 102.0 DIESEL RANGE ORGANICS

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIB3SD01(01)	LAL Sample ID:	L8849-2
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	26.33	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	76%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	29.	4.1	41.	J

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIB3SD02(08)	LAL Sample ID:	L8849-6
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	18.83	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY%	QC Limits
N-OCTACOSANE	76%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT. QUAL(S)
Diesel Range Organics	TPH	<37.	3.7	37.	

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIB6SD01(01)	LAL Sample ID:	L8849-10
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	32.2	QC Group:	AK 102.0 DRO_45796

SURROGATE	% RECOVERY	QC Limits
N-OCTACOSANE	126%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	8.1	4.4	44.	J

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIB6SD02(08)	LAL Sample ID:	L8849-14
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	0.99
Percent Moisture:	22.03	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	118%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S
Diesel Range Organics	TPH	7.0	3.8	38.	J

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIB10SD01(01)	LAL Sample ID:	L8849-18
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	20.06	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	106%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<37.	3.7	37.	

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIB10SD02(08)	LAL Sample ID:	L8849-22
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	27.19	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	117%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics	TPH	10.	4.1	41.	J

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIB10SD62(08)	LAL Sample ID:	L8849-26
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	26.49	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	140%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	14.	4.1	41.	XJ

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLII1SD01(01)	LAL Sample ID:	L8849-30
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	23.19	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	124%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics	TPH	4.3	3.9	39.	J

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLII1SD02(08)	LAL Sample ID:	L8849-34
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	21.34	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	125%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	6.7	3.8	38.	XJ

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIC2SD01(01)	LAL Sample ID:	L8849-38
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	0.99
Percent Moisture:	26.72	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	65%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics	TPH	4.6	4.1	41.	J

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIC2SD02(08)	LAL Sample ID:	L8849-42
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	0.99
Percent Moisture:	19.74	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	89%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<37.	3.7	37.	

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIC2SD61(08)	LAL Sample ID:	L8849-46
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	24-FEB-97	Analytical Batch ID:	021897-8015-D-5
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	19.23	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	105%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	15.	3.7	37.	J

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIC4SD02(08)	LAL Sample ID:	L8849-50
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	23.85	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	94%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/PDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<39.	3.9	39.	

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIA4SD01(01)	LAL Sample ID:	L8849-54
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	17.13	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	84%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics	TPH	<36.	3.6	36.	

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIA4SD02(08)	LAL Sample ID:	L8849-57
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	18.66	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	85%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<37.	3.7	37.	

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIA6SD01(01)	LAL Sample ID:	L8849-61
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	42.88	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	86%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT. QUAL(S)
Diesel Range Organics	TPH	<52.	5.2	52.	

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIA6SD02(08)	LAL Sample ID:	L8849-65
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	28.62	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	116%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<42.	4.2	42.	X

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIA6SD62(08)	LAL Sample ID:	L8849-69
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	32.07	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	89%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics	TPH	<44.	4.4	44.	X

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIA8SD02(08)	LAL Sample ID:	L8849-73
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	26.69	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	101%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<41.	4.1	41.	

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIA8SD01(01)	LAL Sample ID:	L8849-77
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	0.99
Percent Moisture:	38.38	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	98%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	I QU
Diesel Range Organics	TPH	<48.	4.8	48.	

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIA10SD01(01)	LAL Sample ID:	L8849-81
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	35.25	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	79%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<46.	4.6	46.	

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIA10SD02(08)	LAL Sample ID:	L8849-85
Date Collected:	16-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	44.6	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	120%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<54.	5.4	54.	X

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIB8SD02(08)	LAL Sample ID:	L0849-95
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	0.99
Percent Moisture:	28.76	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	139%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	7.7	4.2	42.	XJ

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIB8SD01(01)	LAL Sample ID:	L8849-99
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	28.44	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	115%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT. QUAL(S)
Diesel Range Organics	TPH	<42.	4.2	42.	

LAS

DIESEL BY GC-FID ALASKA METHOD
AK 102.0 DRO

Client Sample ID:	97BPXLIC4SD01(01)	LAL Sample ID:	L8849-103
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
Matrix:	Soil	Preparation Dilution:	1.0
Percent Moisture:	19.41	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	110%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<37.	3.7	37.	

LAS

DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	Method Blank	LAL Sample ID:	45797MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	N/A	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	64%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics	TPH	<30.	3.0	30.	

LAS

DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	Method Blank	LAL Sample ID:	45796MB
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	N/A	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	86%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	<30.	3.0	30.	

LAS

SPIKED SAMPLE RESULT
DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	97BPXLIC4SDO1(01)	LAL Sample ID:	45797MS
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	19.41	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	95%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics	TPH	500	3.7	37.	

LAS

PIKED SAMPLE RESULT
DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	97BPXLIB3SD02(08)	LAL Sample ID:	45796MS
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	18.83	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	84%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	500	3.7	37.	

LAS

SPIKED SAMPLE RESULT
DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	97BPXLIC4SDO1(01)	LAL Sample ID:	45797MSD
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	19.41	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	91%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT? QUAL(S)
Diesel Range Organics	TPH	490	3.7	37.	

LAS

SPIKED SAMPLE RESULT
DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	97BPXLIB3SD02(08)	LAL Sample ID:	45796MSD
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	18.83	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	92%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	490	3.7	37.	

LAS

SPIKED SAMPLE RESULT
DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45797LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	N/A	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	75%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DAT QUAL(S)
Diesel Range Organics	TPH	420	3.0	30.	

LAS

PIKED SAMPLE RESULT
DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45796LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	N/A	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	93%	25-162

CONSTITUENT	CAS NO.	RESULT mg/kg	MDL mg/kg	PQL/RDL mg/kg	DATA QUAL(S)
Diesel Range Organics	TPH	380	3.0	30.	

LAS

MATRIX SPIKE DATA SUMMARY
DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	97BPXLIC4SDO1(01)	LAL Sample ID:	45797MS
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	19.41	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	95%	25-162

Constituent	Spike Added mg/kg	Sample Concentration mg/kg	MS Concentration mg/kg	% Recovery	QC Limits % Recovery
Diesel Range Organics	621	0.570	503	81	51-15

LAS

ATRIX SPIKE DATA SUMMARY
DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	97BPXLIB3SD02(08)	LAL Sample ID:	45796MS
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	18.83	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	84%	25-162

Constituent	Spike Added mg/kg	Sample Concentration mg/kg	MS Concentration mg/kg	% Recovery	QC Limits % Recovery
Diesel Range Organics	618	2.41	502	81	51-153

LAS

MATRIX SPIKE DUPLICATE DATA SUMMARY
DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	97BPXLIC4SDO1(01)	LAL Sample ID:	45797MSD
Date Collected:	15-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	19.41	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	91%	25-162

Constituent	Spike Added mg/kg	MSD Concentration mg/kg	% Recovery	RPD	QC Limits RPD	QC Limits % Recovery
Diesel Range Organics	623	489	79	3	30	51-1

LAS

ATRIX SPIKE DUPLICATE DATA SUMMARY
DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	97BPXLIB3SD02(08)	LAL Sample ID:	45796MSD
Date Collected:	14-FEB-97	Date Received:	19-FEB-97
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	18.83	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	92%	25-162

Constituent	Spike Added mg/kg	MSD Concentration mg/kg	% Recovery	RPD	QC Limits RPD	QC Limits % Recovery
Diesel Range Organics	618	490	79	2	30	51-153

LAS

LCS DATA SUMMARY
DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45797LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	21-FEB-97	Analytical Batch ID:	021897-8015-D-2
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	N/A	QC Group:	AK 102.0 DRO_45797

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	75%	25-162

Constituent	Spike Added mg/kg	LCS Concentration mg/kg	LCS % Recovery	QC Limits
Diesel Range Organics	501	425.	85	51-153

LAS

CS DATA SUMMARY
DIESEL BY GC-FID ALASKA METHOD

Client Sample ID:	Lab Ctrl Sample	LAL Sample ID:	45796LCS
Date Collected:	N/A	Date Received:	N/A
Date Analyzed:	22-FEB-97	Analytical Batch ID:	021897-8015-D-3
Date Extracted:	20-FEB-97	Analytical Dilution:	1
		Preparation Dilution:	1.0
Percent Moisture:	N/A	QC Group:	AK 102.0 DRO_45796

SURROGATE	RECOVERY	QC Limits
N-OCTACOSANE	93%	25-162

Constituent	Spike Added mg/kg	LCS Concentration mg/kg	LCS % Recovery	QC Limits
Diesel Range Organics	502	377.	75	51-153

RUN LOGS/EXTRACTION SHEETS

Analyst	Date and Time	Sample Name	Description/ Solution	Matrix/ Dil.	Raw Data File	Method File	Reported	ReAnalyzed
DA	2/14/97 9:27	CH2CL2		1	8015\021497-D\02149701.d01	8015\021497-D.MET		
DA	2/14/97 10:12	RT 0608.36 1		1	8015\021497-D\02149701.d02	8015\021497-D.MET	OK	
DA	2/14/97 10:57	RT 0727.58 1		1	8015\021497-D\02149701.d03	8015\021497-D.MET	OK	
DA	2/14/97 11:41	1D 0990 04 1		1	8015\021497-D\02149701.d04	8015\021497-D.MET	OK.	
DA	2/14/97 12:26	2D 0990 04 2		1	8015\021497-D\02149701.d05	8015\021497-D.MET	OK	
DA	2/14/97 13:12	3D 0990 04 3		1	8015\021497-D\02149701.d06	8015\021497-D.MET	OK	
DA	2/14/97 13:56	4D 0990 04 4		1	8015\021497-D\02149701.d07	8015\021497-D.MET	OK	
DA	2/14/97 14:41	5D 0990 04 5		1	8015\021497-D\02149701.d08	8015\021497-D.MET	OK	
DA	2/14/97 15:26	D QCCS 0990 08 1		1	8015\021497-D\02149701.d09	8015\021497-D.MET	OK	
DA	2/14/97 16:11	1G 0990 06 1		1	8015\021497-D\02149701.d10	8015\021497-D.MET	OK	
DA	2/14/97 16:56	2G 0990 06 2		1	8015\021497-D\02149701.d11	8015\021497-D.MET	OK	
DA	2/14/97 17:42	3G 0990 06 3		1	8015\021497-D\02149701.d12	8015\021497-D.MET	OK	
DA	2/14/97 18:27	4G 0990 06 4		1	8015\021497-D\02149701.d13	8015\021497-D.MET	OK	
DA	2/14/97 19:11	5G 0990-06 5		1	8015\021497-D\02149701.d14	8015\021497-D.MET	OK	
DA	2/14/97 19:56	G QCCS 0990-08 2		1	8015\021497-D\02149701.d15	8015\021497-D.MET	OK	
DA	2/14/97 20:41	1K 0990-07-1		1	8015\021497-D\02149701.d16	8015\021497-D.MET	OK	
DA	2/14/97 21:26	2K 0990 07-2		1	8015\021497-D\02149701.d17	8015\021497-D.MET	OK	
DA	2/14/97 22:10	3K 0990 07 3		1	8015\021497-D\02149701.d18	8015\021497-D.MET	OK	
DA	2/14/97 22:55	4K 0990 07 4		1	8015\021497-D\02149701.d19	8015\021497-D.MET	OK	
DA	2/14/97 23:40	5K 0990 07 5		1	8015\021497-D\02149701.d20	8015\021497-D.MET	OK	
DA	2/15/97 0:25	1MO 0860 94 1		1	8015\021497-D\02149701.d21	8015\021497-D.MET	OK	
DA	2/15/97 1:09	2MO 0860 94 2		1	8015\021497-D\02149701.d22	8015\021497-D.MET	OK	
DA	2/15/97 1:54	3MO 0860 94 3		1	8015\021497 D\02149701.d23	8015\021497-D.MET	OK	
DA	2/15/97 2:39	4MO 0860 94 4		1	8015\021497-D\02149701.d24	8015\021497-D.MET	OK	
DA	2/15/97 3:24	5MO 0860 94 5		1	8015\021497 D\02149701.d25	8015\021497-D.MET	OK	
DA	2/15/97 4:08	3D 0990 04 3		1	8015\021497 D\02149701.d26	8015\021497-D.MET	OK	
DA	2/15/97 4:53	3D 0990 04 3		1	8015\021497-D\02149701.d27	8015\021497-D.MET		
DA	2/15/97 5:39	CH2CL2		1	8015\021497-D\02149701.d28	8015\021497-D.MET		
DA	2/15/97 6:23	45642MB		0.1666	8015\021497-D\02149701.d29	8015\021497-D.MET		
DA	2/15/97 7:08	45642LCS		0.166	8015\021497-D\02149701.d30	8015\021497-D.MET		
DA	2/15/97 7:53	45642MS		0.2236	8015\021497-D\02149701.d31	8015\021497-D.MET		
DA	2/15/97 8:38	45642MSD		0.2233	8015\021497-D\02149701.d32	8015\021497-D.MET		
DA	2/15/97 9:23	L8794-39		0.2303	8015\021497-D\02149701.d33	8015\021497-D.MET		
DA	2/15/97 10:07	L8794-40		0.2337	8015\021497-D\02149701.d34	8015\021497-D.MET		
DA	2/15/97 10:52	L8794-41		0.2561	8015\021497-D\02149701.d35	8015\021497-D.MET		
DA	2/15/97 11:38	L8794-42		0.2192	8015\021497-D\02149701.d36	8015\021497-D.MET		
DA	2/15/97 12:22	L8794-43		0.2387	8015\021497-D\02149701.d37	8015\021497-D.MET		
DA	2/15/97 13:07	L8794-44		0.2445	8015\021497-D\02149701.d38	8015\021497-D.MET		
DA	2/15/97 13:52	3D 0990-04-3		1	8015\021497-D\02149701.d39	8015\021497-D.MET		
DA	2/15/97 14:37	3D 0990-04-3		1	8015\021497-D\02149701.d40	8015\021497-D.MET		
DA	2/15/97 15:21	L8794-45		0.2157	8015\021497-D\02149701.d41	8015\021497-D.MET		
DA	2/15/97 16:06	L8794-46		0.2226	8015\021497-D\02149701.d42	8015\021497-D.MET		
DA	2/15/97 16:51	L8794-47		0.2113	8015\021497-D\02149701.d43	8015\021497-D.MET		
DA	2/15/97 17:36	L8794-48		0.2032	8015\021497-D\02149701.d44	8015\021497-D.MET		
DA	2/15/97 18:21	L8794-49		0.2294	8015\021497-D\02149701.d45	8015\021497-D.MET		
DA	2/15/97 19:05	L8794-50		0.2228	8015\021497-D\02149701.d46	8015\021497-D.MET		
DA	2/15/97 19:50	L8794-51		0.211	8015\021497-D\02149701.d47	8015\021497-D.MET		
DA	2/15/97 20:35	L8794-52		0.1969	8015\021497-D\02149701.d48	8015\021497-D.MET		
DA	2/15/97 21:19	L8794-53		0.2269	8015\021497-D\02149701.d49	8015\021497-D.MET		

nalyst	Date and Time	Sample Name	Description/ Solution	Matrix/ Dil.	Raw Data File	Method File	Reported	ReAnalyzed
DA	2/18/97 20:08	3D 0990-04 3		1	8015\021897-D\02189701.d01	8015\021497-D.MET		
DA	2/18/97 20:53	3D 0990-04 3		1	8015\021897-D\02189701.d02	8015\021497-D.MET		
DA	2/18/97 21:37	3G 0990-06 3		1	8015\021897-D\02189701.d03	8015\021497-D.MET		
DA	2/18/97 22:22	3G 0990-06 3		1	8015\021897-D\02189701.d04	8015\021497-D.MET		
DA	2/18/97 23:08	CH2CL2		1	8015\021897-D\02189701.d05	8015\021497-D.MET		
DA	2/18/97 23:52	45490MB		1	8015\021897-D\02189701.d06	8015\021497-D.MET		
DA	2/19/97 0:37	45490LCS 1		1	8015\021897-D\02189701.d07	8015\021497-D.MET		
DA	2/19/97 1:22	45490LCS 2		1	8015\021897-D\02189701.d08	8015\021497-D.MET		
DA	2/19/97 2:07	45490MS 1		1	8015\021897-D\02189701.d09	8015\021497-D.MET		
DA	2/19/97 2:52	45490MSD 1		1	8015\021897-D\02189701.d10	8015\021497-D.MET		
DA	2/19/97 3:37	45490MS 2		1	8015\021897-D\02189701.d11	8015\021497-D.MET		
DA	2/19/97 4:22	45490MSD 2		1	8015\021897-D\02189701.d12	8015\021497-D.MET		
DA	2/19/97 5:07	L8786 27		1	8015\021897-D\02189701.d13	8015\021497-D.MET		
DA	2/19/97 5:51	L8786-28		1	8015\021897-D\02189701.d14	8015\021497-D.MET		
DA	2/19/97 6:36	L8786-29		1	8015\021897-D\02189701.d15	8015\021497-D.MET		
DA	2/19/97 7:21	CH2CL2		1	8015\021897-D\02189701.d16	8015\021497-D.MET		
DA	2/19/97 8:06	L8786-26		1	8015\021897-D\02189701.d17	8015\021497-D.MET		
DA	2/19/97 8:51	CH2CL2		1	8015\021897-D\02189701.d18	8015\021497-D.MET		
DA	2/19/97 9:36	L8786-25 1:10		1	8015\021897-D\02189701.d19	8015\021497-D.MET		
DA	2/19/97 10:20	3D 0990-04 3		1	8015\021897-D\02189701.d20	8015\021497-D.MET		
DA	2/19/97 16:00	3G 0990-06 3		1	8015\021897-D\02189701.d21	8015\021497-D.MET		
DA	2/19/97 16:45	3D 0990 04 3		1	8015\021897-D\02189701.d22	8015\021497-D.MET		
DA	2/21/97 9:30	3D 0990 04 3		1	8015\021897-D\02189701.d23	8015\021497-D.MET	OK	
DA	2/21/97 11:49	CH2CL2		1	8015\021897-D\02189701.d24	8015\21497A-D.MET		
DA	2/21/97 12:33	45797MB		0.1663	8015\021897-D\02189701.d25	8015\21497A-D.MET	OK	
DA	2/21/97 13:18	45797LCS		0.1663	8015\021897-D\02189701.d26	8015\21497A-D.MET	OK	
DA	2/21/97 14:03	45797MS		0.2063	8015\021897-D\02189701.d27	8015\21497A-D.MET	OK	
DA	2/21/97 14:49	45797MSD		0.2087	8015\021897-D\02189701.d28	8015\21497A-D.MET	OK	
DA	2/21/97 15:34	L8849-54		0.2002	8015\021897-D\02189701.d29	8015\21497A-D.MET	OK	
DA	2/21/97 16:18	L8849-57		0.2046	8015\021897-D\02189701.d30	8015\21497A-D.MET	OK	
DA	2/21/97 17:04	L8849-61		0.2914	8015\021897-D\02189701.d31	8015\21497A-D.MET	OK	
DA	2/21/97 17:48	L8849-77		0.2689	8015\021897-D\02189701.d32	8015\21497A-D.MET	OK	
DA	2/21/97 18:33	L8849-85		0.2332	8015\021897-D\02189701.d33	8015\21497A-D.MET	OK	
DA	2/21/97 19:18	L8849-50		0.2183	8015\021897-D\02189701.d34	8015\21497A-D.MET	OK	
DA	2/21/97 20:03	L8849-73		0.2271	8015\021897-D\02189701.d35	8015\21497A-D.MET	OK	
DA	2/21/97 20:48	L8849-69		0.2445	8015\021897-D\02189701.d36	8015\21497A-D.MET	OK	
DA	2/21/97 21:34	L8849-81		0.2573	8015\021897-D\02189701.d37	8015\21497A-D.MET	OK	
DA	2/21/97 22:18	3D 0990-04-3		1	8015\021897-D\02189701.d38	8015\21497A-D.MET	OK	
DA	2/21/97 23:03	3D 0990-04-3		1	8015\021897-D\02189701.d39	8015\21497A-D.MET	NO	
DA	2/21/97 23:48	L8849-85		0.3004	8015\021897-D\02189701.d40	8015\21497A-D.MET	OK	
DA	2/22/97 0:33	L8849-95		0.2326	8015\021897-D\02189701.d41	8015\21497A-D.MET	OK	
DA	2/22/97 1:18	L8849-99		0.2327	8015\021897-D\02189701.d42	8015\21497A-D.MET	OK	
DA	2/22/97 2:03	L8849-103		0.2067	8015\021897-D\02189701.d43	8015\21497A-D.MET	OK	
DA	2/22/97 2:47	CH2CL2		1	8015\021897-D\02189701.d44	8015\21497A-D.MET	NO	
DA	2/22/97 3:32	45796MB		0.1666	8015\021897-D\02189701.d45	8015\21497A-D.MET	OK	
DA	2/22/97 4:17	45796LCS		0.1665	8015\021897-D\02189701.d46	8015\21497A-D.MET	OK	
DA	2/22/97 5:02	45796MS		0.2051	8015\021897-D\02189701.d47	8015\21497A-D.MET	OK	
DA	2/22/97 5:47	45796MSD		0.2053	8015\021897-D\02189701.d48	8015\21497A-D.MET	OK	
DA	2/22/97 6:32	L8849-18		0.2077	8015\021897-D\02189701.d49	8015\21497A-D.MET	OK	

alyst	Date and Time	Sample Name	Description/ Solution	Matrix/ Dil.	Raw Data File	Method File	Reported	ReAnalyzed
DA	2/22/97 7:18	L8849-34		0.2113	8015\021897-D\02189701.d50	8015\21497A-D.MET	OK	
DA	2/22/97 8:06	L8849-42		0.2059	8015\021897-D\02189701.d51	8015\21497A-D.MET	OK	
DA	2/22/97 8:52	3D 0990-04-3		1	8015\021897-D\02189701.d52	8015\21497A-D.MET	NO	
DA	2/22/97 9:40	3D 0990-04-3		1	8015\021897-D\02189701.d53	8015\21497A-D.MET	OK	
DA	2/22/97 10:28	L8849-38		1	8015\021897-D\02189701.d54	8015\21497A-D.MET	NO	
DA	2/22/97 11:16	L8849-22		1	8015\021897-D\02189701.d55	8015\21497A-D.MET	NO	
DA	2/22/97 12:05	L8849-2		1	8015\021897-D\02189701.d56	8015\21497A-D.MET	NO	
DA	2/22/97 12:56	L8849-46		1	8015\021897-D\02189701.d57	8015\21497A-D.MET	NO	
DA	2/22/97 13:46	L8849-26		1	8015\021897-D\02189701.d58	8015\21497A-D.MET	NO	
DA	2/22/97 14:38	L8849-6		1	8015\021897-D\02189701.d59	8015\21497A-D.MET	NO	
DA	2/22/97 15:29	L8849-30		1	8015\021897-D\02189701.d60	8015\21497A-D.MET	NO	
DA	2/22/97 16:20	L8849-10		1	8015\021897-D\02189701.d61	8015\21497A-D.MET	NO	
DA	2/22/97 17:10	L8849-14		1	8015\021897-D\02189701.d62	8015\21497A-D.MET	NO	
DA	2/22/97 18:00	3D 0990-04-3		1	8015\021897-D\02189701.d63	8015\21497A-D.MET	NO	
DA	2/22/97 18:49	3D 0990-04-3		1	8015\021897-D\02189701.d64	8015\21497A-D.MET	NO	
DA	2/24/97 9:10	CH2CL2		1	8015\021897-D\02189701.d65	8015\21497A-D.MET	NO	
DA	2/24/97 9:56	3D 0990-04-3		1	8015\021897-D\02189701.d66	8015\21497A-D.MET	NO	
DA	2/24/97 11:31	3D 0990-04-3		1	8015\021897-D\02189701.d67	8015\21497A-D.MET	NO	
DA	2/24/97 13:52	CH2CL2		1	8015\021897-D\02189701.d68	8015\21497A-D.MET	NO	
DA	2/24/97 14:38	3D 0990-04-3		1	8015\021897-D\02189701.d69	8015\21497A-D.MET	OK	
DA	2/24/97 15:35	L8849-38		0.2259	8015\021897-D\02189701.d70	8015\21497A-D.MET	OK	
DA	2/24/97 16:20	L8849-22		0.2288	8015\021897-D\02189701.d71	8015\21497A-D.MET	OK	
DA	2/24/97 17:06	L8849-2		0.2258	8015\021897-D\02189701.d72	8015\21497A-D.MET	OK	
DA	2/24/97 17:51	L8849-46		0.2062	8015\021897-D\02189701.d73	8015\21497A-D.MET	OK	
DA	2/24/97 18:36	L8849-26		0.2258	8015\021897-D\02189701.d74	8015\21497A-D.MET	OK	
DA	2/24/97 19:21	L8849-6		0.205	8015\021897-D\02189701.d75	8015\21497A-D.MET	OK	
DA	2/24/97 20:06	L8849-30		0.217	8015\021897-D\02189701.d76	8015\21497A-D.MET	OK	
DA	2/24/97 20:51	L8849-10		0.2457	8015\021897-D\02189701.d77	8015\21497A-D.MET	OK	
DA	2/24/97 21:36	L8849-14		0.2127	8015\021897-D\02189701.d78	8015\21497A-D.MET	OK	
DA	2/24/97 22:21	3D 0990-04-3		1	8015\021897-D\02189701.d79	8015\21497A-D.MET	NO	
DA	2/24/97 23:06	3D 0990-04-3		1	8015\021897-D\02189701.d80	8015\21497A-D.MET	NO	
DA	2/24/97 23:51	3D 0990-04-3		1	8015\021897-D\02189701.d81	8015\21497A-D.MET	OK	
DA	2/25/97 13:19	3D 0990-04-3		1	8015\021897-D\02189701.d82	8015\21497A-D.MET		

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (bs09)

EXTRACTION SHEET FOR: AK 102.0 DRO Extraction

WORKSHEET NUMBER: AK 102.0 DRO_45796

7 day TAT!

L #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/ CREATED	VOL (1) EXTR (5)	WATER SAMPLE pH	SURR ML	MS ML	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
					2-20-97					
1849-18		97BPXL18105D01(01)	15-FEB-97	19-FEB-97	30.12	N/A	2.0		5.0 ml	~4 ml
1849-34		97BPXL111SD02(08)	15-FEB-97	19-FEB-97	30.08					
1849-42		97BPXL1C2SD02(08)	15-FEB-97	19-FEB-97	30.26					
1849-38		97BPXL1C2SD01(01)	15-FEB-97	19-FEB-97	30.21					
1849-22		97BPXL18105D02(08)	15-FEB-97	19-FEB-97	30.01					
1849-2		97BPXL183SD01(01)	14-FEB-97	19-FEB-97	30.06					
1849-46		97BPXL1C2SD61(08)	15-FEB-97	19-FEB-97	30.02					
1849-26		97BPXL18105D62(08)	15-FEB-97	19-FEB-97	30.12					
1849-6		97BPXL183SD02(08)	14-FEB-97	19-FEB-97	30.05					
1849-30		97BPXL111SD01(01)	15-FEB-97	19-FEB-97	30.00					
1849-10		97BPXL186SD01(01)	15-FEB-97	19-FEB-97	30.02					
1849-14		97BPXL186SD02(08)	15-FEB-97	19-FEB-97	30.15					
796MB	MB	Method Blank		19-FEB-97	30.02					

Diesel matrix spike

TRACTION METHOD: Alaska DRO

TE STARTED: 2-20-97 DATE COMPLETED: 2-20-97 SIGNED:

BATCH# : AK 102.0 DRO_45796 LOT #'S SPIKE WITNESS:

SR ID # : 0859-82-1 CONC: 2000 ug/ml MECL2 : 36240 NA2SO4: 1C39635

ID # : 0859-80-3 CONC: 15,107 ug/L ACETONE: N/A

REVIEWED BY:

RRATIVE EXTRACT COC: RECIEVED BY: Meg Gustafson DATE: 2-20-9

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (bs09)

EXTRACTION SHEET FOR: AK 102.0 DRO Extraction

WORKSHEET NUMBER: AK 102.0 DRO_45796

L #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/ CREATED	VOL/WT EXTR	WATER SAMPLE pH	SURR ML	MS ML	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
5796LCS	LCS	Lab Ctrl Sample		19-FEB-97	30.03	N/A	2.0	1.0	5.0 ml	~ 4 mL
5796MS L9849-6	MS	Matrix Spike	14-Feb-97	19-FEB-97	30.03	↓	↓	↓	↓	↓
5796MSD L9849-6	MSD	Matrix Spike Dup	14-Feb-97	19-FEB-97	30.01	↓	↓	↓	↓	↓
~~SPIKELOT45796~~	~~SPIKELOT~~	~~Spike Lot Sample~~		~~19-FEB-97~~						

VLB 02-19-97

EXTRACTION METHOD: _____

DATE STARTED: _____ DATE COMPLETED: _____ SIGNED: _____

BATCH# : AK 102.0 DRO_45796 LOT #'S SPIKE WITNESS: _____

RR ID # : _____ CONC: _____ MECL2 : _____ NA2SO4: _____

ID # : _____ CONC: _____ ACETONE: _____

REVIEWED BY: _____

RRATIVE EXTRACT COC: RECIEVED BY: _____ DATE: _____

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (bs09)

EXTRACTION SHEET FOR: AK 102.0 DRO Extraction

WORKSHEET NUMBER: AK 102.0 DRO_45797

7 day TAT!

AL #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/ CREATED	VOL/WT EXTR (S) 2-20-97	WATER SAMPLE pH	SURR ML	MS ML	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
8849-54		97BPXL1A4SD01(01)	16-FEB-97	19-FEB-97	30.04	N/A	2.0		5.0ml	~4ml
8849-57		97BPXL1A4SD02(08)	16-FEB-97	19-FEB-97	30.04					
8849-61		97BPXL1A6SD01(01)	16-FEB-97	19-FEB-97	30.04					
8849-77		97BPXL1A8SD01(01)	16-FEB-97	19-FEB-97	30.18					
8849-65		97BPXL1A6SD02(08)	16-FEB-97	19-FEB-97	30.04					
8849-50		97BPXL1C4SD02(08)	15-FEB-97	19-FEB-97	30.04					
8849-73		97BPXL1A8SD02(08)	16-FEB-97	19-FEB-97	30.03					
8849-69		97BPXL1A6SD62(08)	16-FEB-97	19-FEB-97	30.11					
L8849-81		97BPXL1A10SD01(01)	16-FEB-97	19-FEB-97	30.01					
L8849-85		97BPXL1A10SD02(08)	16-FEB-97	19-FEB-97	30.04					
L8849-95		97BPXL1B8SD02(08)	15-FEB-97	19-FEB-97	30.18					
L8849-99		97BPXL1B8SD01(01)	15-FEB-97	19-FEB-97	30.07					
L8849-103		97BPXL1C4SD01(01)	15-FEB-97	19-FEB-97	30.02	↓	↓		↓	↓

Diesel matrix spike

XTRACTION METHOD: Alaska DRO

ATE STARTED: 2-20-97 DATE COMPLETED: 2-20-97 SIGNED:

IC BATCH# : AK 102.0 DRO_45797 LOT #'S SPIKE WITNESS:

URR ID # : 0859-82-1 CONC: 200.0ug/ml HECL2 : 36240 NA2SO4: K39635

IS ID # : 0859-80-3 CONC: 5,107ng/ml ACETONE: N/A

REVIEWED BY: 02-20

NARRATIVE EXTRACT COC: RECIEVED BY: DATE: 2-20-

LOCKHEED ANALYTICAL SERVICES

TRACKING SHEET DATA REPORT (bs09)

EXTRACTION SHEET FOR: AK 102.0 DRO Extraction

WORKSHEET NUMBER: AK 102.0 DRO_45797

LAL #	QC TYPE	CLIENT ID	DATE COLLECTED	DATE RECEIVED/ CREATED	VOL/WT EXTR	WATER SAMPLE pH	SURR ML	MS ML	BROUGHT TO FINAL VOLUME OF	AMT GIVEN TO ANALYST
45797MB	MB	Method Blank		19-FEB-97	30.07	NA	2.0		5.0mL	~4mL
45797LCS	LCS	Lab Ctrl Sample		19-FEB-97	30.06	↓	↓	1.0	↓	↓
45797MS L8849-103	MS	Matrix Spike	15-FEB-97	19-FEB-97	30.08	↓	↓	↓	↓	↓
45797MSD L8849-103	MSD	Matrix Spike Dup	15-FEB-97	19-FEB-97	30.03	↓	↓	↓	↓	↓
~~SPIKELOT45797~~	SPIKELOT	Spike Lot Sample		19-FEB-97						UCB 02-19-97

XTRACTION METHOD: _____

ATE STARTED: _____ DATE COMPLETED: _____ SIGNED: _____

C BATCH# : AK 102.0 DRO_45797 LOT #'S SPIKE WITNESS: _____

URR ID # : _____ CONC: _____ MECL2 : _____ NA2SO4: _____

S ID # : _____ CONC: _____ ACETONE: _____

REVIEWED BY: _____

ARRATIVE EXTRACT COC: RECIEVED BY: _____ DATE: _____

8015 Soils Conversion Values
Ug/Ml Concentration To Mg/kg

1. Surrogate Concentration In Ug/Ml: 200

Sample Name	Mass In Grams	Percent Solid	Of Surr. (ug/kg) Found	Volume Of Surr. Used ml	Final Volume Of Extract ml	Extract Con. ug/Ml If 100% Rec.	Sample Mg/Kg If 100% Rec.	Factor Ug/Ml EC Mg/Kg S(
L8849-18	30.12	79.94		2	5	80	16.6136001	0.20767
L8849-34	30.08	78.66		2	5	80	16.90499189	0.21131
L8849-42	30.26	80.26		2	5	80	16.46993603	0.20587
L8849-38	30.21	73.28		2	5	80	18.06857095	0.22586
L8849-22	30.01	72.81		2	5	80	18.30715504	0.22884
L8849-2	30.06	73.67		2	5	80	18.06309374	0.22579
L8849-46	30.02	80.77		2	5	80	16.49698568	0.20621
L8849-26	30.12	73.51		2	5	80	18.06588294	0.22582
L8849-6	30.05	81.17		2	5	80	16.39893667	0.20499
L8849-30	30	76.81		2	5	80	17.35885084	0.21699
L8849-10	30.02	67.80		2	5	80	19.65287153	0.24566
L8849-14	30.15	77.97		2	5	80	17.01460014	0.212E
45796MB	30.02	100.00		2	5	80	13.32445037	0.1665b
45796LCS	30.03	100.00		2	5	80	13.32001332	0.16650
45796MS	30.03	81.17		2	5	80	16.41002011	0.20513
45796MSD	30.01	81.17		2	5	80	16.42095647	0.20526

8015 Soils Conversion Values
Ug/Ml Concentration To Mg/kg

1. Surrogate Concentration In Ug/Ml: 200

Sample Name	Mass In Grams	Percent Solid	Of Surr. (ug/kg) Found	Volume Of Surr. Used ml	Final Volume Of Extract ml	Extract Con. ug/Ml If 100% Rec.	Sample Mg/Kg If 100% Rec.	Factor Ug/Ml EC To Mg/Kg SC
L8849-54	30.14	82.87		2	5	80	16.01557623	0.20019
L8849-57	30.04	81.34		2	5	80	16.37027198	0.20463
L8849-61	30.04	57.12		2	5	80	23.31082513	0.29139
L8849-77	30.18	61.62		2	5	80	21.50929173	0.26887
L8849-65	30.04	71.38		2	5	80	18.65397331	0.23317
L8849-50	30.08	76.15		2	5	80	17.46213831	0.21828
L8849-73	30.03	73.31		2	5	80	18.16909692	0.22711
L8849-69	30.11	67.93		2	5	80	19.55703285	0.24446
L8849-81	30.01	64.75		2	5	80	20.58427192	0.25730
L8849-85	30.04	55.40		2	5	80	24.03389259	0.30042
L8849-95	30.18	71.24		2	5	80	18.60397251	0.23255
L8849-99	30.02	71.56		2	5	80	18.61931929	0.23274
L8849-103	30.02	80.59		2	5	80	16.53424295	0.20668
45797MB	30.07	100.00		2	5	80	13.30229465	0.16628
45797LCS	30.06	100.00		2	5	80	13.30671989	0.16633
45797MS	30.08	80.59		2	5	80	16.50064815	0.20626
45797MSD	30.02	80.59		2	5	80	16.53362746	0.20667

Percent Solids for L8849

LAL Sample #	Client ID	Value
L8849-83	97BPXLIA10SD01(01)	64.7527910685805
L8849-87	97BPXLIA10SD02(08)	55.4033485540335
L8849-55	97BPXLIA4SD01(01)	82.8655834564254
L8849-59	97BPXLIA4SD02(08)	81.3411078717201
L8849-63	97BPXLIA6SD01(01)	57.1218795888399
L8849-67	97BPXLIA6SD02(08)	71.3821138211382
L8849-71	97BPXLIA6SD62(08)	67.9276315789474
L8849-79	97BPXLIA8SD01(01)	61.6191904047976
L8849-75	97BPXLIA8SD02(08)	73.3113673805601
L8849-20	97BPXLIB10SD01(01)	79.9357945425361
L8849-24	97BPXLIB10SD02(08)	72.8070175438596
L8849-28	97BPXLIB10SD62(08)	73.5099337748344
L8849-4	97BPXLIB3SD01(01)	73.6681887366819
L8849-8	97BPXLIB3SD02(08)	81.1708860759494
L8849-12	97BPXLIB6SD01(01)	67.7993527508091
L8849-16	97BPXLIB6SD02(08)	77.9742765273312
L8849-101	97BPXLIB8SD01(01)	71.5625
L8849-97	97BPXLIB8SD02(08)	71.2418300653595
L8849-40	97BPXLIC2SD01(01)	73.28125
L8849-44	97BPXLIC2SD02(08)	80.2610114192496
L8849-48	97BPXLIC2SD61(08)	80.7692307692308
L8849-105	97BPXLIC4SD01(01)	80.5872756933116
L8849-52	97BPXLIC4SD02(08)	76.1526232114468
L8849-32	97BPXLII1SD01(01)	76.8115942028985
L8849-36	97BPXLII1SD02(08)	78.6624203821656
L8849-105SD	Duplicate	79.6116504854369

Percent Solids for L8849

LAL Sample #	Client ID	Value
L8849-83 (81)	97BPXLIA10SD01(01)	64.7527910685805
L8849-87 (85)	97BPXLIA10SD02(08)	55.4033485540335
L8849-55 (54)	97BPXLIA4SD01(01)	82.8655834564254
L8849-59 (57)	97BPXLIA4SD02(08)	81.3411078717201
L8849-63 (61)	97BPXLIA6SD01(01)	57.1218795888399
L8849-67 (65)	97BPXLIA6SD02(08)	71.3821138211382
L8849-71 (69)	97BPXLIA6SD62(08)	67.9276315789474
L8849-79 (77)	97BPXLIA8SD01(01)	61.6191904047976
L8849-75 (73)	97BPXLIA8SD02(08)	73.3113673805601
L8849-20	97BPXLIB10SD01(01)	79.9357945425361
L8849-24	97BPXLIB10SD02(08)	72.8070175438596
L8849-28	97BPXLIB10SD62(08)	73.5099337748344
L8849-4	97BPXLIB3SD01(01)	73.6681887366819
L8849-8	97BPXLIB3SD02(08)	81.1708860759494
L8849-12	97BPXLIB6SD01(01)	67.7993527508091
L8849-16	97BPXLIB6SD02(08)	77.9742765273312
L8849-101 (99)	97BPXLIB8SD01(01)	71.5625
L8849-97 (95)	97BPXLIB8SD02(08)	71.2418300653595
L8849-40	97BPXLIC2SD01(01)	73.28125
L8849-44	97BPXLIC2SD02(08)	80.2610114192496
L8849-48	97BPXLIC2SD61(08)	80.7692307692308
L8849-105 (103)	97BPXLIC4SD01(01)	80.5872756933116
L8849-52 (50)	97BPXLIC4SD02(08)	76.1526232114468
L8849-32	97BPXLII1SD01(01)	76.8115942028985
L8849-36	97BPXLII1SD02(08)	78.6624203821656
L8849-105SD	Duplicate	79.6116504854369

CT&E Laboratory

MONTGOMERY WATSON

INVOICE (Original) **COPY**

Received JW

CT&E Environmental Services Inc.

Laboratory Division

200 W. Potter Drive
Anchorage, AK 99518-1605
Tel: (907) 562-2343
Fax: (907) 561-5301

FEDERAL I.D. 22-3334380

INVOICE NO. 52228023 Workorder Date: 02/17/97
DATE 02/25/97 CT&E Ref.# 970760
Client PO: Account # JMMENGN
Project Name: 1189002.280101 Liberty Island

PLEASE REMIT TO: P.O. Box 10001-1019, Pasadena, CA 91110-1019

DIRECT PAYMENT INQUIRIES TO: 1919 S. Highland Ave., Suite 210-B, Lombard, IL 60148-4991 Tel. (630) 953-9300 Fax (630) 953-9306

TERMS: Net 30 Days. A Service Charge of One and a Half Percent (1½%) Per Month Will Be Charged on Overdue Accounts.

Bill To Montgomery Watson Americas Inc
4100 Spenard Rd
Anchorage, AK 99517-2901

FEB 28 1997

MONTGOMERY WATSON

Contact Accounts Payable
Phone (907)561-5829
Ordered By

Special Instructions

Client Sample ID/CT&E Sample ID	Parameter	Charge
97 BPX LI A4 WA 01(05)[9707600001]	Total Suspended Solids	18.00
97 BPX LI A4 WA 01(05)[9707600001]	Turbidity	18.00
BPX LI A6 WA 01(06)[9707600002]	Total Suspended Solids	18.00
BPX LI A6 WA 01(06)[9707600002]	Turbidity	18.00
97 BPX LI A8 WA 01(2-5)[9707600003]	Total Suspended Solids	18.00
97 BPX LI A8 WA 01(2-5)[9707600003]	Turbidity	18.00
97 BPX LI A8 WA 02(9-5)[9707600004]	Total Suspended Solids	18.00
97 BPX LI A8 WA 02(9-5)[9707600004]	Turbidity	18.00
97 BPX LI A10 WA 01(4.5)[9707600005]	Total Suspended Solids	18.00
97 BPX LI A10 WA 01(4.5)[9707600005]	Turbidity	18.00
97 BPX LI A10 WA 02(11)[9707600006]	Total Suspended Solids	18.00
97 BPX LI A10 WA 02(11)[9707600006]	Turbidity	18.00
97 BPX LI B3 WA 01(3.2)[9707600007]	Total Suspended Solids	18.00
97 BPX LI B3 WA 01(3.2)[9707600007]	Turbidity	18.00
97 BPX LI B6 WA 01(2.0)[9707600008]	Total Suspended Solids	18.00
97 BPX LI B6 WA 01(2.0)[9707600008]	Turbidity	18.00
97 BPX LI B8 WA 02(3.5)[9707600009]	Total Suspended Solids	18.00
97 BPX LI B8 WA 02(3.5)[9707600009]	Turbidity	18.00
97 BPX LI B8 WA 01(1.5)[9707600010]	Total Suspended Solids	18.00

CONTROL NO.
R- 58515

INVOICE (Original) COPY

CT&E Environmental Services Inc.

Laboratory Division

FEDERAL I.D.: 22-3334380

200 W. Potter Drive
Anchorage, AK 99518-160
Tel: (907) 562-2343
Fax: (907) 561-5301

INVOICE NO. 52228023 Workorder Date: 02/17/97
DATE 02/25/97 CT&E Ref.# 970760
Client PO: Account # JMMENGN
Project Name: 1189002.280101 Liberty Island

PLEASE REMIT TO: P.O. Box 10001-1019, Pasadena, CA 91110-1019

DIRECT PAYMENT INQUIRIES TO: 1919 S. Highland Ave., Suite 210-B, Lombard, IL 60148-4991 Tel. (630) 953-9300 Fax (630) 953-9306

TERMS: Net 30 Days. A Service Charge of One and a Half Percent (1½%) Per Month Will Be Charged on Overdue Accounts.

Client Sample ID/CT&E Sample ID	Parameter	Charge
97 BPX LI B9 WA 01(1.5)[9707600101	Turbidity	18.00
97 BPX LI B10 WA 01(8.0)[9707600111	Total Suspended Solids	18.00
97 BPX LI B10 WA 01(8.0)[9707600111	Turbidity	18.00
97 BPX LI C2 WA 01(3.0)[9707600121	Total Suspended Solids	18.00
97 BPX LI C2 WA 01(3.0)[9707600121	Turbidity	18.00
97 BPX LI C2 WA 02(8.0)[9707600131	Total Suspended Solids	18.00
97 BPX LI C2 WA 02(8.0)[9707600131	Turbidity	18.00
97 BPX LI C4 WA 01(7.0)[9707600141	Total Suspended Solids	18.00
97 BPX LI C4 WA 01(7.0)[9707600141	Turbidity	18.00
97 BPX LI I1 WA 01(11)[9707600151	Total Suspended Solids	18.00
97 BPX LI I1 WA 01(11)[9707600151	Turbidity	18.00
97 BPX LI B8 WA 03(6.5)[9707600161	Total Suspended Solids	18.00
97 BPX LI B8 WA 03(6.5)[9707600161	Turbidity	18.00
	TOTAL DUE	$576.00

CONTROL NO.
R- 58516

CT&E Environmental Services Inc.
Laboratory Division

Laboratory Analysis Report

February 20, 1997

Bonnie McLear
Montgomery Watson Americas Inc
4100 Spenard Rd
Anchorage, AK 99517-2901

Client Name	Montgomery Watson Americas Inc
Project ID	1189002.280101 Liberty Island [970760]
Printed	February 20, 1997

Enclosed are the analytical results associated with the above project.

As required by the state of Alaska and the USEPA, a formal Quality Assurance/Quality Control Program is maintained by CT&E. A copy of our Quality Control Manual that outlines this program is available at your request.

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth in our Quality Assurance Program Plan.

If you have any questions regarding this report or if we can be of any other assistance, please call your CT&E Project Manager at (907) 562-2343.

The following descriptors may be found on your report which will serve to further qualify the data.

U - Indicates the compound was analyzed for but not detected.
J - Indicates an estimated value that falls below PQL, but is greater than the MDL.
B - Indicates the analyte is found in the blank associated with the sample.
* - The analyte has exceeded allowable limits.
GT - Greater Than
D - Secondary Dilution
LT - Less Than

CT&E Environmental Services Inc.

CT&E Ref.#	970760001	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/16/97 11:00
Client Sample ID	97 BPX LI A4 WA 01(05)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	10.0	0.100	NTU	EPA 180.1			02/18/97	ENB
Total Suspended Solids	48.0	0.200	mg/L	EPA 160.2			02/18/97	RAM

CT&E Environmental Services Inc.

CT&E Ref.#	970760002	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/16/97 09:00
Client Sample ID	97 BPX LI A6 WA 01(06)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	24.0	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	18.4	0.200	mg/L	EPA 160.2			02/18/97	RAM

CT&E Environmental Services Inc.

CT&E Ref.#	970760003	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/24/97 10:16
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/15/97 03:50
Client Sample ID	97 BPX LI A8 WA 01(2-5)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	2.1	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	63.5	0.200	mg/L	EPA 160.2			02/18/97	RAM

CT&E Environmental Services Inc.

CT&E Ref.#	970760004	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/15/97 04:00
Client Sample ID	97 BPX LI A8 WA 02(9-5)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	5.5	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	24.5	0.200	mg/L	EPA 160.2			02/18/97	RAM

CT&E Environmental Services Inc.

CT&E Ref.#	970760005	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/16/97 01:10
Client Sample ID	97 BPX LI A10 WA 01(4.5)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	3.1	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	44.4	0.200	mg/L	EPA 160.2			02/18/97	RAH

CT&E Environmental Services Inc.

CT&E Ref.#	970760006	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/16/97 01:20
Client Sample ID	97 BPX LI A10 WA 02(11)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	21.0	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	76.5	0.200	mg/L	EPA 160.2			02/18/97	RAM

CT&E Environmental Services Inc.

CT&E Ref.#	970760007	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/14/97 22:00
Client Sample ID	97 BPX LI B3 WA 01(3.2)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	7.5	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	26.0	0.200	mg/L	EPA 160.2			02/18/97	RAM

CT&E Environmental Services Inc.

CT&E Ref.#	970760008	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/15/97 01:00
Client Sample ID	97 BPX LI B6 WA 01(2.0)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	0.89	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	2.5	0.200	mg/L	EPA 160.2			02/18/97	RAM

CT&E Environmental Services Inc.

CT&E Ref.#	970760009	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/15/97 04:10
Client Sample ID	97 BPX LI B8 WA 02(3.5)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director:**	Stephen C. Ede
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	6.4	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	64.5	0.200	mg/L	EPA 160.2			02/18/97	RAN

CT&E Environmental Services Inc.

CT&E Ref.#	970760010	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/15/97 04:00
Client Sample ID	97 BPX LI B8 WA 01(1.5)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results		PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	6.1		0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.								
Total Suspended Solids	46.5		0.200	mg/L	EPA 160.2			02/18/97	RAM

CT&E Environmental Services Inc.

CT&E Ref.#	970760011	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/15/97 08:30
Client Sample ID	97 BPX LI B10 WA 01(8.0)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	5.4	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	39.5	0.200	mg/L	EPA 160.2			02/18/97	RAM

CT&E Environmental Services Inc.

CT&E Ref.#	970760012	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/15/97 21:00
Client Sample ID	97 BPX LI C2 WA 01(3.0)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	3.4	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	13.0	0.200	mg/L	EPA 160.2			02/18/97	RAM

CT&E Environmental Services Inc.

CT&E Ref.#	970760013	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/15/97 21:10
Client Sample ID	97 BPX LI C2 WA 02(8.0)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director:**	Stephen C. Ede
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	2.8	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	11.5	0.200	mg/L	EPA 160.2			02/18/97	RAN

CT&E Environmental Services Inc.

CT&E Ref.#	970760014
Client Name	Montgomery Watson Americas Inc
Project Name/#	1189002.280101 Liberty Island
Client Sample ID	97 BPX LI C4 WA 01(7.0)
Matrix	Water (Surface, Eff., Ground)
Ordered By	
PWSID	

Client PO#	
Printed Date/Time	02/20/97 16:45
Collected Date/Time	02/15/97 17:00
Received Date/Time	02/17/97 14:25
Technical Director: Stephen C. Ede	

Released By Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	7.4	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	15.5	0.200	mg/L	EPA 160.2			02/18/97	RAM

CT&E Environmental Services Inc.

CT&E Ref.#	970760015	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/15/97 13:45
Client Sample ID	97 BPX LI I1 WA 01(11)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	0.54	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	8.3	0.200	mg/L	EPA 160.2			02/18/97	RAM

CT&E Environmental Services Inc.

CT&E Ref.#	970760016	**Client PO#**	
Client Name	Montgomery Watson Americas Inc	**Printed Date/Time**	02/20/97 16:45
Project Name/#	1189002.280101 Liberty Island	**Collected Date/Time**	02/15/97 04:20
Client Sample ID	97 BPX LI B8 WA 03(6.5)	**Received Date/Time**	02/17/97 14:25
Matrix	Water (Surface, Eff., Ground)	**Technical Director: Stephen C. Ede**	
Ordered By			
PWSID		**Released By**	Stephen C Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Turbidity	1.7	0.100	NTU	EPA 180.1			02/18/97	EMB
	Sample analyzed past 48 hour hold time.							
Total Suspended Solids	12.3	0.200	mg/L	EPA 160.2			02/18/97	RAM

MONTGOMERY WATSON

C of C # 97-C # LI 1

Page _1_ of _1_

REPORT DUE IN 7 CALANDER DAYS

BP EXPLORATION (ALASKA) INC.
LIBERTY ISLAND SEDIMENT AND WATER SAMPLING

CHAIN OF CUSTODY FORM

RETURN COOLERS TO:
MONTGOMERY WATS
4100 Spenard Road
Anchorage, Alaska
(907) 248-8883

97.0760

PROJ. NO. 1189002.280101

To: CT & E ~~CAS, ANCHORAGE~~

SAMPLERS: (Signature) [signatures]

1997

	DATE	TIME	S/W	Sample ID	TOTAL NO. OF CONTAINERS	160.2 TSS AND TURB.					Run Turb. First AT. REMARKS
1	2/16	1100	W	97 BPX LI A4 WA01 (05)	2	✓					
2	2/16	0900	W	97 BPX LI A6 WA 01 (06)	2	✓					
3	2/15	0350	W	97 BPX LI A8 WA 01 (2.5)	2	✓					
4	2/15	0400	W	97 BPX LI A8 WA 02 (9.5)	2	✓					Turb TA
5	2/16	0110	W	97 BPX LI A10 WA 01 (4.5	2	✓					Turb TA
6	2/16	0120	W	97 BPX LI A10 WA 02 (11)	2	✓					
7	2/14	2200	W	97 BPX LI B3 WA01 (3.2)	1	✓					Turb. TA
8	2/15	100	W	97 BPX LI B6 WA01 (2.0	1 ✓	✓		SHORT			Turb TA
9	2/15	0410	W	97 BPX LI B8 WA 02 (3.5	1	✓		HOLDING			Turb. TA
10	2/15	0400	W	97 BPX LI B8 WA 01 (1.5)	1	✓					Turb. TA
11	2/15	830	W	97 BPX LI B10 WA01 (8.0)	2	✓					Turb. TA
12	2/15	2100	W	97 BPX LI ~~B6~~ C2 WA 01 (3.0)	2	✓					
				~~C2 WA02 (3.0)~~				NO Entry			
13	2/15	2110	W	97 BPX LI C2 WA 02 (8.0)	2	✓					
14	2/15	1700	W	97 BPX LI C4 WA 01 (7.0)	2	✓					
15	2/15	1345	W	97 BPX LI I1 WA 01 (11)	2	✓					

Relinquished by: 97 BPX	Date/Time	Shipped via:	Notified:	Date/Time
B McClean [signature]	2/17/96	Delivered		

Received for Laboratory by: Jana Ancastle [signature] Date: 2/17/97 Time: 1425

Columbia Analytical Services

MONTGOMERY WATSON

Review JF

Columbia Analytical Services, Inc.

RECEIVED
MAR 0 1997
ANCH
MONTGOMERY WATSON

March 3, 1997

Doug Quist
Montgomery Watson
4100 Spenard Road
Anchorage, AK 99517

Service Request No: A9700086

Re: **BP Exploration Alaska, Inc./.(1189002.280101)**

Dear Doug:

Attached are the results of the rush samples submitted to our lab on February 21, 1997. For your reference, our service request number for this work is A9700086.

All analyses were performed consistent with generally accepted analytical laboratory principles and practices. All results are intended to be considered in their entirety, and CAS is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Mike Shelton
Laboratory Director

4710 Business Park Blvd. Ste. 24 • Anchorage, AK 99503-7100 • 907.563.9846 • Fax 907.563.2973

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Montgomery Watson	**Date Received:**	2/21/97
Project:	BP Exploration Alaska, Inc.	**Work Order No:**	A9700086
Sample Matrix:	Soil		

CASE NARRATIVE

All analyses were performed consistent with generally accepted analytical principles and practices.

All particle size determination samples were sent to our Kelso laboratory. The service request number for these samples is K971202.

-Acronyms-

MRL	Method Reporting Limit
ND	None Detected at or above the method reporting limit
DRO	Diesel Range Organics
GRO	Gasoline Range Organics
RRO	Residual Range Organics

Approved by _____ March 3, 1997

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/14/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIB3SD01(01)
Lab Code: K9701202-001

Sand Fraction: Weight (Grams)	18.8024
Sand Fraction: Weight Recovered (Grams)	18.7183
Sand Fraction: Percent Recovery	100

Weight as received (Grams)	53.9082
Percent Solids	72.1
Weight Oven-Dried (Grams)	38.8678

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0320	0.08
Coarse Sand	0.425 mm	40	0.2379	0.61
Medium Sand	0.250 mm	60	1.4789	3.80
Fine Sand	0.106 mm	140	8.7652	22.6
Very Fine Sand	0.075 mm	200	3.8259	9.84
Clay			3.0950	7.96
Silt			23.0950	59.4
		Total	40.5299	104

Approved By: Mike Sutton Date: 3/3/97

000003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/14/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIB3SD02(08)
Lab Code: K9701202-002

Sand Fraction: Weight (Grams)	82.8151
Sand Fraction: Weight Recovered (Grams)	82.7387
Sand Fraction: Percent Recovery	100

Weight as received (Grams)	105.248
Percent Solids	83.5
Weight Oven-Dried (Grams)	87.8821

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0452	0.05
Very Coarse Sand	0.850 mm	20	0.0320	0.04
Coarse Sand	0.425 mm	40	0.5295	0.60
Medium Sand	0.250 mm	60	25.8069	29.4
Fine Sand	0.106 mm	140	51.2720	58.3
Very Fine Sand	0.075 mm	200	3.1086	3.54
Clay			1.5800	1.80
Silt			5.6200	6.39
		Total	87.9942	100

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIB6SD01(01)
Lab Code: K9701202-003

Sand Fraction: Weight (Grams)	2.0336
Sand Fraction: Weight Recovered (Grams)	1.9723
Sand Fraction: Percent Recovery	97.0

Weight as received (Grams)	38.5563
Percent Solids	70.1
Weight Oven-Dried (Grams)	27.0280

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0034	0.01
Very Coarse Sand	0.850 mm	20	0.0248	0.09
Coarse Sand	0.425 mm	40	0.0393	0.15
Medium Sand	0.250 mm	60	0.0770	0.28
Fine Sand	0.106 mm	140	0.3171	1.17
Very Fine Sand	0.075 mm	200	0.5936	2.20
Clay			1.9450	7.20
Silt			23.8800	88.4
		Total	26.8802	99.5

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIB6SD02(08)
Lab Code: K9701202-004

Sand Fraction: Weight (Grams)	3.0506
Sand Fraction: Weight Recovered (Grams)	3.024
Sand Fraction: Percent Recovery	99.1

Weight as received (Grams)	34.8972
Percent Solids	76.7
Weight Oven-Dried (Grams)	26.7662

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0080	0.03
Very Coarse Sand	0.850 mm	20	0.0088	0.03
Coarse Sand	0.425 mm	40	0.0338	0.13
Medium Sand	0.250 mm	60	0.0556	0.21
Fine Sand	0.106 mm	140	0.2879	1.08
Very Fine Sand	0.075 mm	200	0.4201	1.57
Clay			2.3250	8.69
Silt			23.2500	86.9
		Total	26.3892	98.6

Approved By: TTLS Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIB10SD01(01)
Lab Code: K9701202-005

Sand Fraction: Weight (Grams)	8.0821
Sand Fraction: Weight Recovered (Grams)	8.0039
Sand Fraction: Percent Recovery	99.0

Weight as received (Grams)	39.5303
Percent Solids	75.8
Weight Oven-Dried (Grams)	29.9640

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0000	0.00
Coarse Sand	0.425 mm	40	0.1198	0.40
Medium Sand	0.250 mm	60	3.9839	13.3
Fine Sand	0.106 mm	140	3.5310	11.8
Very Fine Sand	0.075 mm	200	0.0837	0.28
Clay			6.9850	23.3
Silt			14.9350	49.8
		Total	29.6384	98.9

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIB8SD02(08)
Lab Code: K9701202-006

Sand Fraction: Weight (Grams)	14.4281
Sand Fraction: Weight Recovered (Grams)	14.3143
Sand Fraction: Percent Recovery	99.2

Weight as received (Grams)	61.6584
Percent Solids	67.5
Weight Oven-Dried (Grams)	41.6194

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0269	0.06
Very Coarse Sand	0.850 mm	20	0.1035	0.25
Coarse Sand	0.425 mm	40	0.4336	1.04
Medium Sand	0.250 mm	60	2.5856	6.21
Fine Sand	0.106 mm	140	5.3886	12.9
Very Fine Sand	0.075 mm	200	2.6863	6.45
Clay			5.7450	13.8
Silt			27.2950	65.6
		Total	44.2645	106

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIB8SD02(08)
Lab Code: K9701202-006d

Sand Fraction: Weight (Grams)	10.8452
Sand Fraction: Weight Recovered (Grams)	10.6645
Sand Fraction: Percent Recovery	98.3

Weight as received (Grams)	57.3659
Percent Solids	72.5
Weight Oven-Dried (Grams)	41.5903

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0114	0.03
Very Coarse Sand	0.850 mm	20	0.1450	0.35
Coarse Sand	0.425 mm	40	0.3947	0.95
Medium Sand	0.250 mm	60	1.0133	2.44
Fine Sand	0.106 mm	140	3.1458	7.56
Very Fine Sand	0.075 mm	200	1.8541	4.46
Clay			5.1100	12.3
Silt			27.2100	65.4
		Total	38.8843	93.5

Approved By: TMS Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIB8SD02(08)
Lab Code: K9701202-006t

Sand Fraction: Weight (Grams)	11.8146
Sand Fraction: Weight Recovered (Grams)	11.6371
Sand Fraction: Percent Recovery	98.5

Weight as received (Grams)	54.5878
Percent Solids	70.0
Weight Oven-Dried (Grams)	38.2115

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0031	0.01
Very Coarse Sand	0.850 mm	20	0.1653	0.43
Coarse Sand	0.425 mm	40	0.2877	0.75
Medium Sand	0.250 mm	60	1.0398	2.72
Fine Sand	0.106 mm	140	2.9078	7.61
Very Fine Sand	0.075 mm	200	1.7589	4.60
Clay			4.7300	12.4
Silt			26.1700	68.5
		Total	37.0626	97.0

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIB8SD01(01)
Lab Code: K9701202-007

Sand Fraction: Weight (Grams)	1.0224
Sand Fraction: Weight Recovered (Grams)	0.9617
Sand Fraction: Percent Recovery	94.1

Weight as received (Grams)	38.2747
Percent Solids	68.8
Weight Oven-Dried (Grams)	26.3330

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0012	0.00
Very Coarse Sand	0.850 mm	20	0.0168	0.06
Coarse Sand	0.425 mm	40	0.0257	0.10
Medium Sand	0.250 mm	60	0.0470	0.18
Fine Sand	0.106 mm	140	0.2271	0.86
Very Fine Sand	0.075 mm	200	0.2637	1.00
Clay			2.3600	8.96
Silt			23.6100	89.7
		Total	26.5515	101

Approved By: MS Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIB10SD02(08)
Lab Code: K9701202-008

B-10 Ext

Sand Fraction: Weight (Grams)	2.0051
Sand Fraction: Weight Recovered (Grams)	1.975
Sand Fraction: Percent Recovery	98.5

Weight as received (Grams)	32.4177
Percent Solids	72.5
Weight Oven-Dried (Grams)	23.5028

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0060	0.03
Coarse Sand	0.425 mm	40	0.0321	0.14
Medium Sand	0.250 mm	60	0.3971	1.69
Fine Sand	0.106 mm	140	1.0078	4.29
Very Fine Sand	0.075 mm	200	0.2198	0.94
Clay			6.8450	29.1
Silt			14.9900	63.8
		Total	23.4978	100

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Montgomery Watson Americas, Inc.	**Service Request:**	K9701202
Project:	Liberty Island/1189002.280101	**Date Collected:**	2/15/97
Sample Matrix	Sediment	**Date Received:**	2/24/97
		Date Analyzed:	2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLII1SD01(01)
Lab Code: K9701202-009

Sand Fraction: Weight (Grams)	35.3751
Sand Fraction: Weight Recovered (Grams)	35.1601
Sand Fraction: Percent Recovery	99.4

Weight as received (Grams)	67.4098
Percent Solids	81.5
Weight Oven-Dried (Grams)	54.9390

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0201	0.04
Very Coarse Sand	0.850 mm	20	0.1352	0.25
Coarse Sand	0.425 mm	40	0.1349	0.25
Medium Sand	0.250 mm	60	0.7251	1.32
Fine Sand	0.106 mm	140	16.9634	30.9
Very Fine Sand	0.075 mm	200	10.2088	18.6
Clay			3.6700	6.68
Silt			20.1850	36.7
		Total	52.0425	94.7

Approved By: Vikki Stellon Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLII1SD02(08)
Lab Code: K9701202-010

Sand Fraction: Weight (Grams)	0.3685
Sand Fraction: Weight Recovered (Grams)	0.323
Sand Fraction: Percent Recovery	87.7

Weight as received (Grams)	35.8749
Percent Solids	80.5
Weight Oven-Dried (Grams)	28.8793

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0031	0.01
Coarse Sand	0.425 mm	40	0.0018	0.01
Medium Sand	0.250 mm	60	0.0182	0.06
Fine Sand	0.106 mm	140	0.1221	0.42
Very Fine Sand	0.075 mm	200	0.0903	0.31
Clay			15.3100	53.0
Silt			13.0150	45.1
		Total	28.5605	98.9

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIC2SD01(01)
Lab Code: K9701202-011

Sand Fraction: Weight (Grams)	1.4428
Sand Fraction: Weight Recovered (Grams)	1.3263
Sand Fraction: Percent Recovery	91.9

Weight as received (Grams)	59.9115
Percent Solids	70.9
Weight Oven-Dried (Grams)	42.4773

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0014	0.00
Coarse Sand	0.425 mm	40	0.0138	0.03
Medium Sand	0.250 mm	60	0.0328	0.08
Fine Sand	0.106 mm	140	0.2163	0.51
Very Fine Sand	0.075 mm	200	0.2545	0.60
Clay			3.5400	8.33
Silt			38.5150	90.7
		Total	42.5738	100

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIC2SD02(08)
Lab Code: K9701202-012

Sand Fraction: Weight (Grams)	2.6933
Sand Fraction: Weight Recovered (Grams)	2.673
Sand Fraction: Percent Recovery	99.2

Weight as received (Grams)	25.012
Percent Solids	83.5
Weight Oven-Dried (Grams)	20.8850

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0099	0.05
Coarse Sand	0.425 mm	40	0.0283	0.14
Medium Sand	0.250 mm	60	0.2962	1.42
Fine Sand	0.106 mm	140	1.5188	7.27
Very Fine Sand	0.075 mm	200	0.5037	2.41
Clay			9.4800	45.4
Silt			8.3950	40.2
		Total	20.2319	96.9

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/15/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIC4SD02(08)
Lab Code: K9701202-013

Sand Fraction: Weight (Grams)	66.3786
Sand Fraction: Weight Recovered (Grams)	66.2127
Sand Fraction: Percent Recovery	100

Weight as received (Grams)	92.254
Percent Solids	79.7
Weight Oven-Dried (Grams)	73.5264

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0013	0.00
Very Coarse Sand	0.850 mm	20	0.0147	0.02
Coarse Sand	0.425 mm	40	0.0545	0.07
Medium Sand	0.250 mm	60	1.4404	1.96
Fine Sand	0.106 mm	140	48.7899	66.4
Very Fine Sand	0.075 mm	200	11.6167	15.8
Clay			1.7050	2.32
Silt			7.7850	10.6
		Total	71.4075	97.1

Approved By: _____ Date: 3/2/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Montgomery Watson Americas, Inc.	**Service Request:**	K9701202
Project:	Liberty Island/1189002.280101	**Date Collected:**	2/15/97
Sample Matrix	Sediment	**Date Received:**	2/24/97
		Date Analyzed:	2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIC4SD01(01)
Lab Code: K9701202-014

Sand Fraction: Weight (Grams)	10.0257
Sand Fraction: Weight Recovered (Grams)	9.8972
Sand Fraction: Percent Recovery	98.7

Weight as received (Grams)	58.1901
Percent Solids	72.2
Weight Oven-Dried (Grams)	42.0133

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.0210	0.05
Coarse Sand	0.425 mm	40	0.0389	0.09
Medium Sand	0.250 mm	60	0.5383	1.28
Fine Sand	0.106 mm	140	5.5294	13.2
Very Fine Sand	0.075 mm	200	1.7010	4.05
Clay			3.9050	9.29
Silt			31.8850	75.9
		Total	43.6186	104

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIA4SD01(01)
Lab Code: K9701202-015

Sand Fraction: Weight (Grams)	67.0099
Sand Fraction: Weight Recovered (Grams)	66.8148
Sand Fraction: Percent Recovery	100

Weight as received (Grams)	87.2264
Percent Solids	88.9
Weight Oven-Dried (Grams)	77.5443

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	2.4660	3.18
Fine Gravel	2.00 mm	10	1.2550	1.62
Very Coarse Sand	0.850 mm	20	0.6571	0.85
Coarse Sand	0.425 mm	40	3.8091	4.91
Medium Sand	0.250 mm	60	22.7192	29.3
Fine Sand	0.106 mm	140	32.3866	41.8
Very Fine Sand	0.075 mm	200	1.7992	2.32
Clay			3.7250	4.80
Silt			6.9400	8.95
		Total	75.7572	97.7

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIA4SD02(08)
Lab Code: K9701202-016

Sand Fraction: Weight (Grams)	90.4426
Sand Fraction: Weight Recovered (Grams)	90.363
Sand Fraction: Percent Recovery	100

Weight as received (Grams)	108.145
Percent Solids	85.1
Weight Oven-Dried (Grams)	92.0310

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	9.5634	10.4
Fine Gravel	2.00 mm	10	2.3032	2.50
Very Coarse Sand	0.850 mm	20	1.4641	1.59
Coarse Sand	0.425 mm	40	4.3069	4.68
Medium Sand	0.250 mm	60	43.0847	46.8
Fine Sand	0.106 mm	140	28.1088	30.5
Very Fine Sand	0.075 mm	200	1.0047	1.09
Clay			1.5150	1.65
Silt			2.0000	2.17
		Total	93.3508	101

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIA4SD02(08)
Lab Code: K9701202-016d

Sand Fraction: Weight (Grams)	91.2509
Sand Fraction: Weight Recovered (Grams)	91.0646
Sand Fraction: Percent Recovery	100

Weight as received (Grams)	107.984
Percent Solids	84.8
Weight Oven-Dried (Grams)	91.5706

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	16.8718	18.4
Fine Gravel	2.00 mm	10	1.9209	2.10
Very Coarse Sand	0.850 mm	20	1.1428	1.25
Coarse Sand	0.425 mm	40	5.3384	5.83
Medium Sand	0.250 mm	60	35.1659	38.4
Fine Sand	0.106 mm	140	29.2320	31.9
Very Fine Sand	0.075 mm	200	0.7958	0.87
Clay			1.6000	1.75
Silt			2.0700	2.26
		Total	94.1376	103

Approved By: 1775 Date: 313197

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIA4SD02(08)
Lab Code: K9701202-016I

Sand Fraction: Weight (Grams)	90.1459
Sand Fraction: Weight Recovered (Grams)	90.0547
Sand Fraction: Percent Recovery	100

Weight as received (Grams)	107.053
Percent Solids	85.0
Weight Oven-Dried (Grams)	90.9414

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	11.4577	12.6
Fine Gravel	2.00 mm	10	0.7290	0.80
Very Coarse Sand	0.850 mm	20	0.7757	0.85
Coarse Sand	0.425 mm	40	3.3704	3.71
Medium Sand	0.250 mm	60	40.0474	44.0
Fine Sand	0.106 mm	140	32.0653	35.3
Very Fine Sand	0.075 mm	200	0.8089	0.89
Clay			1.4050	1.54
Silt			2.1900	2.41
		Total	92.8494	102

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIA6SD01(01)
Lab Code: K9701202-017

Sand Fraction: Weight (Grams)	59.7172
Sand Fraction: Weight Recovered (Grams)	59.5882
Sand Fraction: Percent Recovery	100

Weight as received (Grams)	96.8374
Percent Solids	80.5
Weight Oven-Dried (Grams)	77.9541

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	1.0714	1.37
Fine Gravel	2.00 mm	10	0.2535	0.33
Very Coarse Sand	0.850 mm	20	0.1769	0.23
Coarse Sand	0.425 mm	40	0.4364	0.56
Medium Sand	0.250 mm	60	11.1410	14.3
Fine Sand	0.106 mm	140	39.1413	50.2
Very Fine Sand	0.075 mm	200	4.4337	5.69
Clay			3.1250	4.01
Silt			15.1700	19.5
		Total	74.9492	96.1

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIA6SD02(08)
Lab Code: K9701202-018

A-6 ES

Sand Fraction: Weight (Grams)	29.5097
Sand Fraction: Weight Recovered (Grams)	29.3858
Sand Fraction: Percent Recovery	100

Weight as received (Grams)	70.0063
Percent Solids	72.3
Weight Oven-Dried (Grams)	50.6146

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.1635	0.32
Coarse Sand	0.425 mm	40	0.3399	0.67
Medium Sand	0.250 mm	60	0.7212	1.42
Fine Sand	0.106 mm	140	13.0103	25.7
Very Fine Sand	0.075 mm	200	7.1941	14.2
Clay			2.8250	5.58
Silt			25.0550	49.5
		Total	49.3090	97.4

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIA8SD02(08)
Lab Code: K9701202-019

Sand Fraction: Weight (Grams)	17.723
Sand Fraction: Weight Recovered (Grams)	17.5632
Sand Fraction: Percent Recovery	99.1

Weight as received (Grams)	63.8683
Percent Solids	73.7
Weight Oven-Dried (Grams)	47.0709

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0000	0.00
Very Coarse Sand	0.850 mm	20	0.1316	0.28
Coarse Sand	0.425 mm	40	0.1711	0.36
Medium Sand	0.250 mm	60	0.3260	0.69
Fine Sand	0.106 mm	140	4.6817	9.95
Very Fine Sand	0.075 mm	200	5.1741	11.0
Clay			4.9800	10.6
Silt			30.4200	64.6
		Total	45.8845	97.5

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIA8SD01(01)
Lab Code: K9701202-020

A-S 016

Sand Fraction: Weight (Grams)	14.2988
Sand Fraction: Weight Recovered (Grams)	14.3328
Sand Fraction: Percent Recovery	100

Weight as received (Grams)	59.7144
Percent Solids	41.1
Weight Oven-Dried (Grams)	24.5426

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0176	0.07
Very Coarse Sand	0.850 mm	20	1.1690	4.76
Coarse Sand	0.425 mm	40	1.9686	8.02
Medium Sand	0.250 mm	60	1.3939	5.68
Fine Sand	0.106 mm	140	2.2470	9.16
Very Fine Sand	0.075 mm	200	1.5678	6.39
Clay			2.8300	11.5
Silt			13.2600	54.0
		Total	24.4539	100

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIA10SD01(01)
Lab Code: K9701202-021

A-10 1F-7

Sand Fraction: Weight (Grams)	32.1191
Sand Fraction: Weight Recovered (Grams)	32.0103
Sand Fraction: Percent Recovery	100

Weight as received (Grams)	61.4534
Percent Solids	81.0
Weight Oven-Dried (Grams)	49.7773

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0394	0.08
Very Coarse Sand	0.850 mm	20	0.0863	0.17
Coarse Sand	0.425 mm	40	0.2890	0.58
Medium Sand	0.250 mm	60	3.4337	6.90
Fine Sand	0.106 mm	140	20.7419	41.7
Very Fine Sand	0.075 mm	200	2.8292	5.68
Clay			1.7400	3.50
Silt			18.6400	37.4
		Total	47.7995	96.0

Approved By: _____ Date: 3/3/97

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Montgomery Watson Americas, Inc.
Project: Liberty Island/1189002.280101
Sample Matrix Sediment

Service Request: K9701202
Date Collected: 2/16/97
Date Received: 2/24/97
Date Analyzed: 2/28/97

Particle Size Determination
ASTM Method D422 Modified

Sample Name: 97BPXLIA10SD02(08)
Lab Code: K9701202-022

Sand Fraction: Weight (Grams)	17.5188
Sand Fraction: Weight Recovered (Grams)	17.1901
Sand Fraction: Percent Recovery	98.1

Weight as received (Grams)	61.0743
Percent Solids	56.0
Weight Oven-Dried (Grams)	34.2016

Description	Sieve Size	Sieve Number	Dry Weight (Grams)	Percent of Total Weight Recovered
Medium Gravel	4.75 mm	4	0.0000	0.00
Fine Gravel	2.00 mm	10	0.0838	0.25
Very Coarse Sand	0.850 mm	20	0.6112	1.79
Coarse Sand	0.425 mm	40	0.8858	2.59
Medium Sand	0.250 mm	60	0.6678	1.95
Fine Sand	0.106 mm	140	5.2105	15.2
Very Fine Sand	0.075 mm	200	3.1105	9.09
Clay			5.7050	16.7
Silt			19.7300	57.7
		Total	36.0046	105

Approved By: _____ Date: _____

APPENDIX A

CHAIN OF CUSTODY INFORMATION
COOLER RECEIPT FORM

+++ 100080

MONTGOMERY WATSON

C of C # 97-C #LI3

Page _1_ of 2

REPORT DUE IN 7 CALANDER DAYS

BP EXPLORATION (ALAS) INC.
LIBERTY ISLAND SEDIMENT AND WATER SAMPLING

CHAIN OF CUSTODY FORM

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

000030

PROJ. NO. 1189002.280101

To: CAS, ANCHORAGE

SAMPLERS: (*Signature*)

1997

DATE	TIME	S/W	Sample ID	TOTAL NO. OF CONTAINERS	GRAIN SIZE, ASTM D442					REMARKS
2/14	2300	S	97 BPX LI B3 SD 01 (01)	1	✓					-1
2/14	2330	S	97 BPX LI B3 SD 02 (08)	1	✓					-2
2/15	0120	S	97 BPX LI B6 SD 01 (01)	1	✓					-3
2/15	0145	S	97 BPX LI B6 SD 02 (08)	1	✓					-4
2/15	900	S	97 BPX LI B10 SD 01 (01)	1	✓					-5
2/15	0530	S	97 BPX LI B8 SD 02 (08)	1	✓					-6
2/15	0430	S	97 BPX LI B8 SD 01 (01)	1	✓					-7
2/15	1000	S	97 BPX LI B10 SD (02) (08)	1	✓					02 (08) -8
2/15	1400	S	97 BPX LI I1 SD 01 (01)	1	✓					-9
2/15	1445	S	97 BPX LI I1 SD (02) (08)	1	✓					02 (08) -10
2/15	2220	S	97 BPX LI C2 SD 01 (01)	1	✓					-11
2/15	2240	S	97 BPX LI C2 SD 02 (08)	1	✓					-12
2/15	1800	S	97 BPX LI C4 SD 02 (08)	1	✓					-13
2/15	1730	S	97 BPX LI C4 SD 01 (01)	1	✓					-14
2/16	1130	S	97 BPX LI A4 SD 01 (01)	1	✓					-15
2/16	1200	S	97 BPX LI A4 SD 02 (08)	1	✓					-16
2/16	0930	S	97 BPX LI A6 SD 01 (01)	1	✓					-17

Relinquished by:97 BPX	Date/Time	Shipped via:	Notified: N/A	Date/Time
	2/21/97 1455	Delivered		

Received for Laboratory by: [signature] Date: 2-21-97 Time: 7:

MONTGOMERY WATSON

C of C # 97-C # 43

Page 2 of 2

REPORT DUE IN 7 CALANDER DAYS

BP EXPLORATION (ALAS) INC.
LIBERTY ISLAND SEDIMENT AND WATER SAMPLING

CHAIN OF CUSTODY FORM

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

PROJ. NO.	To:
1189002.280101	CAS, ANCHORAGE

SAMPLERS: (Signature)

1997

DATE	TIME	S/W	Sample ID	TOTAL NO. OF CON-TAINERS	GRAIN SIZE, ASTM D442					REMARKS
2/16	1000	S	97 BPX LI A6 SD 02(08)	1	✓					-18
2/16	0440	S	97 BPX LI A8 SD 02(08)	1	✓					-19
2/16	0430	S	97 BPX LI A8 SD 01(01)	1	✓					-20
2/16	0130	S	97 BPX LI A10 SD 01(01)	1	✓					-21
2/16	0150	S	97 BPX LI A10 SD 02(08)	1	✓					-22

Relinquished by:97 BPX	Date/Time	Shipped via:	Notified: N/A	Date/Time
	2/21/97 1455	Delivered		

Received for Laboratory by: Date: 2-21-97 Time: 2:55 pm

12000

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation From

Client: Montgomery Watson Work order: A9700086

Project: BP Exploration Alaska, Inc. / (1189002.280101)

Cooler received on: 2/21/97 and opened on 2/21/97 by Shiree Kahlstrom

		Yes	No	N/A
1	Were custody seals on outside of cooler?		☒	☐
	If yes, how many and where? Hand delivered.			☐
	Were signature and date correct?	☒	☐	☐
2	Were custody papers properly filled out (ink, signed, etc....)?	☒	☐	☐
3	Did all bottles arrive in good condition (unbroken, etc....)?	☒	☐	☐
4	Were all bottle labels correct (analysis, preservation, etc....)?	☒	☐	☐
5	Did all bottle labels and tags agree with custody papers?	☒	☐	☐
6	Were correct bottles used for test indicated?	☒	☐	☐
7	Were VOA vials checked for absence of air bubbles, and noted?		☐	☒
8	Temperature of cooler upon receipt	Ambient	Degrees C	

Explain any discrepancies:

		Yes	No
pH	Reagent		
12	NaOH		
2	HNO_3		
2	H_2SO_4		

Yes = all samples OK
No = Samples were preserved at lab as listed

Comments:

Sample I.D.	Reagent	Vol.

Appendix D

Chain-of-Custody-Records

Michelle Timmons

MONTGOMERY WATSON

C of C # 97-C #LI |
Page _1_ of _1_

BP EXPLORATION (ALASKA) INC.
LIBERTY ISLAND SEDIMENT AND WATER SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATS
4100 Spenard Road
Anchorage, Alaska
(907) 248-8883

97.0760

REPORT DUE IN 7 CALANDER DAYS

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101

To: CT&E. ~~CAS, ANCHORAGE~~

SAMPLERS: (Signature) 1997

DATE	TIME	S/W	Sample ID	TOTAL NO. OF CONTAINERS	160.2 TSS AND TURB.					REMARKS (Run Turb. 2oot A.T.)
2/16	1100	W	97 BPX LI A4 WA01 (0.5)	2	✓					
2/16	0500	W	97 BPX LI A6 WA 01 (0.6)	2	✓					
2/16	0350	W	97 BPX LI A8 WA 01 (2.5)	2	✓					
2/15	0400	W	97 BPX LI A8 WA 02 (9.5)	2	✓					Turb TA
2/16	0110	W	97 BPX LI A10 WA 01 (4.5	2	✓					Turb TA
2/16	0120	W	97 BPX LI A10 WA 02 (11)	2	✓					
2/14	2200	W	97 BPX LI 33 WA01 (3.2)	1	✓					Turb. TA
2/15	100	W	97 BPX LI B6 WA01 (2.0	1✓	✓					Turb TA
2/15	0410	W	97 BPX LI B8 WA 02 (3.5	1	✓					Turb. TA
2/15	0400	W	97 BPX LI B8 WA01 (1.5)	1	✓					Turb. TA
2/15	830	W	97 BPX LI B10 WA01 (8.0)	2	✓					Turb. TA
2/15	2100	W	97 BPX LI ~~B10~~ C2 WA 01 (3.0)	2	✓					
			~~C2 WA01 (3.0)~~		NO entry					
2/15	2110	W	97 BPX LI C2 WA 02 (8.0)	2	✓					
2/15	1700	W	97 BPX LI C4 WA 01 (7.0)	2	✓					
2/15	1345	W	97 BPX LI I1 WA 01 (11)	2	✓					
2/15	420	W	97 BPX LI B8 WA03 (6.5)	1	✓					Added: Bmc

Relinquished by: 97 BPX Date/Time 2/17/96 | Shipped via: Delivered | Notified: | Date/Time

Received for Laboratory by: Jana Aecaster Date: 2/17/97 Time: 1425

CT&E Environmental Services Inc.

February 19, 1997

Bonnie McLear
Montgomery Watson Americas Inc
4100 Spenard Rd
Anchorage, AK 99517-2901

Dear Bonnie McLear:

Thank you for your recent request for analytical services. The sample(s) below will be analyzed per your request.

These samples will be disposed 30 days after completion of analysis. Your samples are assigned to the indicated project

Client: Montgomery Watson Americas Inc - JMMENGN
Project: 1189002.280101 Liberty Island - [970760]

Sample: 970760001 Client/CT&E ID: 97 BPX LI A4 WA 01(05)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 11:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760002 Client/CT&E ID: 97 BPX LI A6 WA 01(06)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 09:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760003 Client/CT&E ID: 97 BPX LI A8 WA 01(2-5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 03:50 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

CT&E Environmental Services Inc.

Sample: 970760004 Client/CT&E ID: 97 BPX LI A8 WA 02(9-5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 04:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760005 Client/CT&E ID: 97 BPX LI A10 WA 01(4.5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 01:10 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760006 Client/CT&E ID: 97 BPX LI A10 WA 02(11)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/16/97 01:20 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760007 Client/CT&E ID: 97 BPX LI B3 WA 01(3.2)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/14/97 22:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760008 Client/CT&E ID: 97 BPX LI B6 WA 01(2.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 01:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760009 Client/CT&E ID: 97 BPX LI B8 WA 02(3.5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 04:10 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760010 Client/CT&E ID: 97 BPX LI B8 WA 01(1.5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 04:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760011 Client/CT&E ID: 97 BPX LI B10 WA 01(8.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 08:30 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760012 Client/CT&E ID: 97 BPX LI C2 WA 01(3.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 21:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760013 Client/CT&E ID: 97 BPX LI C2 WA 02(8.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 21:10 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

CT&E Environmental Services Inc.

Sample: 970760014 Client/CT&E ID: 97 BPX LI C4 WA 01(7.0)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 17:00 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760015 Client/CT&E ID: 97 BPX LI I1 WA 01(11)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 13:45 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

Sample: 970760016 Client/CT&E ID: 97 BPX LI B8 WA 03(6.5)
Matrix: 1 - Water (Surface, Eff., Ground)
Collected: 02/15/97 04:20 Received: 02/17/97 14:25 02/26/97 17:00
Receiving Codes:
OK - Sample arrived in good condition

Total Suspended Solids
Turbidity

For further information or assistance concerning samples, please contact:
Joyce Windebank at (907)562-2343

MONTGOMERY WATSON

C of C , #97- LI2
Page _1_ of 2.

REPORT DUE IN 7 CALANDER DAYS

BP EXPLORATION (ALASKA) INC.
LIBERY ISLAND PILELINE SEDIMENT AND WATER SAMPLING

CHAIN OF CUSTODY FORM

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

PROJ. NO. 1189002.280101

To: LOCKHEED, Attn: MARY WOLFE

SAMPLERS: (Signature) 1997 [signatures]

DATE	TIME	S/W	Sample ID	TOTAL NO. OF CONTAINERS	WATER: TSS, EPA 160.2	VOC, 8260A 2-2 oz.	SVOC(8270B), DRO (8100M), TOC (415.1), 8 oz.	As, Cd, Cr, Ba, Hg, Cr+6, BaSO4, 4 oz.		REMARKS
2/14	2300	SED	97BPXLIB3SD01(01)	4	X	X	X			
2/14	2330	SED	97BPXLIB3SD02(08)	4						
2/15	0120	SED	97BPXLIB6SD01(01)	4						
2/15	0145	SED	97BPXLIB6SD02(08)	4						
2/15	0900	SED	97BPXLIB10SD01(07)	4						
2/15	0930	SED	97BPXLIB10SD02(08)	4						
2/15	1000	SED	97BPXLIB10SD62(08)	4						
2/15	1400	SED	97BPXLII1SD01(01)	4						
2/15	1445	SED	97BPXLII1SD02(08)	4						
2/15	2220	SED	97BPXLIC2SD01(01)	4						
2/15	2240	SED	97BPXLIC2SD02(08)	4						
2/15	2300	SED	✓ 97BPXLIC2SD61(08)	4						should be SD 62 (08)
2/15	1800	SED	97BPXLIC4SD02(08)	4	(01) correct	(08)				corrected 2/20
2/15	1730	SED	97BPXLIC4SD01(08)	4						(08) should be (01)
2/16	1130	SED	97BPXLIA4SD01(01)	3						
2/16	1200	SED	97BPXLIA4SD02(08)	4						
2/16	0930	SED	97BPXLIA6SD01(01)	4	X	X	X			

Relinquished by: [signature] | Date/Time: 2/16/97 1200 | Shipped via: FedEx 384209662 | Notified: | Date/Time

Received for Laboratory by: | Date: | Time:

MONTGOMERY WATSON

C of C, #97-LI2
Page 2 of 2.

REPORT DUE IN 7 CALANDER DAYS

BP EXPLORATION (ALAS..A) INC.
LIBERY ISLAND PILELINE SEDIMENT AND WATER SAMPLING

CHAIN OF CUSTODY FORM

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

PROJ. NO. 1189002.280101

To: LOCKHEED, Attn: MARY WOLFE

SAMPLERS: (Signature) 1997

DATE	TIME	S/W	Sample ID	TOTAL NO. OF CONTAINERS	WATER: TSS, EPA 160.2	VOC, 8260A 2-2 oz	SVOC(8270B), DRO (8100M), TOC (415.1), 8 OZ.	As, Cd, Cr, Ba, Hg, Cr+6, BaSO4, 4 oz.		REMARKS
2/16	1000	SED	97BPXLIA6SD02(08)	4		X	X	X		
2/16	1010	SED	97BPXLIA6SD62(08)	4		↓	↓	↓		
2/16	0440	SED	97BPXLIA8SD02(08)	4		↓	↓	↓		
2/16	0430	SED	97BPXLIA8SD01(07)	4		↓	↓	↓		
2/16	0130	SED	97BPXLIA10SD01(07)	4		↓	↓	↓		
2/16	0150	SED	97BPXLIA10SD02(08)	4		X	X	X		
2/16	1900	W	97 BPX LI TB 21697	3		X				
2/14	1900	W	97 BPX LI 021497	3		X				
2/15	0430	SD	97 BPX LI B8SD01(07)	4		X	X	X		JARS Rec'd by LAB — Added to CofC 2/20
2/15	0500	SD	97BPXLIB8SD02(08)	4		X	X	X		

Relinquished by: | Date/Time: 2/15/97 1230 | Shipped via: FedEx 3842009662 | Notified: | Date/Time

Received for Laboratory by: | Date: | Time:

MONTGOMERY WATSON

C of C , #97- LI2

Page _1_ of 2.

REPORT DUE IN 7 CALANDER DAYS

BP EXPLORATION (ALASKA) INC.
LIBERY ISLAND PILELINE SEDIMENT AND WATER SAMPLING

CHAIN OF CUSTODY FORM

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

PROJ. NO. 1189002.260101

To: LOCKHEED, Attn: MARY WOLFE

SAMPLERS: (Signature) 1997 [signatures]

DATE	TIME	S/W	Sample ID	TOTAL NO. OF CONTAINERS	TSS, EPA 160.2 (WATER)	VOC, 8260A 2-2 oz	SVOC(8270B), DRO (8100M), TOC (415.1), 8 oz.	As, Cd, Cr, Ba, Hg, Cr+6, BaSO4, 4 oz.		REMARKS
2/14	2300	SED	97BPXLIB3SD01(01)	4		X	X	X		
2/14	2330	SED	97BPXLIB3SD02(08)	4						
2/15	0120	SED	97BPXLIB6SD01(01)	4						
2/15	0145	SED	97BPXLIB6SD02(08)	4						
2/15	0900	SED	97BPXLIB10SD01(07)	4						
2/15	0930	SED	97BPXLIB10SD02(08)	4						
2/15	1000	SED	97BPXLIB10SD62(08)	4						
2/15	1400	SED	97BPXLII1SD01(01)	4						
2/15	1445	SED	97BPXLII1SD02(08)	4						
2/15	2220	SED	97BPXLIC2SD01(01)	4						
2/15	2240	SED	97BPXLIC2SD02(08)	4						
2/15	2300	SED	97BPXLIC2SD61(08)	4						
2/15	1800	SED	97BPXLIC4SD02(08)	4	correct (01) BGM					Corrected 2/20
2/15	1730	SED	97BPXLIC4SD01(08)	4						(08) should be (01) BGM
2/16	1130	SED	97BPXLIA4SD01(01)	3						
2/16	1200	SED	97BPXLIA4SD02(08)	4						
2/16	0930	SED	97BPXLIA6SD01(01)	4		X	X	X		

Relinquished by:	Date/Time	Shipped via:	Notified:	Date/Time
[signature]	2/10/97 1200	FedX 3842089662		

Received for Laboratory by: Date: Time:

MONTGOMERY WATSON

C of C , #97-LI2
Page 1 of 1.

REPORT DUE IN 7 CALANDER DAYS

BP EXPLORATION (ALAS..A) INC.
LIBERY ISLAND PILELINE SEDIMENT AND WATER SAMPLING

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

CHAIN OF CUSTODY FORM

PROJ. NO. 1189002.280101 | To: LOCKHEED, Attn: MARY WOLFE

SAMPLERS: (*Signature*)
1997 WC [signature] [signature]

DATE	TIME	S/W	Sample ID	TOTAL NO. OF CONTAINERS	WATER	TSS, EPA 160.2	VOC, 8260A 2-2 oz	SVOC(8270B), DRO (8100M), TOC (415.1), 8 OZ.	As, Cd, Cr, Ba, Hg, Cr+6, BaSO4, 4 oz.	REMARKS
2/16	1000	SED	97BPX LIA6SD02(08)	4			X	X	X	
2/16	1010	SED	97BPX LIA6SD62(08)	4						
2/16	0440	SED	97BPX LI AB SD01(08)	4						
2/16	0430	SED	97BPX LI AB SD01(01)	4						
2/16	0130	SED	97BPX LI A10SD01(01)	4						
2/16	0150	SED	97BPX LI A10SD02(08)	4			X	X	X	
2/16	1900	W	97 BPX LI TB 21697	3			X			
2/14	1900	W	97 BPX LI 021497	3			X			
2/15	0430	SD	97 BPX LI B8SD01(01)	4			X	X	X	SJARS Rec'd by LAB — Added to CofC 2/20
2/15	0500	SD	97BPXLI B8SD02(08)				X	X	X	

Relinquished by: [signature] | Date/Time 2/18/97 (2PM) | Shipped via: FedEx 3842009662 | Notified: | Date/Time

Received for Laboratory by: | Date: | Time:

FedEx. *USA Airbill*

Tracking Number 3842009662

Sender's Copy

863140 00006/00200

1 From (please print)

Date 2/18/97 Sender's FedEx Account Number 1387-3266-5

Sender's Name Connie McLean Phone (907) 248-8883

Dept./Floor/Suite/Room

Company MONTGOMERY WATSON

Address 4100 SPENARD RD

City ANCHORAGE State AK Zip 99517

2 Your Internal Billing Reference Information (Optional) (First 24 characters will appear on invoice) 1189002.270101

3 To (please print)

Recipient's Name Mary Wolfe Phone (800) 582-7605

Dept./Floor/Suite/Room

Company LAS Lab

Address 975 Kelly Johnson Dr.

(To "HOLD" at FedEx location, print FedEx address here) (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes)

City Las Vegas State NV Zip 89119

For HOLD at FedEx Location check here

☐ Hold Weekday (Not available with FedEx First Overnight) ☐ Hold Saturday (Not available at all locations) (Not available with FedEx First Overnight or FedEx Standard Overnight)

For Saturday Delivery check here

☐ (Extra Charge. Not available at all locations) (Not available with FedEx First Overnight or FedEx Standard Overnight)

4a Express Package Service *Packages under 150 lbs.* (Delivery commitments may be later in some areas)

☒ FedEx Priority Overnight (Next business morning) ☐ FedEx Standard Overnight (Next business afternoon) ☐ FedEx 2Day* (Second business day)

☐ NEW FedEx First Overnight (Earliest next business morning delivery to select locations) (Higher rates apply)

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

4b Express Freight Service *Packages over 150 lbs.* (Delivery commitments may be later in some areas)

☐ FedEx Overnight Freight (Next business day service for any distance) ☐ FedEx 2Day Freight (Second business day service for any distance) ☐ FedEx Express Saver Freight (Up to 3 business day service, based upon distance)

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

5 Packaging ☐ FedEx Letter ☐ FedEx Pak (Declared value limit $500) ☐ FedEx Box ☐ FedEx Tube ☒ Other Pkg.

6 Special Handling

Does this shipment contain dangerous goods? ☐ Yes (No or yes Shipper's Declaration not required) ☐ Yes (Shipper's Declaration not required)

☐ Dry Ice (Dry Ice, 9, UN 1845) ____ x ____ kg. (Dangerous Goods Shipper's Declaration not required)

CA ☐ Cargo Aircraft Only

7 Payment

Bill to: ☒ Sender (Account no. in section 1 will be billed) ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

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

FedEx Account No. _____

Credit Card No. _____ Exp. Date _____

Total Packages	Total Weight	Total Declared Value*
		$ .00

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

8 Release Signature *Sign to authorize delivery without obtaining signature.*

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

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WCSL 5394 Rev. Date 6/95 PART #147956 ©1994-95 FedEx PRINTED IN U.S.A.

Service Conditions, Declared Value, and Limit of Liability—By using this Airbill you agree to the service conditions in our current Service Guide or U.S. Government Service Guide. Both are available on request. SEE BACK OF SENDER'S COPY OF THIS AIRBILL FOR INFORMATION AND ADDITIONAL TERMS. We will not be responsible for any claim in excess of $100 per package whether the result of loss, damage, or delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, and document your actual loss in a timely manner. Your right to recover from us for any loss includes intrinsic value of the package, loss of sales, interest, profit, attorney's fees, costs, and other forms of damage, whether direct, incidental, consequential, or special, and is limited to the greater of $100 or the declared value but cannot exceed actual documented loss. The maximum declared value for any FedEx Letter and FedEx Pak is $500. Federal Express may, upon your request, and with some limitations, refund all transportation charges paid. See the FedEx Service Guide for further details.

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

The World On Time.

FAX

MONTGOMERY WATSON

4100 Spenard Road
Anchorage, Alaska 99517

Tel: (907) 248-8883
Fax: (907) 248-8884

Date: 2/20/97

To: Mary Wolfe LAB

Fax No: 702 361-3137

From: Bonnie McLean

Reference:

Subject: Cog C 97 LI 2 Corrected

No. of Pages: 3 (including cover)

If you do not receive all pages, or if there are any problems with this transmission, please call Jenny Farr at (907) 248-8883.

2/16/97 Time

ADD: 97 BPX LI B8 SD 01 (01) @ 0430

Pg 2. 97 BPX LI B8 SD 02 (08) @ 0500

Correct

Pg 1. 2/15/97 @ 1730

97 BPX LI C4 SD 01 (08)

Should be

97 BPX LI C4 SD 02 (01)

MONTGOMERY WATSON

C of C # 97-C # LI 3

Page 1 of 2

REPORT DUE IN 7 CALANDER DAYS

BP EXPLORATION (ALAS INC.
LIBERTY ISLAND SEDIMENT AND WATER SAMPLING

CHAIN OF CUSTODY FORM

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

PROJ. NO. 1189002.280101

To: CAS, ANCHORAGE

SAMPLERS: (Signature) 1997

DATE	TIME	S/W	Sample ID	TOTAL NO. OF CONTAINERS	GRAIN SIZE, ASTM D442					REMARKS
2/14	2300	S	97 BPX LI B3 SD 01 (01)	1	✓					
2/14	2330	S	97 BPX LI B3 SD 02 (08)	1	✓					
2/15	0120	S	97 BPX LI B6 SD 01 (01)	1	✓					
2/15	0145	S	97 BPX LI B6 SD 02 (08)	1	✓					
2/15	900	S	97 BPX LI B10 SD 01 (01)	1	✓					
2/15	0500	S	97 BPX LI B8 SD 02 (08)	1	✓					
2/15	0430	S	97 BPX LI B8 SD 01 (01)	1	✓					
2/15	1000	S	97 BPX LI B10 SD (02)(08)	1	✓					02 (08)
2/15	1400	S	97 BPX LI I1 SD 01 (01)	1	✓					
2/15	1445	S	97 BPX LI I1 SD (02)(08)	1	✓					02 (08)
2/15	2220	S	97 BPX LI C2 SD 01 (01)	1	✓					
2/15	2240	S	97 BPX LI C2 SD 02 (08)	1	✓					
2/15	1800	S	97 BPX LI C4 SD 02 (08)	1	✓					
2/15	1730	S	97 BPX LI C4 SD 01 (01)	1	✓					
2/16	1130	S	97 BPX LI A4 SD 01 (01)	1	✓					
2/16	1200	S	97 BPX LI A4 SD 02 (08)	1	✓					
2/16	0930	S	97 BPX LI A6 SD 01 (01)	1	✓					

Relinquished by: 97 BPX	Date/Time	Shipped via:	Notified:	Date/Time
[signature]	2/21/97 1453	Delivered	N/A	

Received for Laboratory by: [signature] Date: 2-21-97 Time: 2:50pm

MONTGOMERY WATSON

C of C # 97-C # 43

Page 2 of 2

REPORT DUE IN 7 CALANDER DAYS

BP EXPLORATION (ALAS) INC.
LIBERTY ISLAND SEDIMENT AND WATER SAMPLING

CHAIN OF CUSTODY FORM

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

PROJ. NO. 1189002.280101

To: CAS, ANCHORAGE

SAMPLERS: (*Signature*)

1997

DATE	TIME	S/W	Sample ID	TOTAL NO. OF CON-TAINERS	GRAIN SIZE, ASTM D442					REMARKS
2/16	1600	S	97 BPX LI A6 SD 02(08)	1	✓					
2/16	0440	S	97 BPX LI A8 SD 02(08)	1	✓					
2/16	0430	S	97 BPX LI A8 SD 01(01)	1	✓					
2/16	0130	S	97 BPX LI A10 SD 01(01)	1	✓					
2/16	0150	S	97 BPX LI A10 SD 02(08)	1	✓					

Relinquished by:97 BPX — Date/Time 2/17/97 1455 — Shipped via: Delivered — Notified: N/A — Date/Time

Received for Laboratory by: — Date: 2-21-97 — Time: 2:55 pm

ATTN: [illegible]

MONTGOMERY WATSON

C of C # 97-C #LI5
Page _1_ of _1_

REPORT DUE IN 7 CALANDER DAYS

BP EXPLORATION (ALAS) INC.
LIBERTY ISLAND SEDIMENT AND WATER SAMPLING

CHAIN OF CUSTODY FORM

RETURN COOLERS TO:
MONTGOMERY WATSON
4100 Spenard Road
Anchorage, Alaska 99517
(907) 248-8883

206 656 1068

PROJ. NO. 1189002.280101

To: Kelso WA. CAS, ~~ANCHORAGE~~

SAMPLERS: (Signature)
1997

DATE	TIME	S/W	Sample ID	TOTAL NO. OF CON-TAINERS	GRAIN SIZE, ASTM D442	VOA, 8260A				REMARKS
7/16	1000	SD	97 BPX LI A6 SD 02(08)	1		✓				3-D. T/A

Relinquished by: 97 BPX [illegible] Date/Time

Shipped via: already in Kelso WA

Notified:

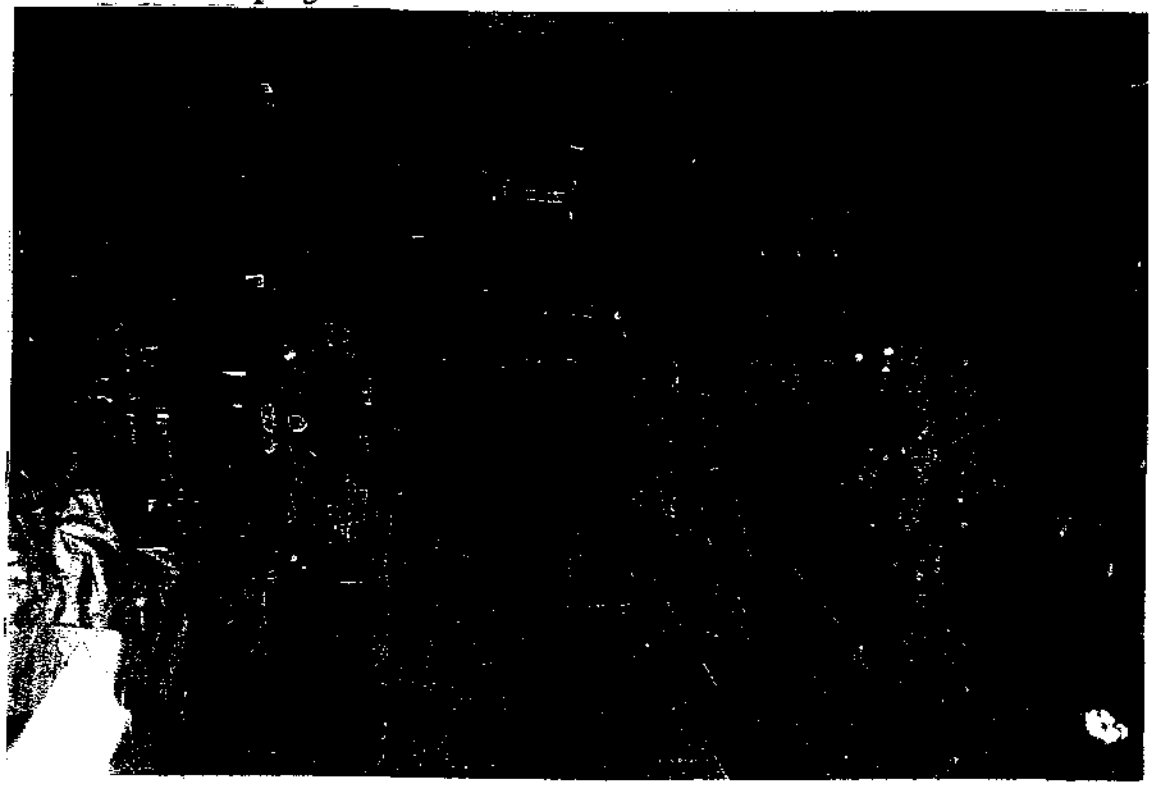
Date/Time

Received for Laboratory by: Date: Time:

Appendix E
Photographs

MONTGOMERY WATSON

BP Exploration (Alaska), Inc
Liberty Island
Water and Sediment Sampling



Five Foot Split Spoon, Extracted From Hole, Preparing To Open

Collecting Soil Sample From Split Spoon By Bill Nettleton, MW

Taken by Montgomery Watson

February 1997

Appendix F

Health and Safety Plan (Duane Miller & Associates)

MONTGOMERY WATSON

SOP FILE NO: 4119.22
DATE: Feb. 11, 1997

SIMULTANEOUS OPERATING PLAN
BPX: Liberty Geotechnical Exploration

WORK PACKAGE: Drill and sample geotechnical borings
JOB TITLE: Liberty Geotechnical
LOCATION: Offshore in Foggy Island Bay between Endicott and Liberty #1 Ice Island
START DATE: Feb. 14, 1997
COMPLETION DATE: March 1, 1997

SPOC FOR THIS JOB: W. Phillips / E. Bashaw **Acknowledgment**_____

OPERATOR: Duane Miller & Associates **Acknowledgment**_____

1. **List the areas and the individuals that will be impacted by this job.**

   AREA: offshore in Foggy Island Bay
   east of Endicott

   INDIVIDUAL: W. Phillips and E. Bashaw

2. **Indicate any special worksite considerations that may impact this work:**
   Ice safety
   Polar Bears

3. **Provide a brief scope of work:**
   Drill and sample soil and permafrost conditions at about 30 different locations to depths of 30 to 100 feet below mudline. The drilling will be performed with a CME-75 soils drill mounted in an enclosured sled. A second sled with generator and survival shed will be towed in tandem with the drill sled. The sleds will be moved using a Catco RD-85 which will also carry a 3500 gallon fuel tank.

4. **Have the following items been considered in the final work plan?**

EMERGENCY ACTION PLAN	X
WORK PERMITS	X
LIFT PLANS	X
SPECIAL PROCEDURES	X
JOB HAZARD ANALYSIS	X

NOTE:
All information referred to in this SOP must be reviewed and approved by the individuals listed in section #1.

DM&A Originator: Duane Miller

DUANE MILLER & ASSOCIATES

HAZARD ANALYSIS

ACTIVITY: Geotechnical Exploration - Moving from site to site

ANALYZED BY/DATE: D L Miller 2/11/97

PRINCIPLE STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Movement of drill and support sleds between boring locations using CATCO RD-85	Weak ice Getting lost	Check ice conditions before start of work and after any significant storms Reflector set at each location by survey team Use GPS Have redundant GPS systems Check ice thickness at drilling location
EQUPMENT TO BE USED	**INSPECTION REQUIREMENTS**	**TRAINING REQUIREMENTS**
RD-85 Hand Held GPS List of boring coordinates Ice auger	Inspect ice conditions prior to start of work Inspect ice conditions after storms Inspect interior of sled before moving	Ice safety Use of GPS
REQUIRED PEMITS	**ENVIRONMENTAL REQUIREMENTS**	**EMERGENCY CONTACTS**
DNR Misc land Use Permit NSB Devlopment Permit MMS approval	Housekeeping Backfill boring with any remaining cuttings	Radio CATCO Cellular phone to BP Endicott EMERGENCY 659-2222 or SECURITY 659-6800

DUANE MILLER & ASSOCIATES

HAZARD ANALYSIS

ACTIVITY: Geotechnical Exploration - Drilling and sampling

ANALYZED BY/DATE: D L Miller 2/11/97

PRINCIPLE STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Drill sea ice and subsea soil Stop at depths and sample soil Recover samples, log and label Backfill boring	Equipment / personnel accident Fire in enclosure Polar bears Methane pocket Ice movement while drilling	Inspect equipment & rigging each day Practice safe operation of equipment Placement of fire extinguishers at both ends of enclosure Check operation of methane detector Proper exterior lighting for bear detection Awarenes of auger binding as indicator of ice movement Plan for retreat from ice if severe movement
EQUPMENT TO BE USED	**INSPECTION REQUIREMENTS**	**TRAINING REQUIREMENTS**
Drill rig Sample extrucder Fire extinguishers Methane detector Emergency survival gear on second sled	Inspect equipment & rigging eachday Qualified driller CATCO RD-85 watches for bears	Drilling safety Operation of fire extinguishers Fire drill w/ plan of evacuation Methane alarm and evacuation plan
REQUIRED PERMITS	**ENVIRONMENTAL REQUIREMENTS**	**EMERGENCY CONTACTS**
DNR Misc land Use Permit NSB Devlopment Permit MMS approval	Housekeeping Liners in place for fueling & idling vehicles Good management refueling	Radio CATCO Cellular phone to BP Endicott EMERGENCY 659-2222 or SECURITY 659-6800

DUANE MILLER & ASSOCIATES

HAZARD ANALYSIS

ACTIVITY: Geotechnical Exploration - Personnel transport and temperature monitoring ANALYZED BY/DATE: D L Miller 2/11/97

PRINCIPLE STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Transport on ice w/ CATCO RD-85 and on Ice-Road w/ 4-wheel drive crew cabs	Weak ice Getting lost	Check ice conditions after any significant storms Use GPS Have redundant GPS systems Convoy 4WD's when visiblity is bad
EQUPMENT TO BE USED	**INSPECTION REQUIREMENTS**	**TRAINING REQUIREMENTS**
RD-85 Hand Held GPS List of boring coordinates	Inspect ice conditions after storms CATCO RD-85 operator watches for bears	Ice safety Use of GPS
REQUIRED PEMITS	**ENVIRONMENTAL REQUIREMENTS**	**EMERGENCY CONTACTS**
DNR Misc land Use Permit NSB Devlopment Permit MMS approval	Housekeeping Liners in place for fueling & idling vehicles Good management refueling	Radio CATCO Cellular phone to BP Endicott EMERGENCY 659-2222 or SECURITY 659-6800

MEMORANDUM

Duane Miller & Associates
(907) 346-1021 FAX 346-1636

To: Participating Parties (see distribution at end)
From: Duane Miller
Date: February 11, 1997 **DM&A Job No.** 4119.22
Subject: Liberty Geotechnical Program - Contingency Plan

Contingency Plan

This winter's geotechnical work for the Liberty Development project will be performed using a soils drill mounted on an enclosed sled and moved by a Catco RD-85 rolligon. The work will be performed on a 24-hour per day basis. Field supervisor and the geologist for one shift will be Walt Phillips of DM&A, the second geo-engineer will be Erin Bashaw, and Mike Hendee will assist during the day shift as expediter and engineering technician. Discovery Drilling will have a driller and helper on each shift. Our contingency planning relies heavily on Catco and BP support for communications and transport.

Environmental sampling will be performed by Bonnie McLean and Bill Nettleton of Montgomery Watson when the drill is cleanest and will be completed before the geotechnical work. Walt and Erin will assist. The work is expected to start Friday's day shift (2/14) and be completed in 2 or 3 shifts. The environmental work should start with Boring B-3 (it can be driven to on the ice road and a snow ramp is present where the drill-sled can be off-loaded).

The geotechnical drilling should start with the near shore borings (B-1, B-2, B-3. B-4 and B-5 and A-1, A-2, A-3 and A-4). These holes are all in shallow water and we might add additional holes depending on what permafrost we find. The work will then continue on to the holes in deeper water. A list of the borings (with coordinates) and a map (showing the ice road) are attached.

Communications Systems

Two systems will be available. The primary system is the Catco Network with radios in the RD-85, in the drill enclosure and at the Catco Base. This allows for communication with Catco Base which is operated on a 24-hour basis and between the drill and the Catco unit.

The second system is cellular phone. The three DM&A cell phones have the following numbers through Arctic Slope Telephone:

Erin Bashaw 448-1358

Walt Phillips 448-1357

Mike Hendee 448-1328

Emergency Notification

During the work for Liberty, if an incident/emergency occurs such as injury, fire or spill, the field party will contact Catco and BP Endicott. Catco will notify the other parties on this list as needed:

Catco Dispatch
Deborah Hamilton-Johnson (days)
Carmenlita Cothron (nights)
radio is expected to be the initial contact
659-2548 or 659-2526

Bill Kuper, Catco General Manager
659-2205 Room Number
659-3711 Pickup

BP Emergency @ Endicott 659-2222 (the "Red" phone)
BP Security @ Endicott 659-6800

Duane Miller, DM&A Anchorage
(907) 346-1021 office 24 hours
(907) 346-2563 home

Kyle Brown, owner/manager, Discovery Drilling
(907) 344-6431 office
(907) 346-2006 home
Mark Terry, operations manager, 346-4098 home
Dave Roes, chief mechanic, 562-6652 home

Fire Response

The drill operation will be equipped with Ansul style fire extinguishers near each exit door. If a fire destroys the drill, the crew will retreat to the RD-85 for weather protection and evacuation or to the secondary survival sled that is moved with the drill.

Injury Response

First aid equipment will be at the drill rig. The drillers and helpers have current first aid and CPR training. If an injury occurs that requires evacuation, BP Emergency should be notified and they will call for help to transport the injured to the emergency aid station at BP Base Camp.

Ice Safety

Robert Lewellen, PhD, has been monitoring the ice in this area for the Liberty Ice Island and ice road. Check with Bob @ Prudhoe Bay Hotel for current

conditions before start of work. If any ice movement is detected, he will provide further inspection to verify that we can still safely travel on the ice.

The holes drilled through the ice should be used to verify the thickness of the ice at each drill site, the initial freeboard and to monitor the change in freeboard as work progresses.

Oil Spill Response

Pickups parked on the ice road will be left running in most weather and a drip pan should be under the engine area of the pickup while it is parked.

Fueling of the operation will be from a 3,500 gallon fuel tank carried by the Rolligon. The fueling operations will be in accordance with best management practices; drip pans will be used and absorbent pads, shovels and collection bags will be available to contain and immediately respond to any small spills.

Catco and BP Emergency will be notified of any fuel spills.

Bear Awareness/Confrontation

All personnel will receive North Slope environmental and Cultural Awareness training in the form of BPX's "Achieving Environmental Excellence" program. All personnel will participate in a specific training program for Polar Bear awareness and safety.

A site layout that minimizes the possibility of polar bear interaction is planned. During drilling operations, the Catco RD-85 operator will watch for bears. A 12-gauge shotgun with buckshot and slugs will be kept at the drill rig for the extreme emergency.

Rolligon Breakdown

If the Rolligon breaks down at a remote location away from camp, the personnel will rely on the emergency equipment in the survival drum on the Rolligon. The Catco radio system will be used to call for help from Catco Prudhoe Operations.

Attachments:

Summary of Planned Borings
Map showing Planned Borings and Existing Ice Road

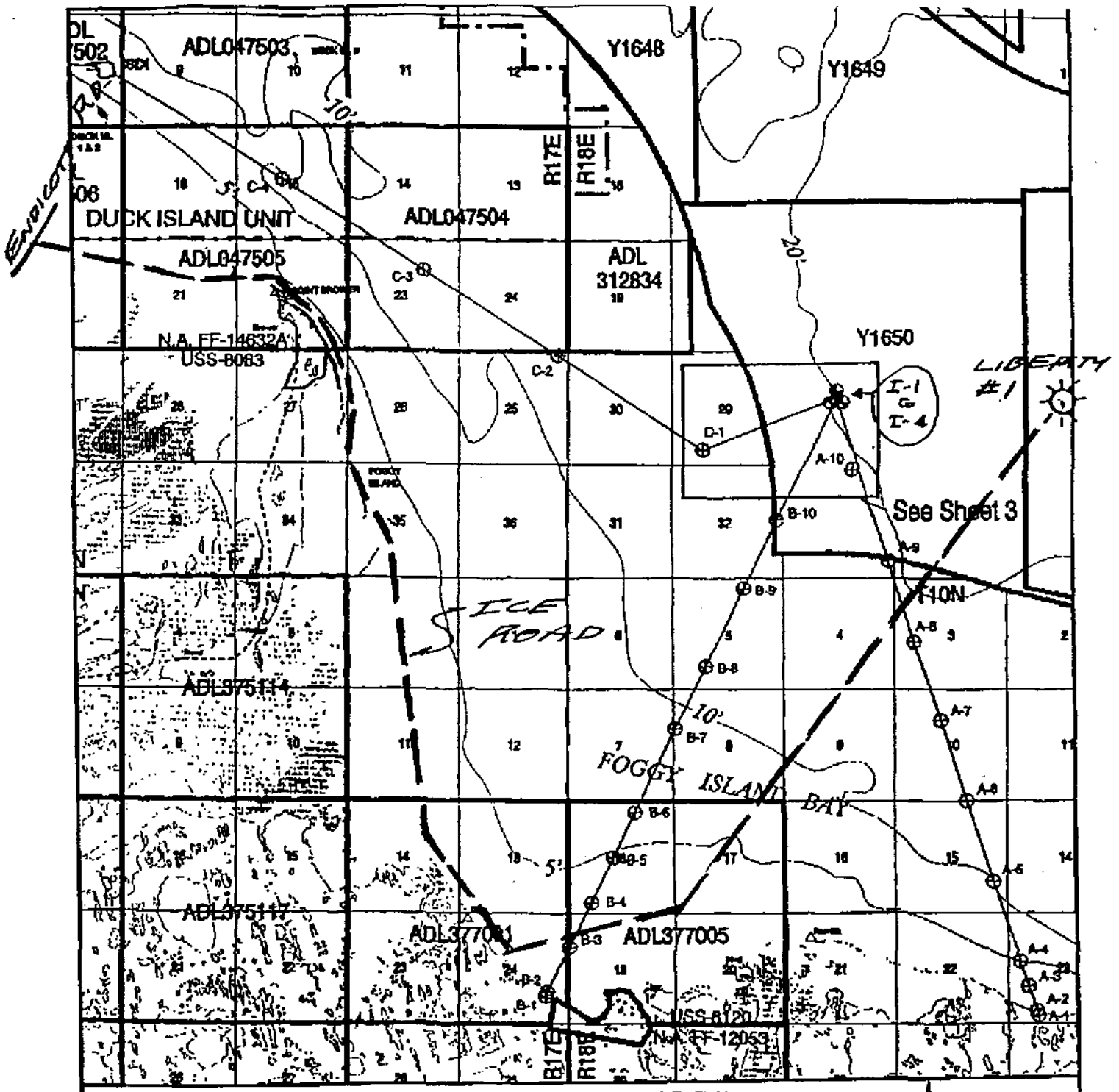
Distribution :

Walt Phillips and Erin Bashaw @ DM&A, Liberty Field
Bonnie McLean @ Montgomery Watson
Bill Kuper @ Catco, Prudhoe Bay
BP Endicott Security
Kyle Brown @ Discovery Drilling Anchorage
Jim Lewis @ BP Exploration (Alaska), Anchorage
José González Jáuregui @ INTEC Engineering c/o BP Anchorage
Rory Mayra @ BP Exploration (Alaska), Anchorage

LIBERTY GEOTECHNICAL EXPLORATION PLAN

Boring	Facility location	EASTING ASP zone 3, NAD 27	NORTHING ASP zone 3, NAD 27	Latitude	Longitude	Enviro. Sampling	Expected Water	Geotech Hole Depth
A1	SSE Badami route	313,271 ft.	5,925,151 ft.	70° 12.026'	147° 30.308'		on shore	30 ft.
A2	SSE Badami route	313,203 ft.	5,925,378 ft.	70° 12.063'	147° 30.343'		beach	30 ft.
A3	SSE Badami route	312,849 ft.	5,926,563 ft.	70° 12.255'	147° 30.528'		3 ft.	30 ft.
A4	SSE Badami route	312,496 ft.	5,927,747 ft.	70° 12.448'	147° 30.714'	yes	5 ft.	30 ft.
A5	SSE Badami route	311,356 ft.	5,931,567 ft.	70° 13.069'	147° 31.311'		9 ft.	30 ft.
A6	SSE Badami route	310,216 ft.	5,935,387 ft.	70° 13.690'	147° 31.909'	yes	16 ft.	30 ft.
A7	SSE Badami route	309,075 ft.	5,939,206 ft.	70° 14.312'	147° 32.508'		18 ft.	30 ft.
A8	SSE Badami route	307,935 ft.	5,943,026 ft.	70° 14.933'	147° 33.107'	yes	20 ft.	30 ft.
A9	SSE Badami route	306,795 ft.	5,946,845 ft.	70° 15.554'	147° 33.707'		19 ft.	30 ft.
A10	SSE Badami route	305,657 ft.	5,950,657 ft.	70° 16.174'	147° 34.307'	yes	18 ft.	30 ft.
B1	SSW Badami route	289,870 ft.	5,926,732 ft.	70° 12.184'	147° 41.641'		on shore	30 ft.
B2	SSW Badami route	289,963 ft.	5,926,908 ft.	70° 12.213'	147° 41.598'		beach	30 ft.
B3	SSW Badami route	291,067 ft.	5,929,001 ft.	70° 12.561'	147° 41.092'	yes	3 ft.	30 ft.
B4	SSW Badami route	292,171 ft.	5,931,093 ft.	70° 12.909'	147° 40.586'		3 ft.	30 ft.
B5	SSW Badami route	293,275 ft.	5,933,186 ft.	70° 13.257'	147° 40.080'		4 ft.	30 ft.
B6	SSW Badami route	294,380 ft.	5,935,278 ft.	70° 13.605'	147° 39.573'	yes	6 ft.	30 ft.
B7	SSW Badami route	296,427 ft.	5,939,158 ft.	70° 14.250'	147° 38.633'		7 ft.	30 ft.
B8	SSW Badami route	297,975 ft.	5,942,092 ft.	70° 14.737'	147° 37.921'	yes	14 ft.	30 ft.
B9	SSW Badami route	299,910 ft.	5,945,758 ft.	70° 15.346'	147° 37.031'		17 ft.	30 ft.
B10	SSW Badami route	301,581 ft.	5,948,926 ft.	70° 15.873'	147° 36.261'	yes	12 ft.	30 ft.
C1	Endicott route	298,096 ft.	5,952,260 ft.	70° 16.404'	147° 37.995'		15 ft.	30 ft.
C2	Endicott route	291,288 ft.	5,956,828 ft.	70° 17.122'	147° 41.359'	yes	15 ft.	30 ft.
C3	Endicott route	284,967 ft.	5,961,071 ft.	70° 17.788'	147° 44.486'		10 ft.	30 ft.
C4	Endicott route	278,336 ft.	5,965,522 ft.	70° 18.486'	147° 47.770'	yes	11 ft.	30 ft.
I1	center of island	304,514 ft.	5,954,484 ft.	70° 16.796'	147° 34.909'		20 ft.	100 ft.
I2	350' SE of island cen	304,815 ft.	5,954,311 ft.	70° 16.769'	147° 34.761'		20 ft.	50 ft.
I3	350' N of island cent	304,515 ft.	5,954,831 ft.	70° 16.853'	147° 34.913'	yes	20 ft.	50 ft.
I4	350' SW of island cei	304,215 ft.	5,954,311 ft.	70° 16.766'	147° 35.052'		20 ft.	50 ft.

Geotechnical hole depths are from mudline. All holes should end in gravel or gravelly sand and not in frozen silt, clay or sand.



This map is based on U.S.G.S. quad Beechy Point (B-2,B-1, A-2,A-1) and on the Unit Operator's Facility Maps.

⊕ Boring less than 50' deep

⊕ Boring greater than 50' deep

Within T11NR17E Sec. 8, 9, 14, 15, 16, 23, 24, 25
T11NR18E Sec. 29, 30, 32, 33
T10NR17E Sec. 24
T10NR18E Sec. 3, 4, 5, 7, 8, 10, 15, 16, 19, 22, 23

BP EXPLORATION (ALASKA) INC.

LIBERTY GEOTECHNICAL BORE HOLE LOCATIONS PERMIT APPLICATION

DATE:	SCALE:	SHEET:
1/28/97	1" = 1.25 Mile	2 OF 3

bs13351.dgn