SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: April 14, 1997

TO: Darin Cramer
WSDOT - Operations, Olympia

PROJECT: Gorst Creek Landfill

REPORT NUMBER: 63853

Enclosed are the test results for six samples received at Sound Analytical Services on April 7, 1997.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers when applicable, and a copy of any requested raw data.

Analytical Narrative: X1 Flag=The contaminant present for the diesel range organics in sample 63853-2 did not appear to be typical diesel product. The elution pattern suggests it may be heavy oil.

Should there be any questions regarding this report, please contact me at (206) 922-2310.

Sincerely,

Dawn M. Werner

Dawn M. Werner
Project Manager

This report is issued solely for the use of the person or company to whom it is addressed. This laboratory accepts responsibility only for the due performance of analysis in accordance with industry acceptable practice. In no event shall Sound Analytical Services, Inc. or its employees be responsible for consequential or special damages in any kind or in any amount.

Washington State
Department of Transportation
Sid Morrison
Secretary of Transportation

Transportation Building
P.O. Box 47300
Olympia, WA 98504-7300

April 17, 1997

RECEIVED
APR 21 1997
BREMERTON KITSAP COUNTY HEALTH DISTRICT

Ms. Michelle Miller
Bremerton/Kitsap County Health District
Poulsbo Annex
PO Box 1076
Poulsbo, WA 98370-0050

Dear Ms. Miller:

Attached you will find the analytical results for the sampling conducted at the Bremerton Auto Wrecking Landfill on April 7, 1997. Four samples were collected downstream of the slope failure and two were collected upstream of the southern property boundary. Composite sediment and soil samples were analyzed for TPH, PAH's, PCB's, metals, pesticides and chlorinated herbicides. Three grab samples were analyzed for semi-volatile organics.

Sampling downstream of the slope failure included: One composite sediment sample from the streambed (CS1); one composite soil sample from an area that had water flowing during the last major storm event (CD2); and a volatile grab sample from each of the above sample points (SV1, DV2). Upstream sampling included: One composite sediment sample from the streambed (SC3US); and one volatile grab sample from the same point (SV3US).

Laboratory results for this round of sampling indicate low level hits of metals, semi-VOA's, PCB's, TPH and Mercury in the soil and/or sediments downstream of the slope failure. All of these were below MTCA Method A/B Cleanup Levels. Some metals were found in the upstream sediment sample. However, concentrations were below MTCA Method A/B Levels and lower than the concentrations found in the downstream samples. Samples were collected by WDOE and WSDOT staff and transported under chain of custody to Sound Analytical Services, Inc. in Fife, Washington.

If you have any questions, I can be reached at (360) 705-7864.

Sincerely,

Darin D. Cramer

DARIN CRAMER
Water Quality Specialist

DC:kmc
Attachments

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC1
Lab ID:	63853-01
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	78.38

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Nitrobenzene - d5	84		23	120
2 - Fluorobiphenyl	69		30	115
p - Terphenyl - d14	58		18	137

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Naphthalene	ND	210	
2-Methylnaphthalene	ND	170	
2-Chloronaphthalene	ND	84	
Acenaphthylene	ND	89	
Acenaphthene	ND	110	
Fluorene	ND	120	
Phenanthrene	ND	180	
Anthracene	ND	160	
Fluoranthene	ND	120	
Pyrene	ND	170	
Benzo(a)anthracene	ND	120	
Chrysene	ND	98	
Benzo(b)fluoranthene	ND	280	
Benzo(k)fluoranthene	ND	220	
Benzo(a)pyrene	ND	130	
Indeno(1,2,3-cd)pyrene	ND	82	
Dibenz(a,h)anthracene	ND	130	
Benzo(g,h,i)perylene	ND	190	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	CD2
Lab ID:	63853-02
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	92.48

Semivolatile Organics by USEPA Method 8270

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Nitrobenzene - d5	76		23	120
2 - Fluorobiphenyl	68		30	115
p - Terphenyl - d14	50		18	137

Sample results are on a dry weight basis.

Analyte	**Result (ug/kg)**	**PQL**	**Flags**
Naphthalene	ND	180	
2-Methylnaphthalene	ND	140	
2-Chloronaphthalene	ND	71	
Acenaphthylene	ND	76	
Acenaphthene	ND	91	
Fluorene	ND	100	
Phenanthrene	ND	150	
Anthracene	ND	140	
Fluoranthene	ND	100	
Pyrene	ND	140	
Benzo(a)anthracene	ND	100	
Chrysene	ND	83	
Benzo(b)fluoranthene	ND	240	
Benzo(k)fluoranthene	ND	180	
Benzo(a)pyrene	ND	110	
Indeno(1,2,3-cd)pyrene	ND	70	
Dibenz(a,h)anthracene	ND	110	
Benzo(g,h,i)perylene	ND	160	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC3US
Lab ID:	63853-03
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	68.26

Semivolatile Organics by USEPA Method 8270

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Nitrobenzene - d5	97		23	120
2 - Fluorobiphenyl	74		30	115
p - Terphenyl - d14	62		18	137

Sample results are on a dry weight basis.

Analyte	**Result (ug/kg)**	**PQL**	**Flags**
Naphthalene	ND	240	
2-Methylnaphthalene	ND	200	
2-Chloronaphthalene	ND	98	
Acenaphthylene	ND	100	
Acenaphthene	ND	130	
Fluorene	ND	140	
Phenanthrene	ND	210	
Anthracene	ND	190	
Fluoranthene	ND	140	
Pyrene	ND	190	
Benzo(a)anthracene	ND	140	
Chrysene	ND	110	
Benzo(b)fluoranthene	ND	330	
Benzo(k)fluoranthene	ND	250	
Benzo(a)pyrene	ND	150	
Indeno(1,2,3-cd)pyrene	ND	96	
Dibenz(a,h)anthracene	ND	160	
Benzo(g,h,i)perylene	ND	220	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SV1
Lab ID:	63853-04
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	71.94

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	Recovery Limits High
Nitrobenzene - d5	93		23	120
2 - Fluorobiphenyl	69		30	115
p - Terphenyl - d14	57		18	137
Phenol - d5	26		24	113
2 - Fluorophenol	56		25	121
2,4,6 - Tribromophenol	113		19	122

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Phenol	ND	230	
bis(2-Chloroethyl)ether	ND	310	
2-Chlorophenol	ND	190	
1,3-Dichlorobenzene	ND	150	
1,4-Dichlorobenzene	ND	210	
Benzyl Alcohol	ND	490	
1,2-Dichlorobenzene	ND	140	
2-Methylphenol	ND	170	
bis(2-Chloroisopropyl)ether	ND	260	
3- & 4-Methylphenol	ND	220	
N-nitroso-di-n-propylamine	ND	180	
Hexachloroethane	ND	290	
Nitrobenzene	ND	420	
Isophorone	ND	210	
2-Nitrophenol	ND	140	
2,4-Dimethylphenol	ND	200	
Benzoic Acid	ND	450	
bis(2-Chloroethoxy)methane	ND	830	
2,4-Dichlorophenol	ND	360	
1,2,4-Trichlorobenzene	ND	200	
Naphthalene	ND	220	
4-Chloroaniline	ND	320	
Hexachlorobutadiene	ND	230	
4-Chloro-3-methylphenol	ND	320	
2-Methylnaphthalene	ND	180	
Hexachlorocyclopentadiene	ND	140	

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Semivolatile Organics by USEPA Method 8270 data for 63853-04 continued...

Analyte	Result (ug/kg)	PQL	Flags
2,4,6-Trichlorophenol	ND	170	
2,4,5-Trichlorophenol	ND	230	
2-Chloronaphthalene	ND	91	
2-Nitroaniline	ND	220	
Dimethylphthalate	ND	130	
Acenaphthylene	ND	97	
2,6-Dinitrotoluene	ND	160	
3-Nitroaniline	ND	420	
Acenaphthene	ND	120	
2,4-Dinitrophenol	ND	820	
4-Nitrophenol	ND	570	
Dibenzofuran	ND	170	
2,4-Dinitrotoluene	ND	150	
Diethylphthalate	ND	160	
4-Chlorophenylphenylether	ND	190	
Fluorene	ND	130	
4-Nitroaniline	ND	220	
4,6-Dinitro-2-methylphenol	ND	450	
N-Nitrosodiphenylamine	ND	210	
4-Bromophenylphenylether	ND	170	
Hexachlorobenzene	ND	170	
Pentachlorophenol	ND	350	
Phenanthrene	ND	200	
Anthracene	ND	180	
Di-n-butylphthalate	ND	340	
Fluoranthene	ND	130	
Pyrene	ND	180	
Butylbenzylphthalate	ND	470	
3,3'-dichlorobenzidine	ND	230	
Benzo(a)anthracene	ND	130	
Chrysene	ND	110	
bis(2-Ethylhexyl)phthalate	150	140	
Di-n-octylphthalate	ND	120	
Benzo(b)fluoranthene	ND	300	
Benzo(k)fluoranthene	ND	240	
Benzo(a)pyrene	ND	140	
Indeno(1,2,3-cd)pyrene	ND	90	
Dibenz(a,h)anthracene	ND	150	
Benzo(g,h,i)perylene	ND	200	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	DV2
Lab ID:	63853-05
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	93.22

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Nitrobenzene - d5	90		23	120
2 - Fluorobiphenyl	64		30	115
p - Terphenyl - d14	69		18	137
Phenol - d5	28		24	113
2 - Fluorophenol	55		25	121
2,4,6 - Tribromophenol	97		19	122

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Phenol	ND	180	
bis(2-Chloroethyl)ether	ND	250	
2-Chlorophenol	ND	150	
1,3-Dichlorobenzene	ND	120	
1,4-Dichlorobenzene	ND	170	
Benzyl Alcohol	ND	390	
1,2-Dichlorobenzene	ND	110	
2-Methylphenol	ND	140	
bis(2-Chloroisopropyl)ether	ND	210	
3- & 4-Methylphenol	ND	170	
N-nitroso-di-n-propylamine	ND	140	
Hexachloroethane	ND	230	
Nitrobenzene	ND	330	
Isophorone	ND	160	
2-Nitrophenol	ND	110	
2,4-Dimethylphenol	ND	160	
Benzoic Acid	ND	360	
bis(2-Chloroethoxy)methane	ND	650	
2,4-Dichlorophenol	ND	280	
1,2,4-Trichlorobenzene	ND	150	
Naphthalene	ND	180	
4-Chloroaniline	ND	250	
Hexachlorobutadiene	ND	180	
4-Chloro-3-methylphenol	ND	250	
2-Methylnaphthalene	ND	150	
Hexachlorocyclopentadiene	ND	110	

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Semivolatile Organics by USEPA Method 8270 data for 63853-05 continued...

Analyte	Result (ug/kg)	PQL	Flags
2,4,6-Trichlorophenol	ND	130	
2,4,5-Trichlorophenol	ND	180	
2-Chloronaphthalene	ND	72	
2-Nitroaniline	ND	170	
Dimethylphthalate	ND	110	
Acenaphthylene	ND	77	
2,6-Dinitrotoluene	ND	120	
3-Nitroaniline	ND	340	
Acenaphthene	ND	93	
2,4-Dinitrophenol	ND	650	
4-Nitrophenol	ND	450	
Dibenzofuran	ND	140	
2,4-Dinitrotoluene	ND	120	
Diethylphthalate	ND	120	
4-Chlorophenylphenylether	ND	150	
Fluorene	ND	100	
4-Nitroaniline	ND	180	
4,6-Dinitro-2-methylphenol	ND	360	
N-Nitrosodiphenylamine	ND	160	
4-Bromophenylphenylether	ND	140	
Hexachlorobenzene	ND	130	
Pentachlorophenol	ND	280	
Phenanthrene	ND	150	
Anthracene	ND	140	
Di-n-butylphthalate	ND	270	
Fluoranthene	ND	110	
Pyrene	ND	140	
Butylbenzylphthalate	210	370	J
3,3'-dichlorobenzidine	ND	180	
Benzo(a)anthracene	ND	100	
Chrysene	ND	84	
bis(2-Ethylhexyl)phthalate	120	110	
Di-n-octylphthalate	ND	95	
Benzo(b)fluoranthene	ND	240	
Benzo(k)fluoranthene	ND	190	
Benzo(a)pyrene	ND	110	
Indeno(1,2,3-cd)pyrene	ND	71	
Dibenz(a,h)anthracene	ND	120	
Benzo(g,h,i)perylene	ND	160	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SV3US
Lab ID:	63853-06
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	58.81

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Nitrobenzene - d5	90		23	120
2 - Fluorobiphenyl	61		30	115
p - Terphenyl - d14	48		18	137
Phenol - d5	29		24	113
2 - Fluorophenol	61		25	121
2,4,6 - Tribromophenol	90		19	122

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Phenol	ND	280	
bis(2-Chloroethyl)ether	ND	380	
2-Chlorophenol	ND	230	
1,3-Dichlorobenzene	ND	190	
1,4-Dichlorobenzene	ND	260	
Benzyl Alcohol	ND	600	
1,2-Dichlorobenzene	ND	170	
2-Methylphenol	ND	210	
bis(2-Chloroisopropyl)ether	ND	320	
3- & 4-Methylphenol	ND	260	
N-nitroso-di-n-propylamine	ND	220	
Hexachloroethane	ND	350	
Nitrobenzene	ND	520	
Isophorone	ND	250	
2-Nitrophenol	ND	170	
2,4-Dimethylphenol	ND	240	
Benzoic Acid	ND	550	
bis(2-Chloroethoxy)methane	ND	1000	
2,4-Dichlorophenol	ND	440	
1,2,4-Trichlorobenzene	ND	240	
Naphthalene	ND	270	
4-Chloroaniline	ND	390	
Hexachlorobutadiene	ND	280	
4-Chloro-3-methylphenol	ND	390	
2-Methylnaphthalene	ND	220	
Hexachlorocyclopentadiene	ND	170	

SOUND ANALYTICAL SERVICES, INC.

Semivolatile Organics by USEPA Method 8270 data for 63853-06 continued...

Analyte	Result (ug/kg)	PQL	Flags
2,4,6-Trichlorophenol	ND	210	
2,4,5-Trichlorophenol	ND	280	
2-Chloronaphthalene	ND	110	
2-Nitroaniline	ND	270	
Dimethylphthalate	ND	160	
Acenaphthylene	ND	120	
2,6-Dinitrotoluene	ND	190	
3-Nitroaniline	ND	520	
Acenaphthene	ND	140	
2,4-Dinitrophenol	ND	1000	
4-Nitrophenol	ND	700	
Dibenzofuran	ND	210	
2,4-Dinitrotoluene	ND	180	
Diethylphthalate	ND	190	
4-Chlorophenylphenylether	ND	230	
Fluorene	ND	160	
4-Nitroaniline	ND	270	
4,6-Dinitro-2-methylphenol	ND	550	
N-Nitrosodiphenylamine	ND	250	
4-Bromophenylphenylether	ND	210	
Hexachlorobenzene	ND	200	
Pentachlorophenol	ND	430	
Phenanthrene	ND	240	
Anthracene	ND	220	
Di-n-butylphthalate	ND	410	
Fluoranthene	ND	160	
Pyrene	ND	220	
Butylbenzylphthalate	ND	570	
3,3'-dichlorobenzidine	ND	280	
Benzo(a)anthracene	ND	160	
Chrysene	ND	130	
bis(2-Ethylhexyl)phthalate	ND	180	
Di-n-octylphthalate	ND	150	
Benzo(b)fluoranthene	ND	370	
Benzo(k)fluoranthene	ND	290	
Benzo(a)pyrene	ND	170	
Indeno(1,2,3-cd)pyrene	ND	110	
Dibenz(a,h)anthracene	ND	180	
Benzo(g,h,i)perylene	ND	250	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC1
Lab ID:	63853-01
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	78.38

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits Low	High
o-Terphenyl	98		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	16	
Heavy Oil (>nC24-nC32)	ND	78	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	CD2
Lab ID:	63853-02
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	92.48

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits Low	High
o-Terphenyl	106		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	12	13	J X1
Heavy Oil (>nC24-nC32)	67	66	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC3US
Lab ID:	63853-03
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	68.26

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits Low	High
o-Terphenyl	78		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	18	
Heavy Oil (>nC24-nC32)	ND	90	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC1
Lab ID:	63853-01
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	78.38

Chlorinated Herbicides by USEPA Method 8150 GC/MS Modified

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
2,4,6-Tribromophenol	52		36	128

Sample results are on a dry weight basis.

Analyte	**Result (ug/kg)**	**PQL**	**Flags**
Dalapon	ND	78	
Dicamba	ND	45	
Dichloroprop	ND	54	
2,4-D	ND	33	
Silvex (2,4,5-TP)	ND	18	
2,4,5-T	ND	37	
Dinoseb	ND	27	
2,4-DB	ND	31	
MCPP	ND	47	
MCPA	ND	34	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	CD2
Lab ID:	63853-02
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/9/97
% Solids	92.48

Chlorinated Herbicides by USEPA Method 8150 GC/MS Modified

Surrogate	% Recovery	Flags	Recovery Limits Low	High
2,4,6-Tribromophenol	56		36	128

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Dalapon	ND	69	
Dicamba	ND	39	
Dichloroprop	ND	47	
2,4-D	ND	29	
Silvex (2,4,5-TP)	ND	16	
2,4,5-T	ND	32	
Dinoseb	ND	23	
2,4-DB	ND	27	
MCPP	ND	42	
MCPA	ND	30	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC3US
Lab ID:	63853-03
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/9/97
% Solids	68.26

Chlorinated Herbicides by USEPA Method 8150 GC/MS Modified

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
2,4,6-Tribromophenol	80		36	128

Sample results are on a dry weight basis.

Analyte	**Result (ug/kg)**	**PQL**	**Flags**
Dalapon	ND	91	
Dicamba	ND	52	
Dichloroprop	ND	62	
2,4-D	ND	39	
Silvex (2,4,5-TP)	ND	21	
2,4,5-T	ND	43	
Dinoseb	ND	31	
2,4-DB	ND	36	
MCPP	ND	55	
MCPA	ND	39	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC1
Lab ID:	63853-01
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/9/97
% Solids	78.38

Pesticides by USEPA Method 1618 (Screening Method)

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Tributyl Phosphate	60		50	150
Triphenyl Phosphate	82		50	150
Decachlorobiphenyl	108		50	150

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Dichlorvos	ND	340	
Mevinphos	ND	170	
Ethoprop	ND	220	
Naled	ND	480	
Sulfotepp	ND	540	
Monocrotophos	ND	270	
Phorate	ND	430	
Dimethoate	ND	180	
Demeton,o-s	ND	560	
Diazinon	ND	140	
Disulfoton	ND	430	
Parathion,methyl	ND	210	
Ronnel	ND	130	
Chlorpyrifos	ND	140	
Malathion	ND	200	
Fenthion	ND	280	
Parathion	ND	98	
Trichloronate	ND	230	
Tetrachlorvinphos	ND	170	
Merphos	ND	260	
Tokuthion	ND	110	
Fensulfothion	ND	150	
Bolstar	ND	270	
EPN	ND	260	
Azinphos,methyl	ND	470	
Coumaphos	ND	96	

SOUND ANALYTICAL SERVICES, INC.

Pesticides by USEPA Method 1618 (Screening Method) data for 63853-01 continued...

Analyte	Result (ug/kg)	PQL	Flags
Alpha-BHC	ND	180	
Beta-BHC	ND	390	
Lindane	ND	520	
Delta-BHC	ND	120	
Heptachlor	ND	130	
Aldrin	ND	86	
Heptachlor epoxide	ND	88	
Endosulfan 1	ND	130	
P'P-DDE	ND	130	
Dieldrin	ND	100	
Endrin	ND	130	
Endosulfan II	ND	84	
P'P-DDD	ND	120	
Endrin aldehyde	ND	190	
Endosulfan sulfate	ND	290	
P'P-DDT	ND	120	
Methoxychlor	ND	320	
Chlordane-cis	ND	140	
Chlordane-trans	ND	120	
Strobane	ND	130	
Trifluralin	ND	140	
Dicloran	ND	180	
PCNB	ND	84	
Isodrin	ND	160	
Captan	ND	190	
Perthane	ND	180	
Carbophenothion	ND	140	
Kelthane	ND	93	
Mirex	ND	190	
TEPP	ND	130	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	CD2
Lab ID:	63853-02
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/9/97
% Solids	92.48

Pesticides by USEPA Method 1618 (Screening Method)

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Tributyl Phosphate	71		50	150
Triphenyl Phosphate	82		50	150
Decachlorobiphenyl	100		50	150

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Dichlorvos	ND	290	
Mevinphos	ND	150	
Ethoprop	ND	190	
Naled	ND	420	
Sulfotepp	ND	460	
Monocrotophos	ND	230	
Phorate	ND	370	
Dimethoate	ND	160	
Demeton,o-s	ND	480	
Diazinon	ND	120	
Disulfoton	ND	370	
Parathion,methyl	ND	180	
Ronnel	ND	110	
Chlorpyrifos	ND	120	
Malathion	ND	180	
Fenthion	ND	240	
Parathion	ND	85	
Trichloronate	ND	200	
Tetrachlorvinphos	ND	150	
Merphos	ND	230	
Tokuthion	ND	91	
Fensulfothion	ND	130	
Bolstar	ND	230	
EPN	ND	230	
Azinphos,methyl	ND	410	
Coumaphos	ND	83	

SOUND ANALYTICAL SERVICES, INC.

Pesticides by USEPA Method 1618 (Screening Method) data for 63853-02 continued...

Analyte	Result (ug/kg)	PQL	Flags
Alpha-BHC	ND	160	
Beta-BHC	ND	340	
Lindane	ND	450	
Delta-BHC	ND	100	
Heptachlor	ND	110	
Aldrin	ND	75	
Heptachlor epoxide	ND	76	
Endosulfan 1	ND	120	
P'P-DDE	ND	120	
Dieldrin	ND	90	
Endrin	ND	110	
Endosulfan II	ND	73	
P'P-DDD	ND	110	
Endrin aldehyde	ND	170	
Endosulfan sulfate	ND	250	
P'P-DDT	ND	100	
Methoxychlor	ND	280	
Chlordane-cis	ND	120	
Chlordane-trans	ND	100	
Strobane	ND	110	
Trifluralin	ND	120	
Dicloran	ND	150	
PCNB	ND	72	
Isodrin	ND	140	
Captan	ND	170	
Perthane	ND	150	
Carbophenothion	ND	120	
Kelthane	ND	80	
Mirex	ND	160	
TEPP	ND	110	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC3US
Lab ID:	63853-03
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/9/97
% Solids	68.26

Pesticides by USEPA Method 1618 (Screening Method)

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Tributyl Phosphate	63		50	150
Triphenyl Phosphate	87		50	150
Decachlorobiphenyl	96		50	150

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Dichlorvos	ND	410	
Mevinphos	ND	200	
Ethoprop	ND	270	
Naled	ND	580	
Sulfotepp	ND	640	
Monocrotophos	ND	330	
Phorate	ND	520	
Dimethoate	ND	220	
Demeton,o-s	ND	670	
Diazinon	ND	170	
Disulfoton	ND	520	
Parathion,methyl	ND	250	
Ronnel	ND	160	
Chlorpyrifos	ND	170	
Malathion	ND	240	
Fenthion	ND	340	
Parathion	ND	120	
Trichloronate	ND	280	
Tetrachlorvinphos	ND	210	
Merphos	ND	310	
Tokuthion	ND	130	
Fensulfothion	ND	170	
Bolstar	ND	320	
EPN	ND	320	
Azinphos,methyl	ND	570	
Coumaphos	ND	110	

SOUND ANALYTICAL SERVICES, INC.

Pesticides by USEPA Method 1618 (Screening Method) data for 63853-03 continued...

Analyte	Result (ug/kg)	PQL	Flags
Alpha-BHC	ND	220	
Beta-BHC	ND	470	
Lindane	ND	630	
Delta-BHC	ND	140	
Heptachlor	ND	150	
Aldrin	ND	100	
Heptachlor epoxide	ND	110	
Endosulfan 1	ND	160	
P'P-DDE	ND	160	
Dieldrin	ND	120	
Endrin	ND	150	
Endosulfan II	ND	100	
P'P-DDD	ND	150	
Endrin aldehyde	ND	230	
Endosulfan sulfate	ND	340	
P'P-DDT	ND	140	
Methoxychlor	ND	390	
Chlordane-cis	ND	170	
Chlordane-trans	ND	140	
Strobane	ND	160	
Trifluralin	ND	170	
Dicloran	ND	210	
PCNB	ND	100	
Isodrin	ND	200	
Captan	ND	230	
Perthane	ND	210	
Carbophenothion	ND	170	
Kelthane	ND	110	
Mirex	ND	230	
TEPP	ND	160	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC1
Lab ID:	63853-01
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	78.38

PCBs by USEPA Method 8080

Surrogate	% Recovery	Flags	Recovery Limits Low	High
TCMX	85		50	150
Decachlorobiphenyl	93		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Aroclor 1016	ND	0.12	
Aroclor 1221	ND	0.12	
Aroclor 1232	ND	0.12	
Aroclor 1242	0.4	0.12	
Aroclor 1248	ND	0.12	
Aroclor 1254	0.81	0.12	
Aroclor 1260	ND	0.12	
Aroclor 1262	ND	0.12	
Aroclor 1268	ND	0.12	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	CD2
Lab ID:	63853-02
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	92.48

PCBs by USEPA Method 8080

Surrogate	% Recovery	Flags	Recovery Limits Low	High
TCMX	123		50	150
Decachlorobiphenyl	105		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Aroclor 1016	ND	0.11	
Aroclor 1221	ND	0.11	
Aroclor 1232	ND	0.11	
Aroclor 1242	ND	0.11	
Aroclor 1248	ND	0.11	
Aroclor 1254	0.41	0.11	
Aroclor 1260	ND	0.11	
Aroclor 1262	ND	0.11	
Aroclor 1268	ND	0.11	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC3US
Lab ID:	63853-03
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	68.26

PCBs by USEPA Method 8080

Surrogate	% Recovery	Flags	Recovery Limits Low	High
TCMX	85		50	150
Decachlorobiphenyl	102		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Aroclor 1016	ND	0.13	
Aroclor 1221	ND	0.13	
Aroclor 1232	ND	0.13	
Aroclor 1242	ND	0.13	
Aroclor 1248	ND	0.13	
Aroclor 1254	ND	0.13	
Aroclor 1260	ND	0.13	
Aroclor 1262	ND	0.13	
Aroclor 1268	ND	0.13	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC1
Lab ID:	63853-01
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
Dilution Factor	1
% Solids	78.38

ICP Metals by USEPA Method 6010

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	ND	22	
Antimony	ND	33	
Beryllium	ND	0.55	
Cadmium	ND	5.5	
Chromium	20	1.1	
Copper	26	2.2	
Lead	28	5.5	
Nickel	32	4.4	
Selenium	ND	22	
Silver	ND	2.2	
Thallium	ND	22	
Zinc	90	2.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	CD2
Lab ID:	63853-02
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
Dilution Factor	1
% Solids	92.48

ICP Metals by USEPA Method 6010

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	ND	21	
Antimony	ND	31	
Beryllium	ND	0.52	
Cadmium	ND	5.2	
Chromium	19	1	
Copper	32	2.1	
Lead	34	5.2	
Nickel	41	4.1	
Selenium	ND	31	
Silver	ND	2.1	
Thallium	ND	21	
Zinc	150	2.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC3US
Lab ID:	63853-03
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
Dilution Factor	1
% Solids	68.26

ICP Metals by USEPA Method 6010

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	ND	25	
Antimony	ND	38	
Beryllium	ND	0.63	
Cadmium	ND	6.3	
Chromium	22	1.3	
Copper	9.5	2.5	
Lead	ND	6.3	
Nickel	35	5	
Selenium	ND	38	
Silver	ND	2.5	
Thallium	ND	25	
Zinc	50	2.5	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC1
Lab ID:	63853-01
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
Dilution Factor	1
% Solids	78.38

Mercury by CVAA - USEPA Method 7471

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Mercury	ND	0.11	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	CD2
Lab ID:	63853-02
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
Dilution Factor	1
% Solids	92.48

Mercury by CVAA - USEPA Method 7471

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Mercury	0.11	0.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	WSDOT - Operations, Olympia
Client ID:	SC3US
Lab ID:	63853-03
Date Received:	4/7/97
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
Dilution Factor	1
% Solids	68.26

Mercury by CVAA - USEPA Method 7471

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Mercury	ND	0.11	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - SV1466
Date Received:	-
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	
Dilution Factor	20

Semivolatile Organics by USEPA Method 8270

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Nitrobenzene - d5	101		23	120
2 - Fluorobiphenyl	64		30	115
p - Terphenyl - d14	56		18	137
Phenol - d5	48		24	113
2 - Fluorophenol	83		25	121
2,4,6 - Tribromophenol	102		19	122

Sample results are on an as received basis.

Analyte	**Result (ug/kg)**	**PQL**	**Flags**
Phenol	ND	170	
bis(2-Chloroethyl)ether	ND	250	
2-Chlorophenol	ND	140	
1,3-Dichlorobenzene	ND	290	
1,4-Dichlorobenzene	ND	210	
Benzyl Alcohol	ND	250	
1,2-Dichlorobenzene	ND	190	
2-Methylphenol	ND	95	
bis(2-Chloroisopropyl)ether	ND	140	
3- & 4-Methylphenol	ND	130	
N-nitroso-di-n-propylamine	ND	190	
Hexachloroethane	ND	110	
Nitrobenzene	ND	120	
Isophorone	ND	140	
2-Nitrophenol	ND	110	
2,4-Dimethylphenol	ND	160	
Benzoic Acid	ND	570	
bis(2-Chloroethoxy)methane	ND	160	
2,4-Dichlorophenol	ND	96	
1,2,4-Trichlorobenzene	ND	190	
Naphthalene	ND	81	
4-Chloroaniline	ND	170	
Hexachlorobutadiene	ND	180	
4-Chloro-3-methylphenol	ND	95	
2-Methylnaphthalene	ND	100	
Hexachlorocyclopentadiene	ND	230	

SOUND ANALYTICAL SERVICES, INC.

Semivolatile Organics by USEPA Method 8270 data for SV1466 continued...

Analyte	Result (ug/kg)	PQL	Flags
2,4,6-Trichlorophenol	ND	160	
2,4,5-Trichlorophenol	ND	160	
2-Chloronaphthalene	ND	170	
2-Nitroaniline	ND	81	
Dimethylphthalate	ND	120	
Acenaphthylene	ND	110	
2,6-Dinitrotoluene	ND	160	
3-Nitroaniline	ND	190	
Acenaphthene	ND	120	
2,4-Dinitrophenol	ND	180	
4-Nitrophenol	ND	150	
Dibenzofuran	ND	130	
2,4-Dinitrotoluene	ND	150	
Diethylphthalate	ND	250	
4-Chlorophenylphenylether	ND	110	
Fluorene	ND	140	
4-Nitroaniline	ND	170	
4,6-Dinitro-2-methylphenol	ND	170	
N-Nitrosodiphenylamine	ND	130	
4-Bromophenylphenylether	ND	140	
Hexachlorobenzene	ND	160	
Pentachlorophenol	ND	150	
Phenanthrene	ND	88	
Anthracene	ND	110	
Di-n-butylphthalate	ND	310	
Fluoranthene	ND	140	
Pyrene	ND	110	
Butylbenzylphthalate	ND	80	
3,3'-dichlorobenzidine	ND	250	
Benzo(a)anthracene	ND	170	
Chrysene	ND	100	
bis(2-Ethylhexyl)phthalate	ND	410	
Di-n-octylphthalate	ND	110	
Benzo(b)fluoranthene	ND	190	
Benzo(k)fluoranthene	ND	71	
Benzo(a)pyrene	ND	82	
Indeno(1,2,3-cd)pyrene	ND	510	
Dibenz(a,h)anthracene	ND	120	
Benzo(g,h,i)perylene	ND	500	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike Report

Lab ID:	SV1466
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
QC Batch ID:	SV1466

Semivolatile Organics by USEPA Method 8270

Parameter Name	Blank Result (ug/kg)	Spike Amount (ug/kg)	BS Result (ug/kg)	BS % Rec.	Flag
Acenaphthene	0	10000	6500	65	
Pyrene	0	10000	6000	60	

SOUND ANALYTICAL SERVICES, INC.

Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID:	SV1
Lab ID:	63853-04
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
QC Batch ID:	SV1466

Semivolatile Organics by USEPA Method 8270

Compound Name	Sample Result (ug/kg)	Spike Amount (ug/kg)	MS Result (ug/kg)	MS % Rec.	MSD Result (ug/kg)	MSD % Rec.	RPD	Flag
Acenaphthene	0	12700	9360	73.6	9370	71.3	3.2	
Pyrene	0	12700	7730	60.8	8450	64.3	5.6	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DI1166
Date Received:	-
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits Low	High
o-Terphenyl	92		50	150

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	13	
Heavy Oil (>nC24-nC32)	ND	63	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike Report

Lab ID:	DI1166
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
QC Batch ID:	DI1166

Extended Diesel Range by WTPH-D Modified

Parameter Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	Flag
Diesel (>nC12-nC24)	0	250	250	99	
Heavy Oil (>nC24-nC32)	0	250	240	95	

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID:	CD2
Lab ID:	63853-02
Date Prepared:	4/8/97
Date Analyzed:	4/9/97
QC Batch ID:	DI1166

Extended Diesel Range by WTPH-D Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Diesel (>nC12-nC24)	12	14	15.0	
Heavy Oil (>nC24-nC32)	67	81	19.0	

SOUND ANALYTICAL SERVICES, INC.

Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID:	CD2
Lab ID:	63853-02
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
QC Batch ID:	DI1166

Extended Diesel Range by WTPH-D Modified

Compound Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	MSD Result (mg/kg)	MSD % Rec.	RPD	Flag
Diesel (>nC12-nC24)	12	269	252	89.5	252	90.2	0.78	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - OP176
Date Received:	-
Date Prepared:	4/8/97
Date Analyzed:	4/9/97
% Solids	

Pesticides by USEPA Method 1618 (Screening Method)

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Tributyl Phosphate	62		50	150
Triphenyl Phosphate	81		50	150
Decachlorobiphenyl	83		50	150

Sample results are on an as received basis.

Analyte	Result (ug/kg)	PQL	Flags
Dichlorvos	ND	280	
Mevinphos	ND	140	
Ethoprop	ND	180	
Naled	ND	400	
Sulfotepp	ND	450	
Monocrotophos	ND	230	
Phorate	ND	360	
Dimethoate	ND	150	
Demeton,o-s	ND	460	
Diazinon	ND	120	
Disulfoton	ND	360	
Parathion,methyl	ND	170	
Ronnel	ND	110	
Chlorpyrifos	ND	120	
Malathion	ND	170	
Fenthion	ND	230	
Parathion	ND	82	
Trichloronate	ND	190	
Tetrachlorvinphos	ND	140	
Merphos	ND	220	
Tokuthion	ND	88	
Fensulfothion	ND	120	
Bolstar	ND	220	
EPN	ND	220	
Azinphos,methyl	ND	390	
Coumaphos	ND	80	

SOUND ANALYTICAL SERVICES, INC.

Pesticides by USEPA Method 1618 (Screening Method) data for OP176 continued...

Analyte	Result (ug/kg)	PQL	Flags
Alpha-BHC	ND	150	
Beta-BHC	ND	330	
Lindane	ND	430	
Delta-BHC	ND	99	
Heptachlor	ND	110	
Aldrin	ND	72	
Heptachlor epoxide	ND	74	
Endosulfan 1	ND	110	
P'P-DDE	ND	110	
Dieldrin	ND	87	
Endrin	ND	110	
Endosulfan II	ND	70	
P'P-DDD	ND	100	
Endrin aldehyde	ND	160	
Endosulfan sulfate	ND	240	
P'P-DDT	ND	98	
Methoxychlor	ND	270	
Chlordane-cis	ND	120	
Chlordane-trans	ND	98	
Strobane	ND	110	
Trifluralin	ND	120	
Dicloran	ND	150	
PCNB	ND	70	
Isodrin	ND	140	
Captan	ND	160	
Perthane	ND	150	
Carbophenothion	ND	120	
Kelthane	ND	77	
Mirex	ND	160	
TEPP	ND	110	

SOUND ANALYTICAL SERVICES, INC.

Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID:	CD2
Lab ID:	63853-02
Date Prepared:	4/8/97
Date Analyzed:	4/9/97
QC Batch ID:	OP176

Pesticides by USEPA Method 1618 (Screening Method)

Compound Name	Sample Result (ug/kg)	Spike Amount (ug/kg)	MS Result (ug/kg)	MS % Rec.	MSD Result (ug/kg)	MSD % Rec.	RPD	Flag
Diazinon	0	2010	1740	86.4	1660	84.2	2.6	
Malathion	0	2010	1750	86.8	1870	94.8	8.8	
Azinphos,methyl	0	2010	1340	66.4	1330	67.6	1.8	
Lindane	0	2010	1350	67	1280	65	3	
P'P-DDT	0	2010	1160	57.8	1230	62.5	7.8	
Trifluralin	0	2010	1490	74.2	1540	78	5	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - HB468
Date Received:	-
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	

Chlorinated Herbicides by USEPA Method 8150 GC/MS Modified

Surrogate	% Recovery	Flags	Recovery Limits Low	High
2,4,6-Tribromophenol	63		36	128

Sample results are on an as received basis.

Analyte	Result (ug/kg)	PQL	Flags
Dalapon	ND	65	
Dicamba	ND	37	
Dichloroprop	ND	44	
2,4-D	ND	27	
Silvex (2,4,5-TP)	ND	15	
2,4,5-T	ND	30	
Dinoseb	ND	22	
2,4-DB	ND	25	
MCPP	ND	39	
MCPA	ND	28	

SOUND ANALYTICAL SERVICES, INC.

Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID:	CD2
Lab ID:	63853-02
Date Prepared:	4/8/97
Date Analyzed:	4/9/97
QC Batch ID:	HB468

Chlorinated Herbicides by USEPA Method 8150 GC/MS Modified

Compound Name	Sample Result (ug/kg)	Spike Amount (ug/kg)	MS Result (ug/kg)	MS % Rec.	MSD Result (ug/kg)	MSD % Rec.	RPD	Flag
2,4-D	0	1030	999	97.2	942	88.5	9.4	
Silvex (2,4,5-TP)	0	1030	639	62.2	717	67.4	8	
Dinoseb	0	1030	932	90.7	1020	95.8	5.5	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - PCB887
Date Received:	-
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
% Solids	

PCBs by USEPA Method 8080

Surrogate	% Recovery	Flags	Recovery Limits Low	High
TCMX	63		50	150
Decachlorobiphenyl	90		50	150

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Aroclor 1016	ND	0.1	
Aroclor 1221	ND	0.1	
Aroclor 1232	ND	0.1	
Aroclor 1242	ND	0.1	
Aroclor 1248	ND	0.1	
Aroclor 1254	ND	0.1	
Aroclor 1260	ND	0.1	
Aroclor 1262	ND	0.1	
Aroclor 1268	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID:	PCB887
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
QC Batch ID:	PCB887

PCBs by USEPA Method 8080

Compound Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	BSD Result (mg/kg)	BSD % Rec.	RPD	Flag
Aroclor 1260	0	1	0.918	91.8	0.832	83.2	9.8	

SOUND ANALYTICAL SERVICES, INC.

Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID:	SC1
Lab ID:	63853-01
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
QC Batch ID:	PCB887

PCBs by USEPA Method 8080

Compound Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	MSD Result (mg/kg)	MSD % Rec.	RPD	Flag
Aroclor 1260	0	1.25	1.04	83.5	1.1	91.7	9.4	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - S220
Date Received:	-
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
Dilution Factor	1

ICP Metals by USEPA Method 6010

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Arsenic	ND	20	
Antimony	ND	30	
Beryllium	ND	0.5	
Cadmium	ND	5	
Chromium	ND	1	
Copper	ND	2	
Lead	ND	5	
Nickel	ND	4	
Selenium	ND	20	
Silver	ND	1	
Thallium	ND	20	
Zinc	ND	2	

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID:	SC1
Lab ID:	63853-01
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
QC Batch ID:	S220

ICP Metals by USEPA Method 6010

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Arsenic	0	0	0.0	
Antimony	0	0	0.0	
Beryllium	0	0	0.0	
Cadmium	0	0	0.0	
Chromium	20	23	14.0	
Copper	26	26	0.0	
Lead	28	29	3.5	
Nickel	32	37	14.0	
Selenium	0	0	0.0	
Silver	0	0	0.0	
Thallium	0	0	0.0	
Zinc	90	100	11.0	

SOUND ANALYTICAL SERVICES, INC.

Matrix Spike Report

Client Sample ID:	SC1
Lab ID:	63853-01
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
QC Batch ID:	S220

ICP Metals by USEPA Method 6010

Parameter Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	Flag
Arsenic	0	476	442	93	
Antimony	0	119	89.9	76	
Beryllium	0	11.9	11.8	100	
Cadmium	0	11.9	12	101	
Chromium	20	47.6	69	102	
Copper	26	59.5	83.2	96	
Lead	28	119	157	108	
Nickel	32	119	146	96	
Selenium	0	476	448	94	
Silver	0	11.9	10.1	85	
Thallium	0	476	416	87	
Zinc	90	119	216	105	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - S400
Date Received:	-
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
Dilution Factor	1

Mercury by CVAA - USEPA Method 7471

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Mercury	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID:	SC1
Lab ID:	63853-01
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
QC Batch ID:	S400

Mercury by CVAA - USEPA Method 7471

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Mercury	0	0	0.0	

SOUND ANALYTICAL SERVICES, INC.

Matrix Spike Report

Client Sample ID:	SC1
Lab ID:	63853-01
Date Prepared:	4/8/97
Date Analyzed:	4/8/97
QC Batch ID:	S400

Mercury by CVAA - USEPA Method 7471

Parameter Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	Flag
Mercury	0	1.22	1.23	102	

SOUND ANALYTICAL SERVICES, INC.
ANALYTICAL & ENVIRONMENTAL CHEMISTS
4813 Pacific Hwy. East
Tacoma, Washington 98424
(206) 922-2310 • FAX (206) 922-5047

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OCT 15 2002
DEPT OF ECOLOGY

UST PARAMETERS
CHAIN OF CUSTODY / REQUEST FOR LABORATORY ANALYSIS

CLIENT: WSDOT - Operations
PROJECT NAME: Corst Creek Landfill
CONTACT: Darin Cramer
PHONE NO: (360) 705-7864

ANALYSIS REQUESTED: Specify State _____

LAB #	SAMPLE I.D.	DATE	TIME	MATRIX	# of Containers	HCID	TPH-G	TPH-D Ext.	TPH 418.1	BTEX	TPH-G / BTEX	TPH 8015M	Total Lead	TCLP Lead	PCB's	PAH's	Phenols	Halogenated Volatiles EPA 601/8010	Aromatic Volatiles EPA 602/8020	Volatile Organics EPA 624/8240 GC/MS	Semi-volatiles EPA 625/8270 GC/MS	Metals PP metals	Total Halogens	Pest. / Herb. EPA 1618			CLOSURE DELIVERABLES
63831	SC1	4/7	1405	Soil	1			X							X	X						X		X			
2	CD2	4/7	1425	Soil	1			X							X	X						X		X			
3	SC3US	4/7	1520	Soil	1			X							X	X						X		X			
4	SV1	4/7	1410	Soil	1																X						
5	DV2	4/7	1470	Soil	1																X						
6	SV345	4/7	1525	Soil	1																X						

	Signature	Printed Name	Firm	Time / Date
Relinquished By	Darin D. Cramer	Darin D. Cramer	WSDOT	4/7 1640
Received By	Mary Curtiss	Mary Curtiss	SAS	1640 4/7/97
Relinquished By				
Received By				
Relinquished By				
Received By				

SPECIAL INSTRUCTIONS/COMMENTS:
These samples will be disposed of after _____
Check this box to have samples returned ☐.

Rush

9/5

Page _____ of _____