



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III
CENTRAL REGIONAL LABORATORY
839 BESTGATE ROAD
ANNAPOLIS, MARYLAND 21401

301-224-2740
FTS-922-3752

DATE : February 9, 1984

SUBJECT: GC/MS Analysis of Taylor Borough Samples 840101-01 - 34
Superfund Removal

FROM : John Austin *JA*
Chemist

Joseph L. Slayton *JS*
Chemist

TO : Daniel K. Donnelly
Chief, Annapolis Lab

Samples prepared by Fred C. Hart Associates, NEIC, Denver, Colorado, were examined for the presence of organic compounds listed as "Base/Neutral" and "Acid" extractable priority pollutants using fused silica capillary column/gas chromatography/mass spectrometry. Concentrations of these compounds were determined using the relative response of authentic standards to the internal standard. All results are reported on a wet weight basis.

The samples were also examined for the presence of compounds in addition to those on the priority pollutant list. Tentative identification of these compounds was made on the comparison of sample spectra to the EPA/NIH Mass Spectral Library. Concentrations for these compounds were estimated based on the response of the internal standard.

Two samples were spiked by Fred C. Hart Associates prior to shipment.

JA/JS:ad

cc: P. J. Krantz
QAO, CRL

AR300298

Sample Description:

<u>Lab No.</u>	<u>Description</u>
	Group #1
840101-01	Taylor-Borouf 2251, Chevron Drum 89, C5478
-02	Taylor-Borouf 2251, Chevorn Drum 82, C5479
-03	Taylor-Borouf 2251, Drum #81, C5480
-04	Taylor-Borouf 2251, Drum #83, C5481
-05	Taylor-Borouf 2251, Drum #126, C5482
-06	Taylor-Borouf 2251, Spike #1, C5482 S1
-07	Taylor-Borouf 2251, Spike #2, C5482 S2
-08	Taylor-Borouf 2251, Spike #3, C5482 S3
-09	Taylor-Borouf 2251, Drum #88, C5483
-10	Taylor-Borouf 2251, Drum #104, C5484
-11	Taylor-Borouf 2251, Drum #104, C5484
-12	Taylor-Borouf 2251, Drum #93, C5485
-13	Taylor-Borouf 2251, Drum #84, C5486
-14	Taylor-Borouf 2251, Drum #41, C5487
-15	Taylor-Borouf 2251, Drum #110, C5488
-16	Taylor-Borouf 2251, Reagent Blank, C5926
-17	Taylor-Borouf 2251, Adjusted Reagent Blank, C5926B
	Group #2
-18	Taylor-Borouf 2251, Drum #62, C5489
-19	Taylor-Borouf 2251, Drum #76, C5490
-20	Taylor-Borouf 2251, Drum #100, C5491
-21	Taylor-Borouf 2251, Drum #99, C5492
-22	Taylor-Borouf 2251, Drum #102, C5493
-23	Taylor-Borouf 2251, Drum #814, C5544
-24	Taylor-Borouf 2251, Drum #728, C5545
-25	Taylor-Borouf 2251, Drum #714, C5546
-26	Taylor-Borouf 2251, Drum #965, C5547
-27	Taylor-Borouf 2251, Drum #488, C5549
-28	Taylor-Borouf 2251, Drum #818, C5550
-29	Taylor-Borouf 2251, Spike #1, C5550 S1
-30	Taylor-Borouf 2251, Spike #2, C5550 S2
-31	Taylor-Borouf 2251, Spike #3, C5550 S3
-32	Taylor-Borouf 2251, Reagent Blank, C5927
-33	Taylor-Borouf 2251, Reagent Blank, Filtered thru glasswool, C5927B
-34	Taylor-Borouf 2251, Reagent Blank, C5927B

AR300299

U.S. Environmental Protection Agency, Region III, Central Regional Laboratory

Project Name: Taylor-Borough - Superfund Removal

Sample Number:	840101-01 C5478	840101-02 C5479	840101-03 C5480	840101-04 C5481	840101-05 C5482
Detection Limits	100 mg/kg	100 mg/kg	100 mg/kg	100 mg/kg	10 mg/kg

BASE/NEUTRAL EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

Parameter	Cas Number				
Bis(2-Ethylhexyl) Phthalate	117-81-7	732	---	---	12.9
Dimethylphthalate	131-11-2	---	---	1050	---
Di-n-Octylphthalate	117-84-0	---	---	---	26.7
N-Nitrosodiphenylamine	86-30-6	*	*	*	*
Pyrene	129-00-0	---	---	---	Trace (2.1)

*Not present after blank correction

ACID EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

Phenol	108-95-2	---	---	177	---
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Sample Number:	840101-09 C5483	840101-10 C5484-01	840101-11 C5484-02	840101-12 C5485	840101-13 C5486
Detection Limits	10 mg/kg	10 mg/kg	10 mg/kg	10 mg/kg	100 mg/kg

BASE/NEUTRAL EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

Parameter	Cas Number				
Bis(2-Ethylhexyl) Phthalate	117-81-7	---	---	---	344
Dimethylphthalate	131-11-3	---	---	1760	4560
N-Nitrosodiphenylamine	86-30-6	*	*	*	*

*Not present after blank correction

ACID EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

Phenol	108-95-2	89.5	---	---	235
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U.S. Environmental Protection Agency, Region III, Central Regional Laboratory

Project Name: Taylor-Borough - Superfund Removal

Sample Number:

840101-14	840101-15	840101-16	840101-17
C5487	C5488	C5926	C59288
100 mg/kg	10 mg/kg	10 mg/kg	10 mg/kg

Detection Limits

BASE/NEUTRAL EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

Parameter

Cas Number

Dimethylphthalate 131-11-3
Naphthalene 91-20-3
N-Nitrosodiphenylamine 86-30-6

677

13.9

*Not present after blank correction

ACID EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

Phenol

108-95-2

30

AR300301

U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Project Name: Taylor-Borough - Superfund Removal

Sample Number: 840101-01 (C5478)

(SOLID) Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
311	Ethylcyclopentane	74,000
316	3-Ethyl-2-methylpentane	17,000
325	(1.1Alpha., 2.1Alpha., 2.2Beta.)-1,2,3-Trimethylcyclopentane	3,600
335	Toluene	14,000
360	cis-1,4-Dimethylcyclohexane	5,400
384	Octane	5,500
392	cis-1,4-Dimethylcyclohexane	870
428	Ethylcyclohexane	390
465	Ethylbenzene	42,000
477	Dimethylbenzene isomer	140,000
507	Dimethylbenzene isomer	57,000
597	(1-Methylethyl) benzene	290
793	2-Ethyl-hexanoic acid	1,100

Sample Number: 840101-02 (C5479)

(SOLID) Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
306	Methylcyclohexane	130,000
315	Ethylcycloheptane	19,000
329	3-Methyl-1-heptane	790
338	Toluene	6,900
364	1,3-dimethylcyclohexane	1,300
387	Octane	1,300
468	Ethylbenzene	21,000
479	1-Ethenyl-3-methylenecyclopentene	70,000
509	Dimethylbenzene isomer	30,000
549	(1-Methylethyl)benzene	120
597	(1-Methylethenyl)benzene	190
2089	2,4,6-Trimethyloctane	160

AR300302

U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Project Name: Taylor-Borough - Superfund Removal

Sample Number: 840101-03 (C5480)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc.</u> <u>(mg/kg wet)</u>
559	2,2-Dimethyl-1,3-propanediol	6,800
608	2,2-Dimethyl-1,3-propanediol	630
710	2-(2-Hydroxypropoxy)-1-propanol	6,100
1033	1,3-Isobenzofurandione	3,700
1331	2-Methylpropyl ester benzoic acid	390
1460	Phenyl ester 2-hydroxy benzoic acid	200

Sample Number: 840101-04 (C5481)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc.</u> <u>(mg/kg wet)</u>
563	2,2-Dimethyl-1,3-propanediol	2,600
714	2-(Hydroxypropyl)-1-propanol or 1,1'-[1-Methyl-1,2-ethanediyl] bis(oxy)bis-2-propanol	10,000
1035	1,2-Benzene dicarboxylic acid or 1,3-isobenzofurandione	7,800
1175	Dimethyl phthalate	840
1449	Unidentified phthalate ester	>14,000
1453	2-Hydroxy-benzoic acid phenyl ester	6,600

Sample Number: 840101-05 (C5482)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc.</u> <u>(mg/kg wet)</u>
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No other compounds detected

U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Project Name: Taylor-Borough - Superfund Removal

Sample Number: 840161-09 (C5483)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
595	Benzaldehyde	24
860	Benzoic acid	38
1022	1-Phenyl-1,2-ethanediol	120
1034	1,2-Benzenedicarboxylic acid	21
1086	Hexanedioic acid	39
1722	2-(2H-benzotriazol-2-yl)-4-methylphenol	1,000

Sample Number: 840101-10 (C5484)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
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No other compounds detected

Sample Number: 840101-11 (C5484) (2nd Phase)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
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No other compounds detected

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U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Project Name: Taylor-Borough - Superfund Removal

Sample Number: 840101-12 (C5485)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
346	Toluene	550
463	Ethylbenzene	23
474	Dimethylbenzene isomer	130
505	Dimethylbenzene isomer	47
1034	1,2-Benzene dicarboxylic acid	55
1723	2-(2H-benzotriazol-2-yl)-4-methylphenol	1,200
1750	2 Dodecenal	17

Sample Number: 840101-13 (C5486)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
493	1,3,5,7-Cyclooctatetraene	Trace (87)
545	2,2-Dimethyl-1,3-propanediol	2,700
1025	1,3-Isobenzofurandione	4,700
1442	Unknown Phthalic acid ester? Base Peak 41	29,000

Sample Number: 840101-14 (C5487)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
313	4-Methyl-2-pentanone	1,600
343	Toluene	2,500
461	Ethylbenzene	970
471	Dimethylbenzene isomer	6,000
502	Dimethylbenzene isomer	1,500
593	1-Ethyl-2-methylbenzene	1,100
602	Trimethylbenzene isomer	370
618	Ethyl-methyl-benzene isomer	250
636	Trimethylbenzene isomer	1,600

AR300305

U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Project Name: Taylor-Borough - Superfund Removal

Sample Number: 840101-14 (C5487) (con't)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
674	Trimethylbenzene isomer	450
684	Undecylcyclohexane	170
701	3,3,5-Trimethyl-1-hexene	Trace (43)
710	.Alpha.-Methyl-benzneacetaldehyde	370
730	2-Ethyl-1,3-dimethylbenzene	260
754	2-Ethyl-1,3-dimethylbenzene	660
767	Undecane	2,100
788	2,2,3,4-Tetramethylpentane	150
793	Tetramethylbenzene isomer	310
799	Tetramethylbenzene isomer	520
827	(1,1-Dimethylpropyl)benzene	100
839	1-Methyl-4-(1-methylethyl)benzene	440
888	3,3-Dimethylhexane	340
1032	1,2-Benzenedicarboxylic acid	1,300
1747	1-Methyl-3-(methylpropyl)cyclopentane	300

Sample Number: 840101-15 (C5488)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
502	1,3,5,7-Cyclooctatetraene	Trace (7.8)
694	3-Methoxy-1,2-propanediol	4,300
868	Benzoic acid	39
943	2,2'-[1,2-Ethanedyl]bis(oxy)]bisethanol	120
1026	1-Phenyl-1,2-ethanediol	67
1035	1,2-Benzene dicarboxylic acid	60
1227	2,2'-[1,2-Ethanedyl]bis(oxy)]bisethanol	67
1462	Allylethyl ester phthalic acid	79
1720	6-(2H-Benzotriazol-2-yl)-4-methylphenol	310

AR300306

Surrogate Recovery (%)

Sample No.	NEIC	2-Fluoro-phenol	D6-Phenol	D5-Nitro-benzene	Decafluoro-biphenyl	D10-Pyrene
840101-01	C5478	X	X	X	X	X
-02	C5479	X	X	X	X	X
-03	C5480	X	X	X	X	X
-04	C5481	X	X	X	X	X
-05	C5482	75.2	75.2	72.7	75.5	92.1
-06	C5482S1	74.3	76.0	68.9	72.0	91.7
-07	C5482S2	83.6	87.3	74.4	82.2	93.5
-08	C5482S3	85.2	84.7	74.3	84.7	95.9
-09	C5483	67.7	62	79	87.1	81.3
-10	C5484-01	87.0	76.5	83	74.2	92.6
-11	C5484-02	82.9	69.1	76.4	66	90.3
-12	C5485	54.4	49.0	71.0	80.0	79.2
-13	C5486	X	X	X	X	X
-14	C5487	X	X	X	X	X
-15	C5488	62	64.9	72.0	73.0	78.9
-16*	C5926	100	100	100	100	100
-17	C5926B	0	0	79.1	78.7	89.8

X = Dilution analyzed

*Blank used as reference

AR300307

Matrix Spikes (Spike of C5482)

	Spike Added ng/ul	S1	S2	S3	Mean	1 Std. Dev.	3 Std. Dev.
Acenaphthylene	10	5.11	5.44	6.22	5.59	.57	1.71
Benzo(a)anthracene	10	6.90	7.10	8.64	7.55	.95	2.86
Benzo(b)fluoranthene	10	6.97	6.97	8.11	7.29	.72	2.15
Bis(2-Chloroethoxy)methane	10	6.70	7.35	9.14	7.73	1.26	3.79
Bis(2-Chloroisopropyl)ether	10	7.60	7.81	9.52	8.31	1.05	3.16
Butyl benzyl phthalate	10	10.04	10.46	12.64	11.05	1.40	4.19
1,3-Dichlorobenzene	10	5.48	6.35	8.24	6.69	2.41	4.23
2,4-Dinitrotoluene	10	4.89	5.61	5.46	5.55	.72	2.30
2,6-Dinitrotoluene	10	5.18	6.18	6.96	6.12	.89	2.68
Fluoranthene	10	7.67	7.75	8.82	8.08	.64	1.93
Ideno(1,2,3,c,d)Pyrene	10	4.23	3.52	4.14	3.96	.39	1.16
2-Methylnaphthalene*	10						
N-Nitrosodimethylamine	10	5.63	6.60	6.96	6.40	.69	2.06
Phenanthrene	10	7.20	7.19	8.11	7.50	.53	1.50
1,2,4-Trichlorobenzene	10	6.05	6.82	7.96	6.94	.96	2.88
4-Chloroaniline*	10						
2-Nitroaniline*	10						
3-Nitroaniline*	10						
4-Nitroaniline*	10						
Aniline*	10						
Benzoic Acid*	10						
p-Chloro-m-cresol	10	17.15	18.67	21.89	19.24	2.42	7.26
2-Chlorophenol	10	8.36	8.87	11.31	9.51	1.58	4.73
2,4-Dichlorophenol	10	8.04	8.91	11.42	9.46	1.76	5.27
2,4-Dimethylphenol	10	7.79	8.35	10.22	8.79	1.27	3.82
4,6-Dinitro-o-cresol	10	0.26	0.38	1.23	.62	.53	1.59
2,4-Dinitrophenol	10	0	0	0	--	--	--
2-Methylphenol*	10						
4-Methylphenol*	10						
2-Nitrophenol	10	7.78	8.81	10.61	9.07	1.43	4.30
4-Nitrophenol	10	3.70	4.73	4.92	4.45	.66	1.97
Phentachlorophenol	10	3.60	4.18	5.25	4.34	.84	2.51
Phenol	10	8.48	9.68	12.37	10.18	1.99	5.97
2,4,5-Trichlorophenol*	10						
2,4,6-Trichlorophenol	10	5.93	5.93	7.62	6.49	.98	2.93

*Hazardous substance standards not available

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U.S. Environmental Protection Agency, Region III, Central Regional Laboratory

Project Name: Taylor-Borough - Superfund Removal

Sample Number:	840101-18	840101-19	840101-20	840101-21	840101-22
	C5489	C5490	C5491	C5492	C5493
Detection Limits	100 mg/kg	100 mg/kg	10 mg/kg	100 mg/kg	10 mg/kg

BASE/NEUTRAL EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

Parameter	Cas Number				
Bis(2-Ethylhexyl) Phthalate	117-81-7	*	169**	---	*
n-Butylbenzylphthalate	85-68-7	---	4490	126	---
1,3-Dichlorobenzene	541-73-1	*	---	---	---
Dimethylphthalate	131-11-3	---	1690	---	23.6
Di-n-Butylphthalate	84-74-2	*	*	---	*
N-Nitrosodiphenylamine	86-30-6	---	*	*	---

ACID EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

Phenol	108-95-2	100	Trace (9.5)	14.6	---	Trace (2.6)
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*Not present after blank correction
 **Corrected for blank

AR300309

U.S. Environmental Protection Agency, Region III, Central Regional Laboratory

Project Name: Taylor-Borough - Superfund Removal

Sample Number:	840101-23	840101-24	840101-25	840101-26	840101-27
	C5544	C5545	C5546	C5547	C5549
Detection Limits	100 mg/kg	10 mg/kg	10 mg/kg	10 mg/kg	10 mg/kg

BASE/NEUTRAL EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

Parameter	Cas Number				
Bis(2-Ethylhexyl) Phthalate	117-81-7			*	*
Dimethylphthalate	131-11-3	4000**			
Di-n-Butylphthalate	84-74-2	*		*	*
N-Nitrosodiphenylamine	86-30-6	---			
Phenanthrene	85-01-8	---	Trace (4.4)	---	Trace (4)
Pyrene	129-00-0	---	---	---	Trace (5)

*Not present after blank correction
 **Corrected for blank

ACID EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

Phenol	108-95-2	386	---	---	---
Sample Number:	840101-28	840101-32	840101-33	840101-34	
	C5550	C5927	C5927F	C5927B	
Detection Limits	10 mg/kg	10 mg/kg	10 mg/kg	10 mg/kg	

BASE/NEUTRAL EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

Parameter	Cas Number				
Bis(2-Ethylhexyl) Phthalate	117-81-7	*			
1,3-Dichlorobenzene	541-73-1	---	44.4	15.6	---
Di-n-Butylphthalate	84-74-2	*	Trace (9.1)	---	---
N-Nitrosodiphenylamine	86-30-6	---	27.2	61.8	---
			---	13	

*Not present after blank correction

ACID EXTRACTABLE PRIORITY POLLUTANT COMPOUNDS

None Detected

U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Project Name: Taylor-Borough - Superfund Removal

Sample Number: 840101-18 (C5488)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc.</u> <u>(mg/kg wet)</u>
630	Ethylbenzene	Trace (89)
677	Ethylbenzene	5,400
784	Benzaldehyde	1,200
1255	1,3-Isobenzofurandione	980
1698	2-Hydroxy benzoic acid phenyl ester	1,300

Sample Number: 840101-19 (C5490)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc.</u> <u>(mg/kg wet)</u>
632	Ethylbenzene	Trace (89)
713	2-Methyl-2,4-pentanediol	200
730	2,2-Methyl-1,3-propanediol	1,600
786	Benzaldehyde	100
1257	1,3-Isobenzofurandione	2,300
1700	2-Hydroxy-benzoic acid	1,000

Sample Number: 840101-20 (C5491)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc.</u> <u>(mg/kg wet)</u>
1035	1,3-Isobenzofurandione	31
1459	Unknown Phthalic acid ester	
	Base Peak 41	7,200
1718	2-(2H-Benzotriazol-2-yl)-4-methyl phenol	600
1828	Butyl 2-ethylhexyl phthalate	1,000
2176	bis(phenylmethyl)phthalate	26

AR300311

U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Project Name: Taylor-Borough - Superfund Removal

Sample Number: 840101-21 (C5492)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
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No Other Compounds Detected

Sample Number: 840101-22 (C5493)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
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1484	2,4-Dimethyldecane	Trace (9.2)
1521	8,5,24-Trimethyltetracontane	Trace (6.3)
1529	2,7,10-Trimethyldodecane	51
1576	Hexadecane	110
1623	Heptadecane	140
1629	2,6,10,14-Tetramethylpentadecane	200
1664	4,6-Dimethyldodecane	23
1723	2,6,10-Trimethyldodecane	79
1799	2,7,10-Trimethyldodecane	36
1881	2,7,0-Trimethyldodecane	15

Sample Number: 840101-23 (C5544)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
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715	2,2-Dimethyl-1,3-propanediol	7,500
771	Benzaldehyde	140
865	Butyl ester acetic acid	150
878	2-(2-Hydroxypropoxyl)-1-propanol	6,800
1242	1,3-Isobenzofurandione	3,800
1685	Phenyl ester 2-hydroxy benzoic acid	1,700
1843	2-Butoxyethylbutyl	
	1,2-benzenedicarboxylic acid	290
1860	Dihexyl ester 1,2-benzene dicarboxylic acid	220

AR300312

U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Project Name: Taylor-Borough - Superfund Removal

Sample Number: 840101-24 (C5545)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc. (mg/kg wet)</u>
1130	2,4,6-Trimethyloctane	40
1175	2,4,6-Trimethyloctane	28
1187	Eicosylcyclohexane	14
1220	4,7-Dimethylundecane	110
1226	2,6,11-Trimethyldodecane	69
1307	4,7-Dimethylundecane	95
1315	2,7,10-Trimethyldodecane	110
1383	3,8-Dimethylundecane	58
1389	4,7-Dimethylundecane	110
1397	1-(Ethenyloxy)octadecane	31
1445	4,7-Dimethylundecane	10
1468	4,7-Dimethylundecane	84
1497	2,6,11-Trimethyldodecane	42
1526	3,6-Dimethylundecane	110
1543	2,7,10-Trimethyldodecane	48
1567	2,7,10-Trimethyldodecane	30
1605	Hexylcyclohexane	67
1616	4,7-Dimethylundecane	37
1642	2,7,10-Trimethyldodecane	76
1725	(E)-9-Octadecene	13
1749	Octylcyclohexane	45
1816	2,6,11-Trimethyldodecane	110
1838	2,7,10-Trimethyldodecane	43
1939	4,7-Dimethylundecane	47
1999	2,6,11-Trimethyldodecane	36
2066	2,7,10-Trimethyldodecane	27
2142	3,5,24-Trimethyltetracontane	42
2230	2,7,10-Trimethyldodecane	58
2334	3,5,24-Trimethyltetracontane	60

AR300313

U.S. Environmental Protection Agency. Region 3, Central Regional Lab

Project Name: Taylor-Borough - Superfund Removal

Sample Number: 840101-25 (C5546)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc.</u> <u>(mg/kg wet)</u>
1531	2,4,6-Trimethyloctane	17
1626	2,4,6-Trimethyloctane	46
1632	2,7,10-Trimethyldodecane	34
1710	2,7,10-Trimethyldodecane	47
1726	2,7,10-Trimethyldodecane	44
1802	4,6-Dimethyldodecane	61
1884	4,7 Dimethylundecane	41
1963	2,4,6-Trimethyloctane	24

Sample Number: 840101-26 (C5547)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc.</u> <u>(mg/kg wet)</u>
No Other Compounds Detected		

Sample Number: 840101-27 (C5549)

Soil Extract

OTHER COMPOUNDS

<u>Scan No.</u>	<u>Tentative Identification</u>	<u>Estimated Conc.</u> <u>(mg/kg wet)</u>
1580	6-Methyltridecane	16
1628	2,4,6-Trimethyldecane	37
1633	2,7,10-Trimethyldodecane	38
1718	4,6-Dimethyldodecane	57
1727	2,6,10-Trimethyldodecane	63
1798	4,6-Dimethylundecane	25
1804	Heptadecane	96
2068	Hexadecane	89
2126	Hexadecane	32

AR300314

U.S. Environmental Protection Agency, Region 3, Central Regional Lab

Project Name: Taylor-Borough - Superfund Removal

Sample Number: 840101-28 (C5550)

Soil Extract

OTHER COMPOUNDS

Scan No.

Tentative Identification

Estimated Conc.
(mg/kg wet)

No Other Compounds Detected

AR300315

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Surrogate Recovery (%)

Sample No.	NEIC	2-Fluoro-phenol	D6-Phenol	D5-Nitro-benzene	Decafluoro-biphenyl	D10-Pyrene
830101-18	C5489	55.2	96.5	96.8	99.0	87.8
-19	C5490	X	X	X	X	X
-20	C5491	52.1	54.1	65.5	65.8	77.5
-21	C5492	X	X	X	X	X
-22	C5493	36.4	46.4	83.3	92.0	93.2
-23	C5544	X	X	X	X	X
-24	C5545	44.7	41.1	71.7	85.6	85.6
-25	C5546	72.5	65.3	91.9	76.6	85.9
-26	C5547	67.0	70.3	72.9	71.1	75.6
-27	C5549	87.5	86.0	91.2	90.5	82.4
-28	C5550	80.8	82.7	84.8	84.0	87.4
-29	C5551	103.0	118.5	121.3	95.9	94.3
-30	C5552	104.6	119.6	125.5	101.0	94.4
-31	C5553	107.0	117.7	126.3	106.5	94.6
-32*	C5927	100	100	100	100	100
-33	C5927F	106	105.8	101	99.8	91.8
-34	C5927B	0.3	0	76.1	57.7	96.4

X = Diluted extract

*Blank used as reference

AR300316

Matrix Spikes (Spike of C5550)

	Spike Added ng/uL	S1	S2	S3	Mean	1 Std. Dev.	3 Std. Dev.
Acenaphthylene	10	7.6	7.6	7.7	7.6	.058	.17
Benzo(a)anthracene	10	8.1	8.4	8.2	8.2	.15	.46
Benzo(b)fluoranthene	10	10.4	10.6	10.4	10.5	.12	.35
Bis(2-Chloroethoxy)methane	10	10.0	10.2	10.0	10.1	.12	.35
Bis(2-Chloroisopropyl)ether	10	10.8	11.1	11.2	11.0	.21	.62
Butyl benzyl phthalate	10	13.0	12.6	13.1	12.9	.26	.79
1,3-Dichlorobenzene	10	15.3	11.3	10.9	12.5	2.4	7.3
2,4-Dinitrotoluene	10	5.8	5.6	5.9	5.1	.46	1.4
2,6-Dinitrotoluene	10	6.5	5.2	6.7	6.1	.81	2.4
Fluoranthene	10	8.7	8.6	9.0	8.8	.21	.62
Ideno(1,2,3,c,d)Pyene	10	7.9	8.6	7.2	7.9	.70	2.1
2-Methylnaphthalene*	10						
N-Nitrosodimethylamine	10	9.4	9.0	9.0	9.1	.23	.69
Phenanthrene	10	9.2	9.2	9.6	9.3	.23	.69
1,2,4-Trichlorobenzene	10	9.4	9.8	10.0	9.7	.31	.92
4-Chloroaniline*	10						
2-Nitroaniline*	10						
3-Nitroaniline*	10						
4-Nitroaniline*	10						
Aniline*	10						
Benzoic Acid*	10						
p-Chloro-m-cresol	10	7.0	7.1	6.7	6.9	.21	.62
2-Chlorophenol	10	10.3	10.5	10.5	10.4	.12	.35
2,4-Dichlorophenol	10	9.5	9.8	9.6	9.6	.15	.46
2,4-Dimethylphenol	10	5.1	3.5	2.2	3.6	1.45	4.35
4,6-Dinitro-o-cresol	10	0	0	0	--	--	--
2,4-Dinitrophenol	10	0	0	0	--	--	--
2-Methylphenol*	10						
4-Methylphenol*	10						
2-Nitrophenol	10	9.6	10.2	10.0	9.9	.31	.92
4-Nitrophenol	10	.94	.67	.17	.59	.39	1.2
Phentachlorophenol	10	0	0	0	--	--	--
Phenol	10	11.7	11.5	11.1	11.4	.31	.92
2,4,5-Trichlorophenol*	10						
2,4,6-Trichlorophenol	10	5.7	5.8	5.7	5.7	.06	.17

*Hazardous substance standards not available

AR300317

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Quality Control

1. Before acquisition of any samples the mass spectrometer is calibrated using FC43.
2. The calibration is verified by obtaining the spectra of a known compound (DFTPP). All mass assignments and relative abundances are found to be in acceptable ranges or the instrument is adjusted until suitable spectra of the known are obtained.
3. Immediately before analysis each sample is spiked with an internal standard D10-anthracene. All quantitation or estimates of concentration are made in comparison to the internal standard.
4. Mixed standards of extractable priority pollutants are analyzed before each group of samples. The relative response of each compound versus the internal standard is determined for use in quantitation.
5. For each group of samples extracted a method blank is prepared and examined for laboratory introduced contamination.
6. The samples were spiked with a mixture of surrogate compounds prior to analysis. Recovery for each was determined to check for matrix effect.
7. Two samples were spiked with a mixture of compounds of interest and analyzed in triplicate. Analytical accuracy and precision were calculated.