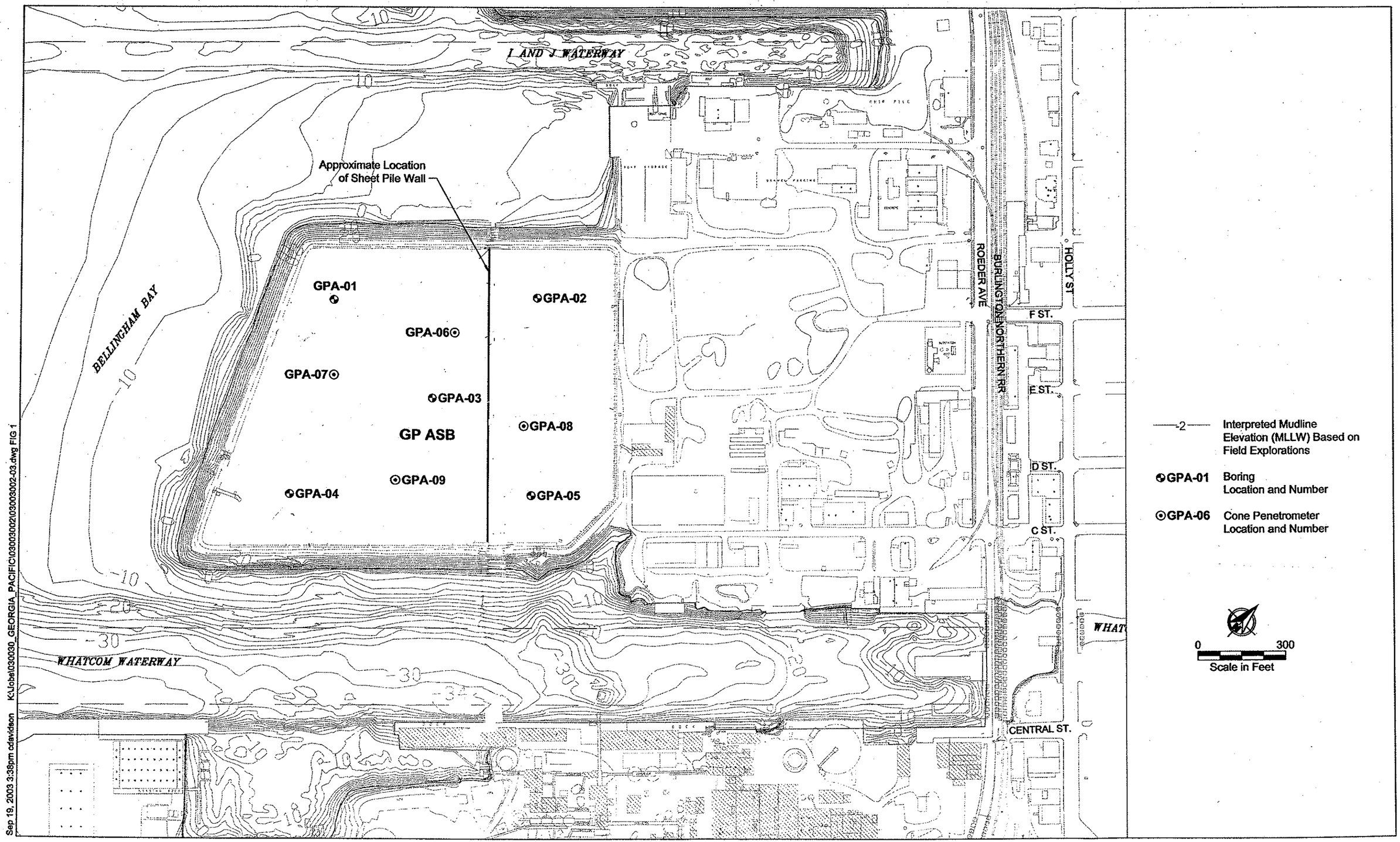
APPENDIX C

2003 ASB SAMPLING DATA

The attached investigation data for ASB sludges and underlying native sands were generated during 2003 as part of Supplemental RI/FS investigations.



Sep 19, 2003 3:38pm cdavidson K:\Jobs\030030_GEORGIA_PACIFIC\030030002\030030002-03.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Exploration Plan

Table C-1
2003 Chemical Sampling Data for ASB Sludges and Underlying Native Sands

Location ID	GPA-01	GPA-01	GPA-01	GPA-01	GPA-02	GPA-02	GPA-02	GPA-02	GPA-03	GPA-03	GPA-03	GPA-03	GPA-04	GPA-04	GPA-04	GPA-04	GPA-05	GPA-05	GPA-05	GPA-05
Core Subsample	A	B1	B2	C	A	B1	B2	C	A	B1	B2	C	A	B1	B2	C	A	B1	B2	C
Sample Date	07/29/2003	07/29/2003	07/29/2003	07/29/2003	07/25/2003	07/25/2003	07/28/2003	07/28/2003	07/28/2003	07/28/2003	07/28/2003	07/28/2003	07/29/2003	07/29/2003	07/29/2003	07/29/2003	07/30/2003	07/30/2003	07/30/2003	07/30/2003
Est. Mudline (ft MLLW)	**-0.4**	**-0.4**	**-0.4**	**-0.4**	**-7**	**-7**	**-7**	**-7**	**-10.6**	**-10.6**	**-10.6**	**-10.6**	**-6.1**	**-6.1**	**-6.1**	**-6.1**	**-2.8**	**-2.8**	**-2.8**	**-2.8**
Depths below Mudline																				
Sample Top	0	6.5	13	26	0	2.1	4	9	0	2.7	5.5	12	0	4.5	8.5	18.5	0	7.5	14	19
Sample Bottom	6	11.5	19	32	2.1	4	6.5	14	2.6	5	9	17.5	4	7	13.5	23.5	6.5	13	17.5	23
Est. Elevation (MLLW)																				
Sample Top	**-0.4**	**-6.9**	**-13.4**	**-26.4**	**-7**	**-9.1**	**-11**	**-16**	**-10.6**	**-13.3**	**-16.1**	**-22.6**	**-6.1**	**-10.6**	**-14.6**	**-24.6**	**-2.8**	**-10.3**	**-16.8**	**-21.8**
Sample Bottom	**-6.4**	**-11.9**	**-19.4**	**-32.4**	**-9.1**	**-11**	**-13.5**	**-21**	**-13.2**	**-15.6**	**-19.6**	**-28.1**	**-10.1**	**-13.1**	**-19.6**	**-29.6**	**-9.3**	**-15.8**	**-20.3**	**-25.8**
Conventionals																				
Total organic carbon (%)	33.0	34.0	2.2	0.4	31.0	28.0	32.0	0.6	29.0	31.0	2.7	0.3	44.0	42.0	1.0	0.3	28.0	2.0	0.4	0.6
Total solids (%)	7.1	11.7	62.8	91.1	15.4	24.7	33.1	90.0	10.4	15.1	71.9	82.9	10.6	16.9	77.3	79.5	29.0	70.8	79.5	79.8
Ammonia (mg/kg)	3,900	--	--	--	4,900	--	--	--	4,300	--	--	--	11,000	--	--	--	200	--	--	--
Sulfide (mg/kg)	1,100	--	--	--	950	--	--	--	750	--	--	--	9,700	--	--	--	5,200	--	--	--
Grain Size																				
Percent Fines	44.3%	82.8%	48.8%	33.3%	50.9%	79.4%	39.1%	10.3%	61.3%	64.0%	19.9%	9.9%	86.9%	96.3%	17.6%	18.2%	18.6%	28.8%	21.4%	11.6%
Metals (mg/kg)																				
Antimony	20 U	10 U	2 U	2 U	9 U	6 U	6 U	2 U	20 U	10 U	2 U	2 U	10 U	8 U	2 U	2 U	6 U	2 U	2 U	2 U
Arsenic	20 U	9 U	2 U	1 U	8 U	5 U	5 U	1 U	10 U	9 U	2 U	1 U	10 U	7 U	2 U	1 U	5 U	2 U	1 U	1 U
Cadmium	18.0	18.0	1.3	0.4	13.0	8.5	14.5	0.3	21.0	9.0	0.9	0.1 U	9.0	11.0	0.7	0.3	3.5	2.1	0.5	0.3
Copper	75	91	23	14	69	88	122	9	75	70	16	10	82	104	13	11	30	26	11	14
Lead	10 U	40	8	3	20	54	206	3	20	40	6	3	50	40	5	3	12	30	3	3
Mercury	1.1	7.0	0.60	0.02 U	2.6	6.0	20.2	0.13	1.9	5.3	0.48	0.02 U	7.7	5.1	0.33	0.04	0.40	0.68	0.05	0.02 U
Nickel	30	41	27	20	27	45	84	14	40	25	18	24	28	39	15	21	14	28	19	23
Silver	1 U	0.5 U	0.1 U	0.08 U	0.5 U	0.3 U	0.3 U	0.08 U	0.7 U	0.5 U	0.09 U	0.08 U	0.6 U	0.4 U	0.09 U	0.08 U	0.3 U	0.1 U	0.08 U	0.08 U
Zinc	616	667	78	29	438	474	3,500	23	544	422	109	32	501	659	37	28	179	82	28	31
PCBs (µg/kg)																				
Total PCBs	6.4 UY	32 UY	6.2 UY	6.1 U	6.4 U	6.3 UY	6.4 UY	6 U	6.4 UY	6.4 UY	6 U	6.1 U	6.4 UY	6.4 UY	5.9 U	5.9 U	6.3 UY	6.1 UY	6.0 U	6.2 U
Pesticides (µg/kg)																				
4,4'-DDD	0.089 U	0.089 U	0.086 U	0.084 U	0.089 U	0.088 U	0.089 UY	0.084 U	0.089 U	0.089 U	0.084 U	0.085 U	0.090 U	0.089 U	0.082 U	0.082 U	0.088 U	0.084 U	0.083 U	0.086 U
4,4'-DDE	0.077 U	0.077 U	0.075 U	0.073 U	0.077 UY	0.077 UY	0.077 UY	0.073 U	0.077	0.077 U	0.073 U	0.074 U	0.078 UY	0.077 UY	0.071 U	0.071 U	0.077 UY	0.073 U	0.072 U	0.075 U
4,4'-DDT	0.14 U	0.14 UY	0.13 U	0.13 U	0.14 U	0.14 UY	0.14 UY	0.13 U	0.14 U	0.14 U	0.13 U	0.13 U	0.14 U	0.14 U	0.13 U	0.13 U	0.14 U	0.13 UY	0.13 U	0.13 U
LPAHs (µg/kg)																				
Naphthalene	7,800	5,600	260	5.0 U	15,000	34,000	26 U	100	5,700	6,600	610	45	4,800	6,400	120	26	1,500	250	76	120
Acenaphthylene	940	510	29	4.4 U	860	5,900	23 U	4.4 U	500	630	82	4.5 U	460	770	4.5 U	4.5 U	100	26	4.5 U	4.5 U
Acenaphthene	240	240	20	5.0 U	350	2,200	26 U	5.0 U	240	480	45	5.1 U	190	460	5.0 U	5.0 U	24 U	32	5.1 U	5.1 U
Fluorene	270	260	23	6.5 U	130	1,200	34 U	6.5 U	200	320	41	6.7 U	140	620	6.6 U	6.6 U	32 U	25	6.6 U	6.7 U
Phenanthrene	3,400	2,800	290	4.4 U	1,500	30,000	200	93	1,500	2,800	580	60	2,600	10,000	170	28	130	190	46	40
Anthracene	280	250	24	4.6 U	130	3,500	24 U	4.6 U	170	300	67	4.7 U	240	1,200	4.6 U	4.7 U	23 U	25	4.7 U	4.7 U
2-Methylnaphthalene	270	300	41	4.8 U	300	1,800	25 U	4.8 U	270	390	45	4.9 U	210	770	4.8 U	4.8 U	23 U	40	4.9 U	4.9 U
HPAHs (µg/kg)																				
Fluoranthene	2,600	2,100	280	5.8 U	920	32,000	210	94	960	1,900	610	69	2,100	8,800	180	26	100	180	44	28
Pyrene	1,900	1,800 M	240	10 U	700	32,000	220	86	700	1,700	490	54	2,200	11,000	160	23	110	150 M	39	24
Benzo(a)anthracene	140 M	25 U	5.1 U	5.0 U	25 U	2,600	26 U	5.0 U	26 U	26 U	54 M	5.1 U	25 U	82 U	20 M	5.0 U	24 U	24 M	5.1 U	5.1 U
Chrysene	300 M	30 U	6.1 U	5.9 U	30 U	4,700	31 U	5.9 U	30 U	31 U	99 M	6.1 U	30 U	97 U	36 M	6.0 U	29 U	34 M	6.0 U	6.1 U
Benzo(b)fluoranthene	320 M	350 M	51 M	7.9 U	39 U	3,800	41 U	7.8 U	40 U	240	110 M	8.0 U	460 M	4,800 M	40 M	7.9 U	39 U	31 M	8.0 U	8.0 U
Benzo(k)fluoranthene	260 M	310 M	43 M	11 U	55 U	5,300	57 U	11 U	56 U	220	94 M	11 U	410 M	5,500 M	39 M	11 U	54 U	25 M	11 U	11 U
Benzo(a)pyrene	250 M	300 M	22 M	3.8 U	19 U	4,200	20 U	3.8 U	20 U	200 M	98 M	3.9 U	320 M	3,000 M	38 M	3.9 U	19 U	3.9 U	3.9 U	3.9 U
Indeno(1,2,3-cd)pyrene	30 U	29 U	5.9 U	5.8 U	29 U	4,900	30 U	5.7 U	29 U	30 U	67 M	5.9 U	29 U	94 U	31 M	5.8 U	28 U	5.8 U	5.8 U	5.9 U
Dibenzo(a,h)anthracene	29 U	28 U	5.7 U	5.6 U	28 U	1,600 M	29 U	5.5 U	28 U	29 U	5.6 U	5.7 U	28 U	91 U	5.6 U	5.6 U	27 U	5.6 U	5.6 U	5.7 U
Benzo(g,h,i)perylene	27 U	26 UY	5.3 U	5.2 U	26 U	4,900	27 U	5.2 U	27 U	27 UY	5.2 UY	23	26 UY	85 UY	34 M	5.2 U	25 U	5.2 U	5.2 U	5.3 U
Total CPAHs (B[a]P equiv.)	332	374	33 E	10 U	46 U	6,547	48 U	16 U	46 U	255	133	5 E	415	4,057	52 E	10 U	44 U	24 U	10 U	10 U
Chlorinated Hydrocarbons (µg/kg)																				
1,3-Dichlorobenzene	24 U	23 U	4.7 U	4.6 U	23 U	250 U	24 U	4.6 U	24 U	24 U	4.6 U	4.7 U	23 U	75 U	4.6 U	4.7 U	23 U	4.6 U	4.7 U	4.7 U
1,4-Dichlorobenzene	26 U	25 U	5.1 U	5.0 U	25 U	270 U	26 U	5.0 U	26 U	26 U	5.0 U	5.1 U	25 U	82 U	5.0 U	5.0 U	24 U	5.0 U	5.1 U	5.1 U
1,2-Dichlorobenzene	26 U	25 U	5.1 U	5.0 U	25 U	270 U	26 U	5.0 U	26 U	26 U	5.0 U	5.1 U	25 U	82 U	5.0 U	5.0 U	24 U	5.0 U	5.1 U	5.1 U
1,2,4-Trichlorobenzene	25 U	24 U	4.9 U	4.8 U	24 U	260 U	25 U	4.8 U	25 U	25 U	4.8 U	4.9 U	24 U	79 U	4.8 U	4.8 U	23 U	4.8 U	4.9 U	4.9 U
Hexachlorobenzene	0.99 UY	0.99 UY	0.96 U	0.94 U	0.99 UY	0.98 UY	0.99 UY	0.93 U	0.99 U	1.8 P	0.93 U	0.94 U	1.0 UY	0.99 U	0.91 U	0.91 U	0.98 UY	0.94 UY	0.93 U	0.96 U

Table C-1
2003 Chemical Sampling Data for ASB Sludges and Underlying Native Sands

Location ID	GPA-01	GPA-01	GPA-01	GPA-01	GPA-02	GPA-02	GPA-02	GPA-02	GPA-03	GPA-03	GPA-03	GPA-03	GPA-04	GPA-04	GPA-04	GPA-04	GPA-05	GPA-05	GPA-05	GPA-05
Core Subsample	A	B1	B2	C	A	B1	B2	C	A	B1	B2	C	A	B1	B2	C	A	B1	B2	C
Sample Date	07/29/2003	07/29/2003	07/29/2003	07/29/2003	07/25/2003	07/25/2003	07/28/2003	07/28/2003	07/28/2003	07/28/2003	07/28/2003	07/28/2003	07/29/2003	07/29/2003	07/29/2003	07/29/2003	07/30/2003	07/30/2003	07/30/2003	07/30/2003
Phthalates (µg/kg)																				
Dimethylphthalate	26 U	25 U	5.1 U	5.0 U	25 U	270 U	26 U	5.0 U	26 U	26 U	5.0 U	5.1 U	25 U	82 U	5.0 U	5.0 U	24 U	5.0 U	5.1 U	5.1 U
Diethylphthalate	43 U	43 U	8.6 U	8.4 U	42 U	460 U	44 U	31	43 U	43 U	50	8.6 U	43 U	140 U	8.5 U	8.5 U	41 U	8.5 U	8.6 U	8.6 U
Di-n-butylphthalate	29 U	28 U	5.7 U	5.6 U	28 U	300 U	29 U	5.5 U	28 U	29 U	5.6 U	5.7 U	28 U	91 U	5.6 U	27	27 U	5.6 U	5.6 U	5.7 U
Butylbenzylphthalate	25 U	24 U	4.9 U	160	24 U	260 U	25 U	21	25 U	25 U	4.8 U	4.9 U	2,800	210,000	4.8 U	4.8 U	23 U	4.8 U	95	4.9 U
bis(2-Ethylhexyl)phthalate	23,000	3,600	130	240	1,000	1,800	94 U	240	1,400	3,600	160 M	74	4,600	300,000	160	94	580	170	250	110
Di-n-octylphthalate	41 U	40 U	8.0 U	84	39 U	430 U	41 U	7.8 U	40 U	41 U	7.9 U	8.0 U	1,100	52,000	7.9 U	7.9 U	39 U	7.9 U	8.0 U	8.0 U
Phenols (µg/kg)																				
Phenol	910	560	6.5 U	6.3 U	1,900	1,200	210	6.3 U	1,000	520	36	6.5 U	350	100 U	6.4 U	6.4 U	1,300	73	6.4 U	24
2-Methylphenol	34 U	33 U	6.7 U	6.5 U	270	350 U	34 U	6.5 U	33 U	34 U	6.5 U	6.7 U	33 U	110 U	6.6 U	6.6 U	210 M	6.6 U	6.6 U	6.7 U
4-Methylphenol	59,000	42,000	540	6.5 U	170,000	47,000	34 U	140	98,000	48,000	1,100	70	26,000	7,700	160	44	37,000	1,100	150	670
2,4-Dimethylphenol	47 U	47 U	9.4 U	9.2 U	46 U	500 U	48 U	9.2 U	47 U	47 U	9.2 U	9.4 U	47 U	150 U	9.3 U	9.3 U	45 U	9.3 U	9.3 U	9.4 U
Pentachlorophenol	220 U	210 U	43 U	42 U	210 U	2,300 U	220 U	42 U	210 U	220 U	42 U	43 U	210 U	690 U	42 U	42 U	200 U	42 U	42 U	43 U
Miscellaneous (µg/kg)																				
Benzyl alcohol	99 U	98 U	20 U	19 U	96 U	1,000 U	99 U	19 U	98 U	99 U	19 U	20 U	97 U	310 U	19 U	19 U	94 U	19 U	19 U	20 U
Benzoic acid	820 U	810 U	160 U	160 U	790 U	8,600 U	820 U	160 U	810 U	820 U	160 U	160 U	800 U	2,600 U	160 U	160 U	780 U	160 U	160 U	160 U
Hexachlorobutadiene	0.99 U	0.99 U	0.96 U	0.94 U	0.99 U	0.98 U	0.99 U	0.93 U	0.99 U	0.99 U	0.93 U	0.94 U	1.0 U	0.99 U	0.91 U	0.91 U	0.98 U	0.94 U	0.93 U	0.96 U
n-Nitrosodiphenylamine	35 U	34 U	6.9 U	6.7 U	34 U	360 U	35 U	6.7 U	34 U	35 U	6.7 U	6.8 U	34 U	110 U	6.8 U	6.8 U	33 U	6.8 U	6.8 U	6.9 U

Notes:

Sampling performed by Anchor Environmental during 2003.

Table C-2.
Dioxin/Furan Concentrations of ASB Sludge Composite

Location ID / Sample Date	GPA-CMP1 07/25/2003		
Dioxin/Furan Congeners	Concentration (ng/kg)	TEF	TEC[1]
2,3,7,8-TCDD	14.4	1.0	14.4
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	72.8	0.5	36.4
2,3,4,7,8-PeCDF	29.3	0.5	14.7
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	377	0.1	37.7
1,2,3,4,7,8-HxCDF	26.2	0.1	2.6
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	329	0.1	32.9
1,2,3,6,7,8-HxCDF	9.6 J	0.1	1.0
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	309	0.1	30.9
1,2,3,7,8,9-HxCDF	1.68 U	0.1	0.1
2,3,4,6,7,8-HxCDF	10.9 J	0.1	1.1
2,3,7,8-Tetrachlorodibenzofuran	364	0.1	36.4
1,2,3,7,8-Pentachlorodibenzofuran	22.0 J	0.05	1.1
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	1,930	0.01	19.3
1,2,3,4,6,7,8-HpCDF	27.0	0.01	0.3
1,2,3,4,7,8,9-HpCDF	3.2 J	0.01	0.0
OCDD	1,580	0.001	1.6
OCDF	35.2	0.001	0.0
Heptachlorodibenzofuran (HpCDF)	71.4 J		
Heptachlorodibenzo-p-dioxin (HpCDD)	3,100		
Hexachlorodibenzofuran (HxCDF)	151 J		
Hexachlorodibenzo-p-dioxin (HxCDD)	24,760 J		
Pentachlorodibenzofuran (PeCDF)	281 J		
Pentachlorodibenzo-p-dioxin (PeCDD)	19,650 J		
Tetrachlorodibenzo-p-dioxin (TCDD)	20,500 J		
Total TCDF	1,370 J		
Total TEC			**230.4**

Notes:

1. TEC represents the concentration of dioxin/furan congeners expressed as the equivalent concentration of 2,3,7,8-TCDD, expressed in units of ng/kg or parts per trillion.

APPENDIX A

FIELD EXPLORATION METHODS AND ANALYSIS

This appendix documents the processes Anchor used in determining the nature of the soils underlying the project site addressed by this report. The discussion includes information on the following subjects:

- Explorations and Their Location;
- Determining Depth to Mudline;
- The Use of Piston Cores;
- The Use of Auger Borings;
- Standard Penetration Test (SPT) Procedures; and
- The Use of Cone Penetrometer Probes.

EXPLORATIONS AND THEIR LOCATION

Explorations for this project included five hollow-stem auger borings (GPA-01 through GPA-05) and four cone penetrometers (GPA-06 through GPA-09). The exploration logs within this appendix show our interpretation of the drilling, sampling, and testing data. They indicate the depth where the soils change. Note that the change may be gradual. In the field, we classified the samples taken from the explorations according to the methods presented on Figure A-1, Key to Exploration Logs. This figure also provides a legend explaining the symbols and abbreviations used in the logs. Figure 1 shows the location of explorations, located using a portable WAAS-enabled GPS.

DETERMINING DEPTH TO MUDLINE

At each exploration location, a lead-line was dropped from the barge and the elevation of the mudline was calculated by subtracting the measured distance from the mudline to the water surface from the elevation of the ASB pool, which was a constant 20 feet, MLLW during the exploration work.

THE USE OF PISTON CORES

To characterize the upper soft soils, cores were collected from five stations located adjacent to borings GPA-01 through GPA-05 using a piston core fitted with a clear polycarbonate core tube (2.875-inch inner diameter). Core lengths of 4 to 8 feet were used to permit retrieval of the full thickness of Unit A soil. Prior to sampling, all core tubes were washed with a standard detergent (e.g., Alconox®) and rinsed with site water as specified in PSEP protocols. During storage and transport, core tubes were capped at both ends to prevent contamination.

The corer was driven into the soil with drive rods. Penetration and recovery were assessed using Velcro® placed on the outside of the core tube. The corer was retrieved slowly and steadily to avoid agitating the sample. As the corer was lifted out of the water, a plug was be inserted in the bottom of the core tube to prevent soil from slipping out the bottom. After the corer head was removed from the core tube, an expansion plug was inserted into the top of the core tube to seal the core sample until processing. Care was taken to keep the core in a vertical position until it was processed.

Each core was evaluated for acceptability using criteria provided in the Sampling and Analysis Plan:

- At least 5 cm of overlying water is present
- The overlying water is not excessively turbid
- The soil surface is relatively undisturbed
- At least 80 percent core recovery versus penetration is achieved.

All soil cores met the above criteria.

Results from piston core logging were used to characterize the upper soils in the ASB. The interface between the Unit A and Unit B soils was visually identified and measured in the piston core and noted on the field logs.

THE USE OF AUGER BORINGS

With depths ranging from 29 to 46 below the mudline, five hollow-stem auger explorations were advanced from July28 to July 30, 3003. The borings used a 3-3/8-inch inside diameter hollow-stem

auger and were advanced with barge-mounted drill rig subcontracted by Anchor. An engineering geologist from Anchor continuously observed the drilling. Detailed field logs were prepared of each boring. Using the Standard Penetration Test (SPT) and thin-walled Shelby tubes, we obtained continuous samples throughout the depth of the exploration.

The boring logs are presented among Figures A-3 through A-7 at the end of this appendix.

Standard Penetration Test (SPT) Procedures

This test is an approximate measure of soil density and consistency. To be useful, the results must be used with engineering judgment in conjunction with other tests. The SPT (as described in ASTM D 1587) was used to obtain disturbed samples. This test employed a large-diameter split-spoon sampler. Using a 140-pound hammer, free-falling 30 inches, the sampler was driven into the soil for the length of the sample interval. The number of blows required to drive the sampler over the last 12 inches of the first 18-inch interval was recorded as the Standard Penetration Resistance. This resistance, or blow count, measures the relative density of granular soils and the consistency of cohesive soils. The blow counts are plotted on the boring logs at their respective sample depths.

Soil samples are recovered from the split-barrel sampler, field classified, and placed into watertight jars. They were then taken to ARI for further testing.

In the Event of Hard Driving

Occasionally very dense materials preclude driving a total 18-inch sample. When this happened, the penetration resistance was entered on logs as follows:

Penetration less than six inches. The log indicates the total number of blows over the number of inches of penetration.

Penetration greater than six inches. The blow count noted on the log is the sum of the total number of blows completed after the first six inches of penetration. This sum is expressed over the number of inches driven that exceed the first 6 inches. The number of blows needed to drive the first six inches is not reported. For example, a blow count series

of 12 blows for 6 inches, 30 blows for 6 inches, and 50 (the maximum number of blows counted within a 6-inch increment for SPT) for 3 inches would be recorded as 80/9.

THE USE OF CONE PENETROMETER PROBES

A cone penetrometer was also deployed from the barge at four locations to evaluate subgrade conditions for this study. The probes were advanced by ConeTec to depths ranging from 15 to 27 feet below the mudline, at which depth the soil was sufficiently dense that the resistance of the cone caused the barge to lift. An explanation key for the cone penetrometers is presented on Figure A-2.

The cone provided information to interpret the density and consistency of the soils. A direct correlation exists between the tip resistance of the cone and the bearing capacity in the soil. Another direct correlation exists between the friction registered on the cone sleeve and the friction characteristics of the soil. The cone logs provide guidelines for interpretation of soil type based on the recommendations of Robertson.

Logs of cone penetrometer probes are presented in Figures A-8 through A-11.

Sample Description

Classification of soils in this report is based on visual field and laboratory observations which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field nor laboratory testing unless presented herein. Visual–manual classification methods of ASTM D 2488 were used as an identification guide.

Soil descriptions consist of the following:
Density/consistency, moisture, color, minor constituents, MAJOR CONSTITUENT, additional remarks.

Density/Consistency

Soil density/consistency in borings is related primarily to the Standard Penetration Resistance.
Soil density/consistency in test pits is estimated based on visual observation and is presented parenthetically on the test pit logs.

SAND or GRAVEL Density	Standard Penetration Resistance (N) in Blows/Foot	SILT or CLAY Consistency	Standard Penetration Resistance (N) in Blows/Foot	Approximate Shear Strength in TSF
Very loose	0 – 4	Very soft	0 – 2	<0.125
Loose	4 – 10	Soft	2 – 4	0.125 – 0.25
Medium dense	10 – 30	Medium stiff	4 – 8	0.25 – 0.5
Dense	30 – 50	Stiff	8 – 15	0.5 – 1.0
Very dense	>50	Very stiff	15 – 30	1.0 – 2.0
		Hard	>30	>2.0

Moisture

Dry	Little perceptible moisture
Damp	Some perceptible moisture, probably below optimum
Moist	Probably near optimum moisture content
Wet	Much perceptible moisture, probably above optimum

Minor Constituents

	Estimated Percentage
Not identified in description	0 – 5
Slightly (clayey, silty, etc.)	5 – 12
Clayey, silty, sandy, gravelly	12 – 30
Very (clayey, silty, etc.)	30 – 50

Legends

Sampling Test Symbols

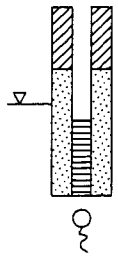
BORING SAMPLES

- Split Spoon
- Shelby Tube
- Cuttings
- Core Run
- ✳ No Sample Recovery
- P Tube Pushed, Not Driven

TEST PIT SAMPLES

- Grab (Jar)
- Bag
- Shelby Tube

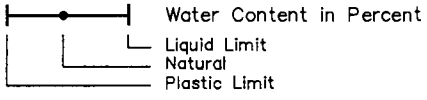
Groundwater Observations



- Surface Seal
- Groundwater Level on Date (ATD) At Time of Drilling
- Observation Well Tip or Slotted Section
- Groundwater Seepage (Test Pits)

Test Symbols

NS	No Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen
TCD	Triaxial Consolidated Drained
QU	Unconfined Compression
DS	Direct Shear
K	Permeability
PP	Pocket Penetrometer Approximate Compressive Strength in TSF
TV	Torvane Appraximate Shear Strength in TSF
CBR	California Bearing Ratio
MD	Moisture Density Relationship
AL	Atterberg Limits



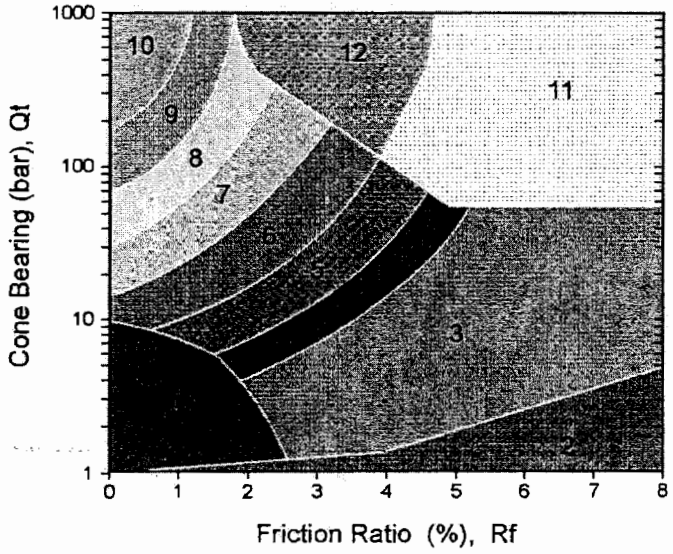
PID	Photoionization Detector Reading
CA	Chemical Analysis
DT	*In Situ* Density Test

ANCHOR ENVIRONMENTAL, L.L.C.

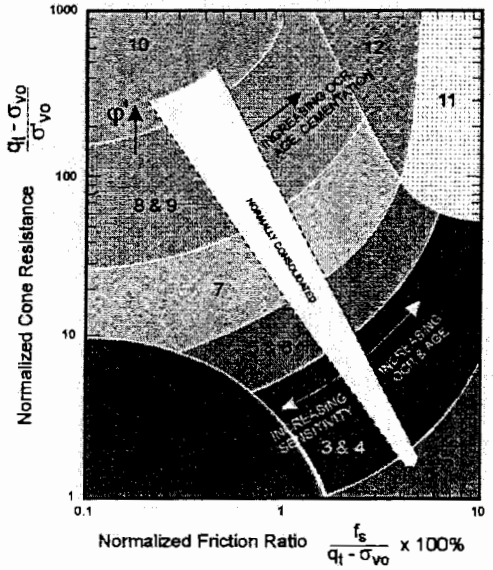
Figure A-1
Key to Exploration Logs

CPT Classification Chart
(after Robertson 1990)

Non-Normalized Classification Chart



Normalized Classification Chart



Zone	Q_t / N	Soil Behaviour Type
1	2	sensitive fine grained
2	1	organic material
3	1	clay
4	1.5	silty clay to clay
5	2	clayey silt to silty clay
6	2.5	sandy silt to clayey silt
7	3	silty sand to sandy silt
8	4	sand to silty sand
9	5	sand
10	6	gravelly sand to sand
11	1	very stiff fine grained *
12	2	sand to clayey sand *

* overconsolidated or cemented

CONETEC

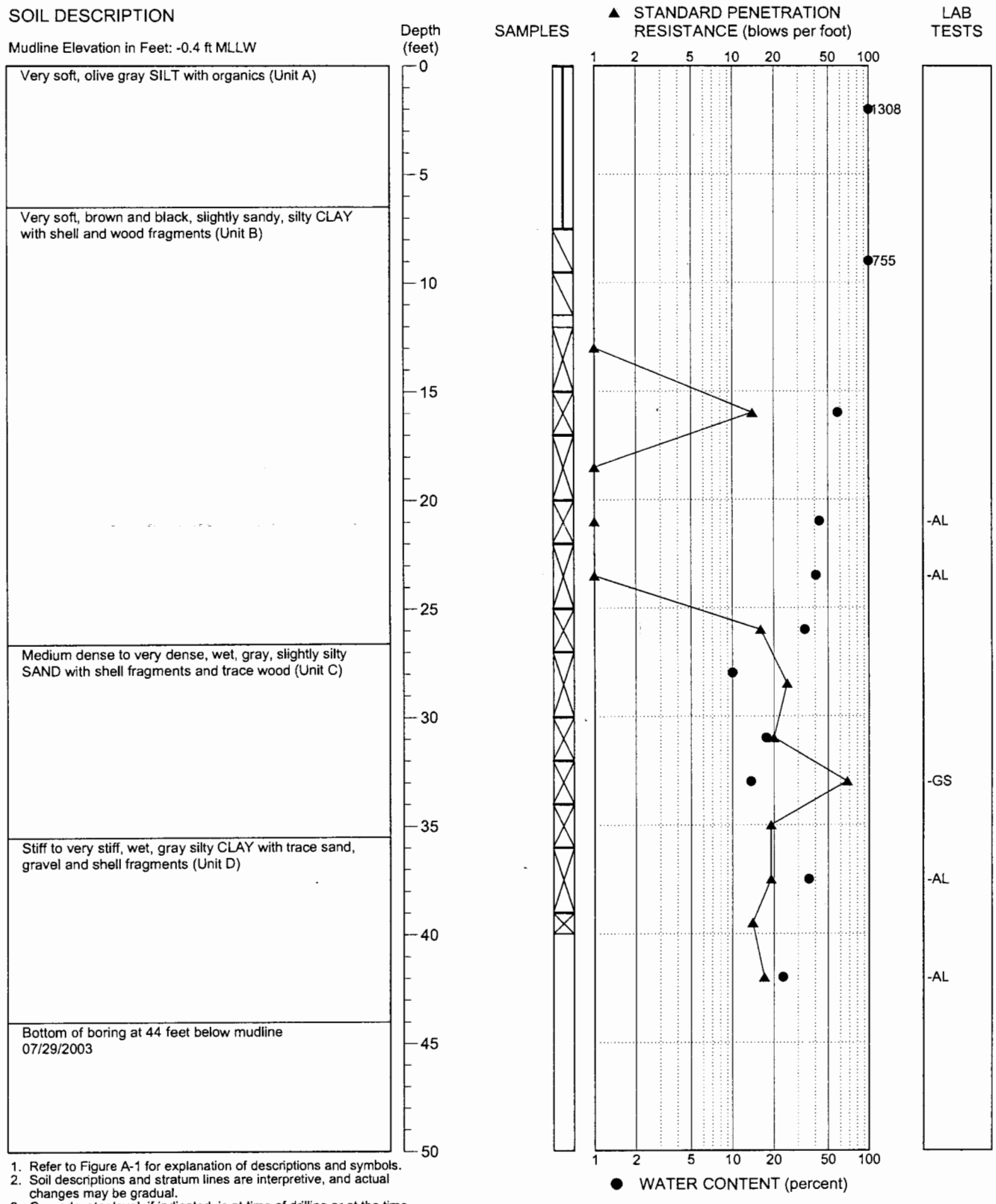
Geotechnical and Environmental In Situ Testing Contractors

10/20/03 K:\Jobs\0300030_GEORGIA_PACIFIC\03003002\FIG A-2.cdr

ANCHOR ENVIRONMENTAL, L.L.C.

Figure A-2
CPT Classification Chart
G-P ASB Supplemental RI/FS

Boring: GPA-01



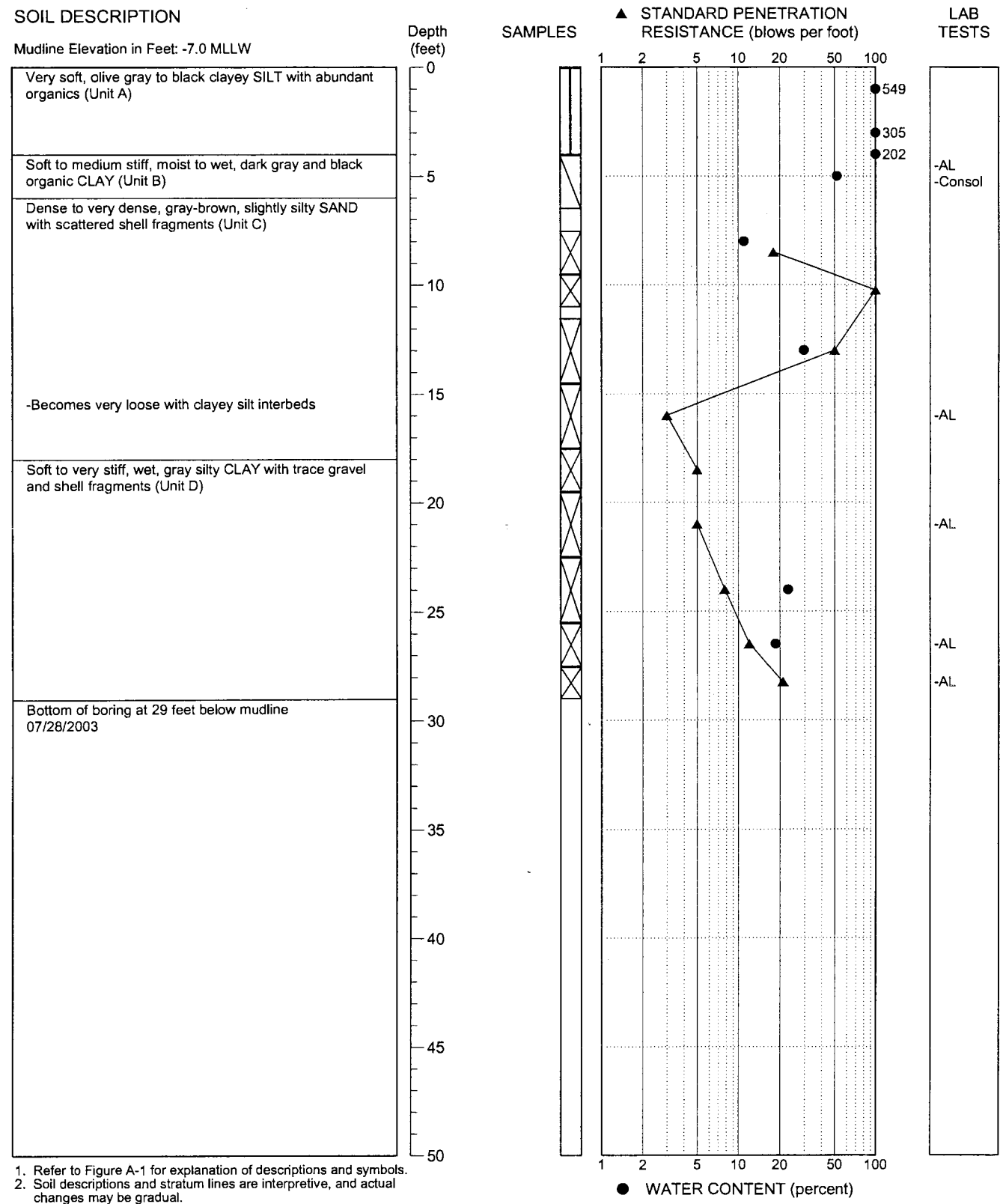
1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive, and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling or at the time and date specified. Ground water level may vary with time.

K:\Jobs\030030_GEORGIA_PACIFIC\03003002\03003002-04.dwg, FIG A-3, 4/8/2004 10:39:07 AM

ANCHOR ENVIRONMENTAL, L.L.C.

Figure A-3
Boring GPA-01
G-P ASB Supplemental RI/FS

Boring: GPA-02



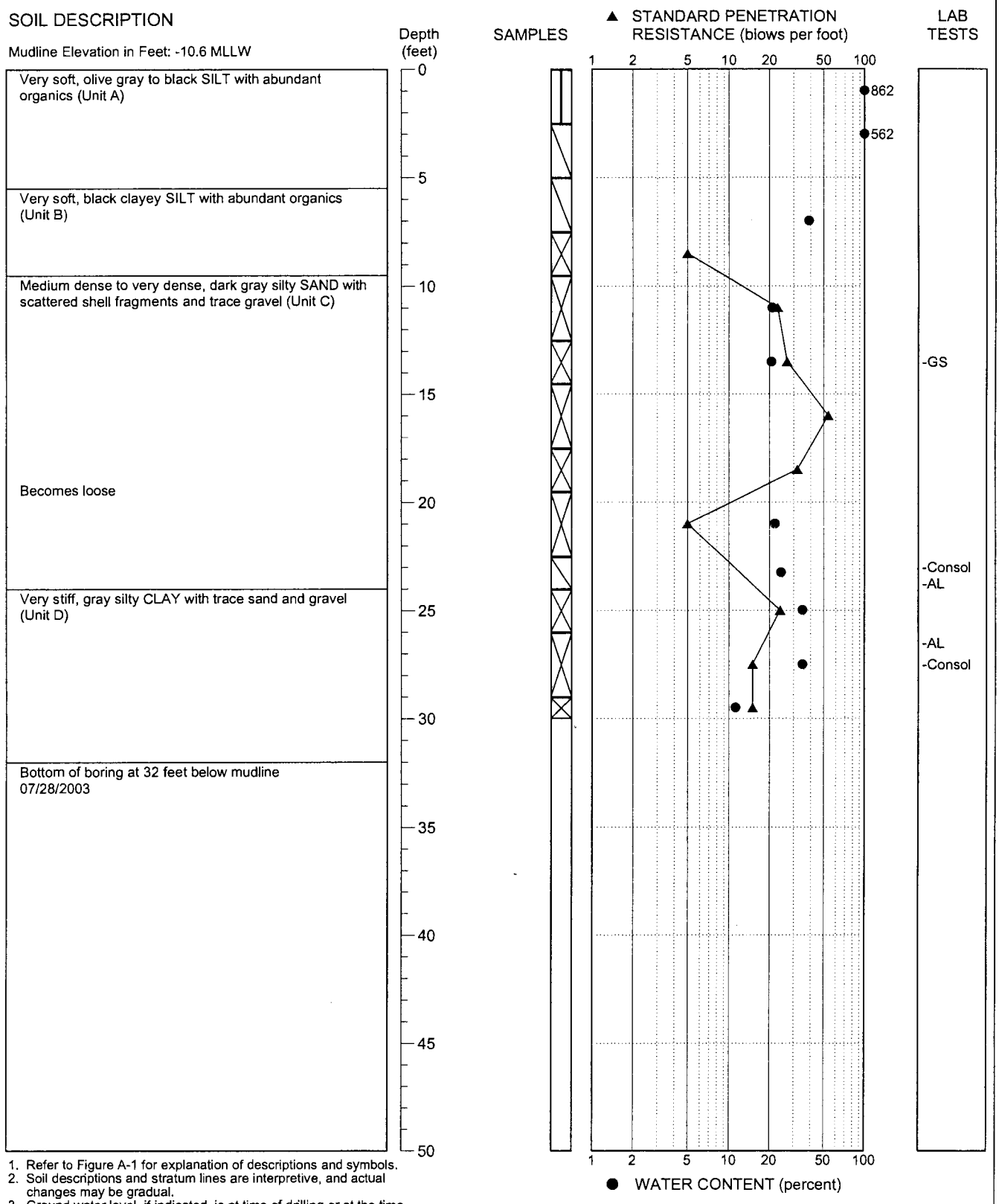
1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive, and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling or at the time and date specified. Ground water level may vary with time.

K:\Jobs\030030_GEORGIA_PACIFIC\030030021030030002-04.dwg, FIG A-4, 4/8/2004 10:37:06 AM

ANCHOR ENVIRONMENTAL, L.L.C.

Figure A-4
Boring GPA-02
G-P ASB Supplemental RI/FS

Boring: GPA-03



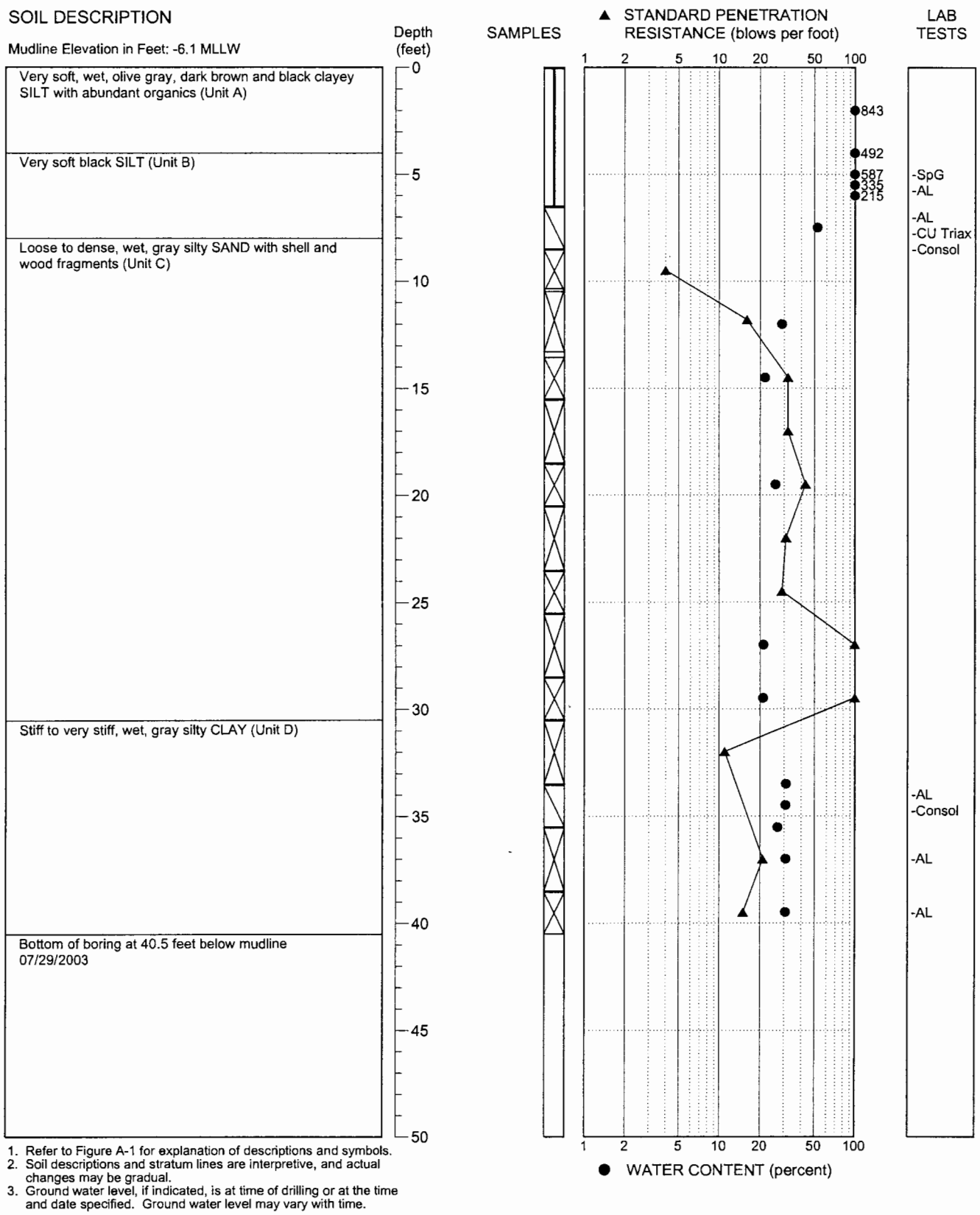
1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive, and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling or at the time and date specified. Ground water level may vary with time.

K:\Jobs\030030_GEORGIA_PACIFIC\03003002\03003002-04.dwg, FIG A-5, 4/8/2004 10:36:31 AM

ANCHOR ENVIRONMENTAL, L.L.C.

Figure A-5
Boring GPA-03
G-P ASB Supplemental RI/FS

Boring: GPA-04



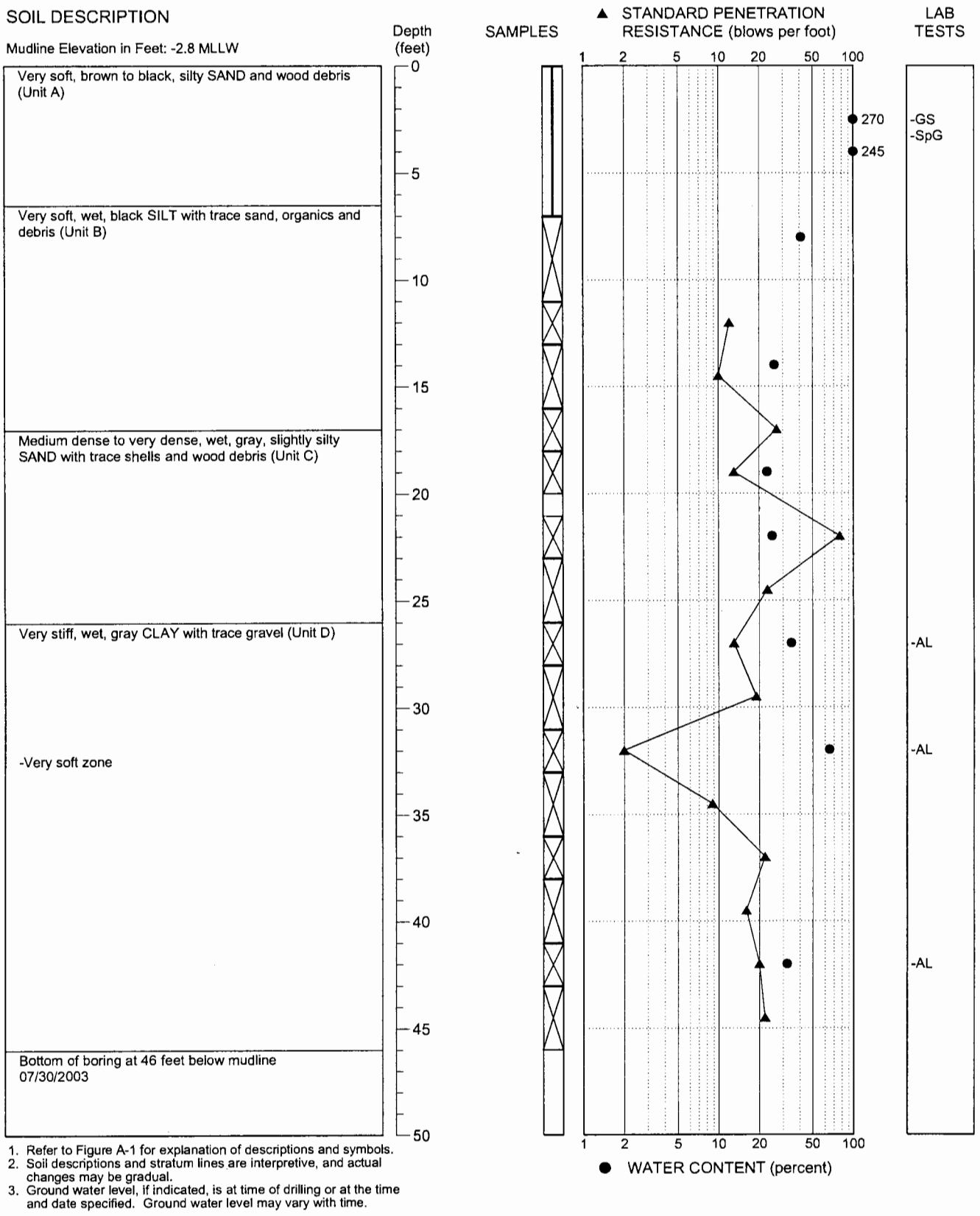
1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive, and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling or at the time and date specified. Ground water level may vary with time.

K:\Jobs\030030_GEORGIA_PACIFIC\03003002\03003002-04.dwg, FIG A-6, 4/8/2004 10:35:58 AM

ANCHOR ENVIRONMENTAL, L.L.C.

Figure A-6
Boring GPA-04
G-P ASB Supplemental RI/FS

Boring: GPA-05

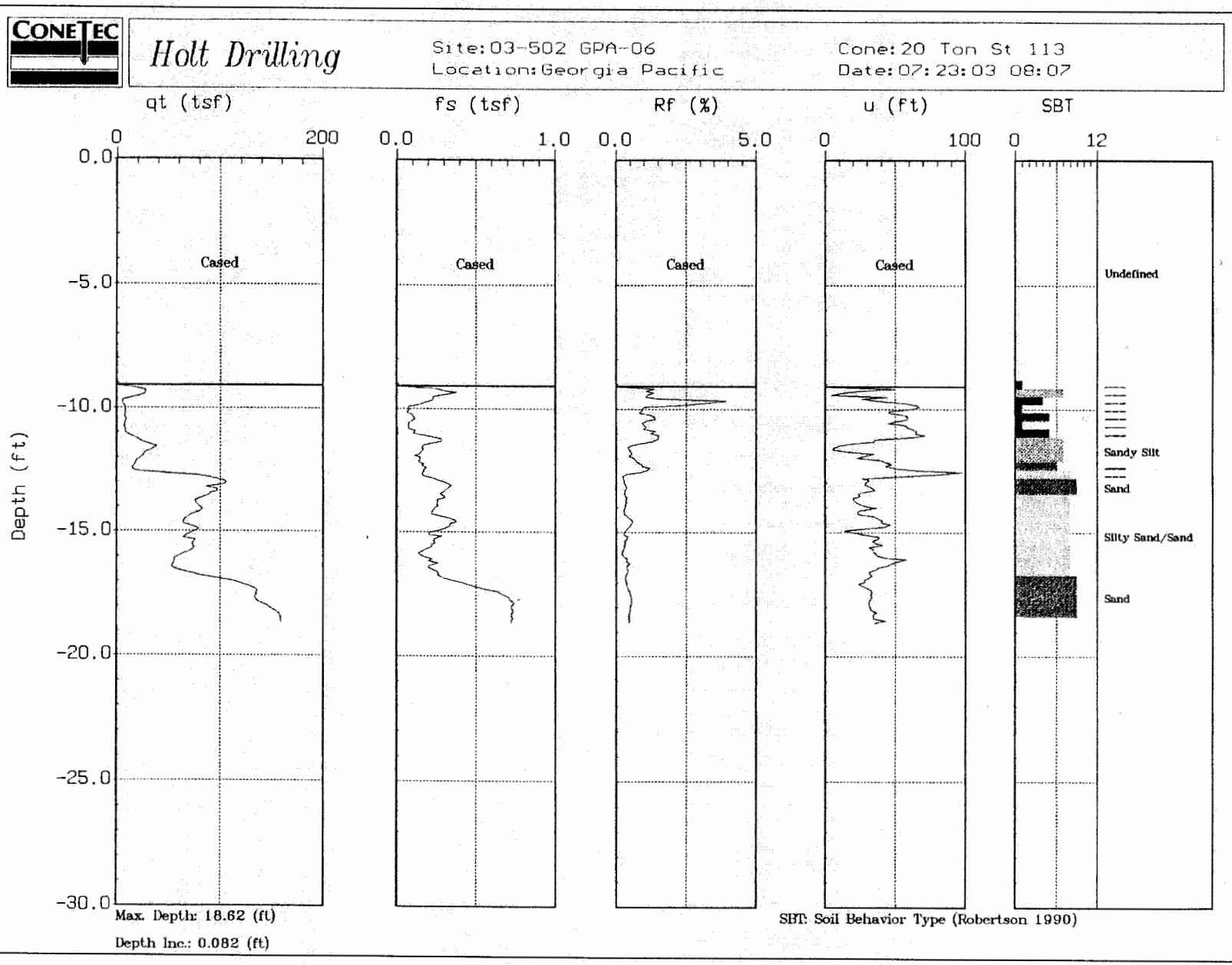


1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive, and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling or at the time and date specified. Ground water level may vary with time.

ANCHOR ENVIRONMENTAL, L.L.C.

Figure A-7
Boring GPA-05
G-P ASB Supplemental RI/FS

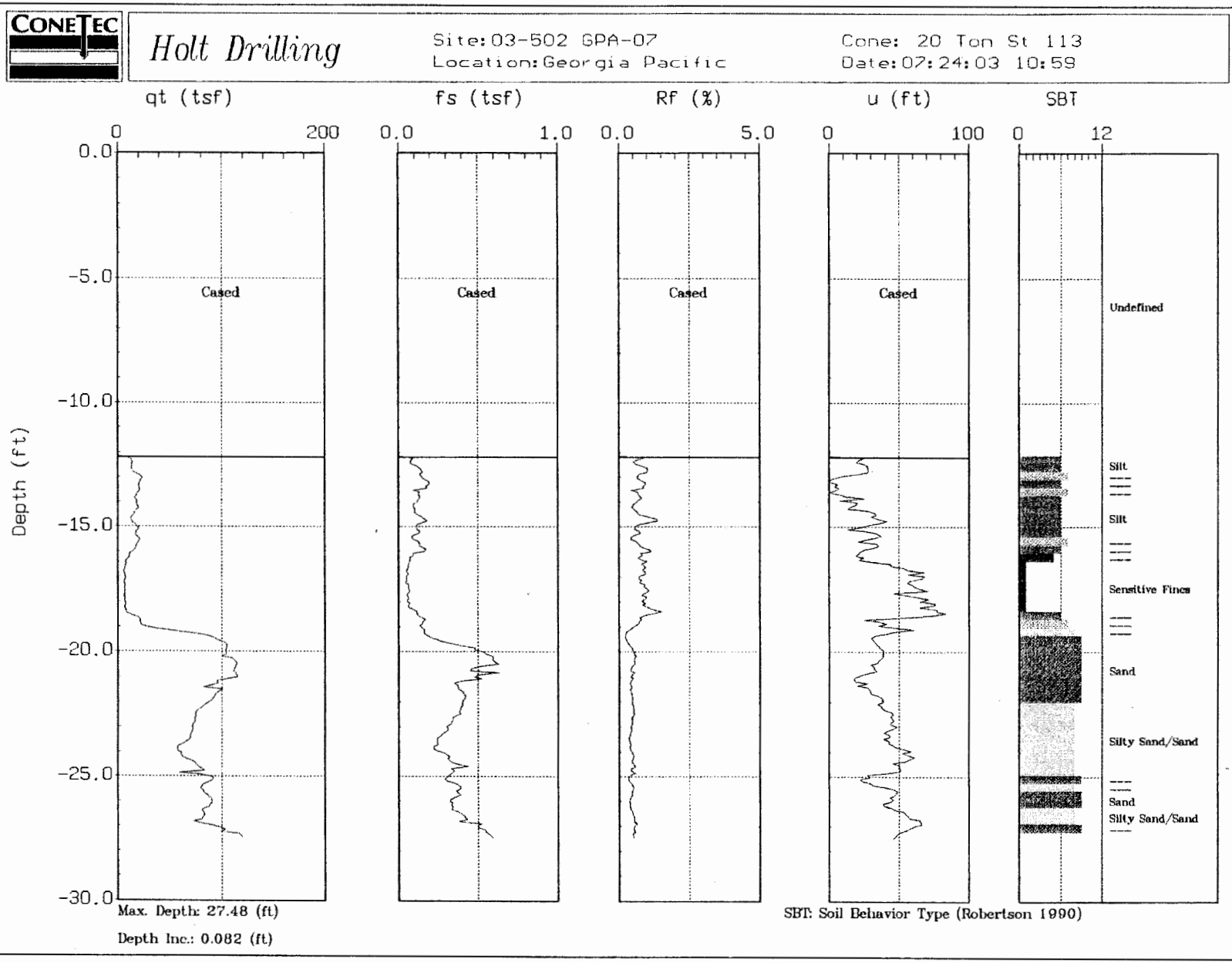
K:\Jobs\030030_GEORGIA_PACIFIC\03003002\03003002-04.dwg, FIG A-7, 4/8/2004 10:35:27 AM



10/20/03 K:\Jobs\030030_GEORGIA_PACIFIC\03003002\FIG A-8-a-11.cdr

ANCHOR ENVIRONMENTAL, L.L.C.

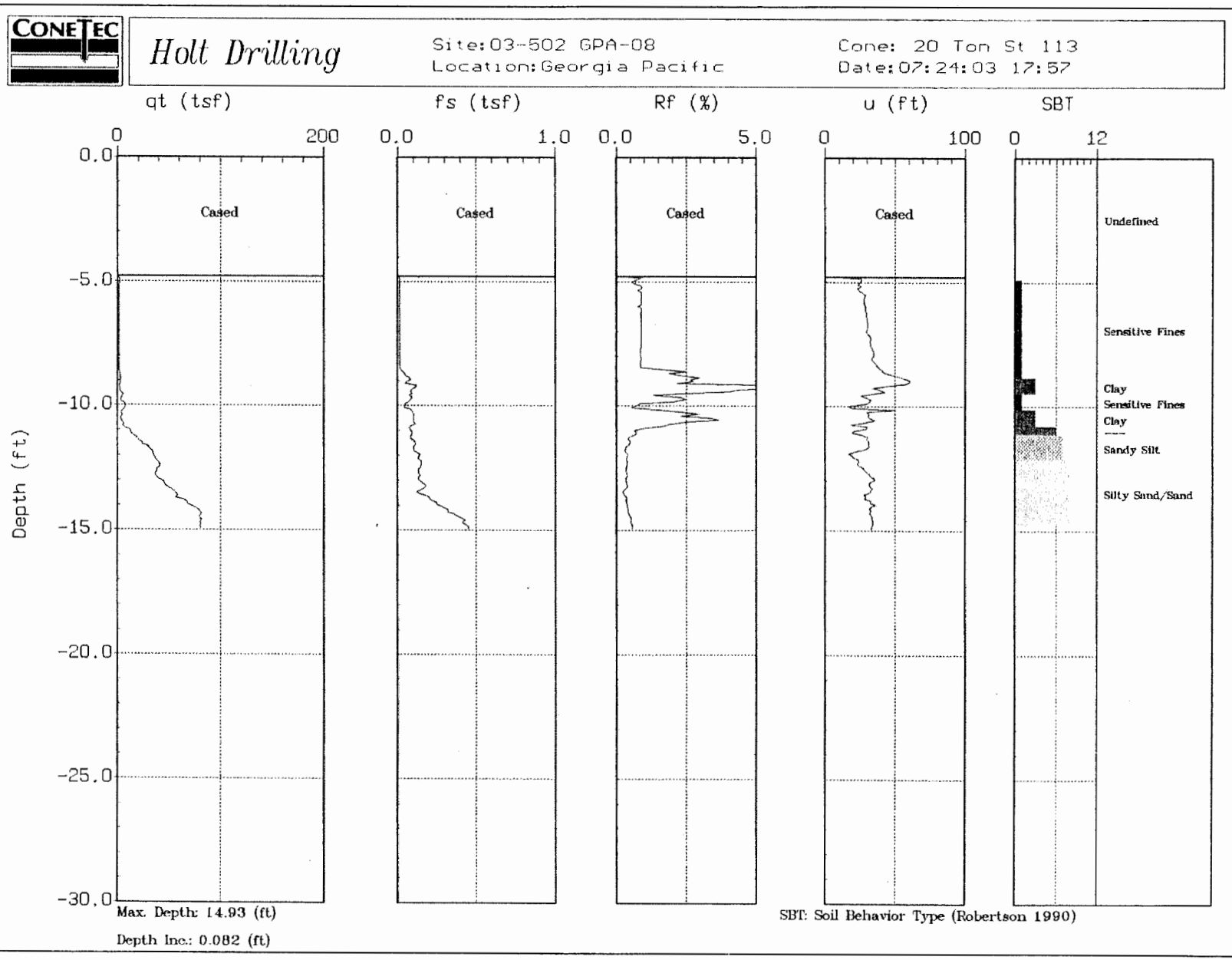
Figure A-8
CPT Log GPA-06
G-P ASB Supplemental RI/FS



10/20/03 K:\Jobs\030030_GEORGIA_PACIFIC\03003002\FIG A-8-a-11.cdr

ANCHOR ENVIRONMENTAL, L.L.C.

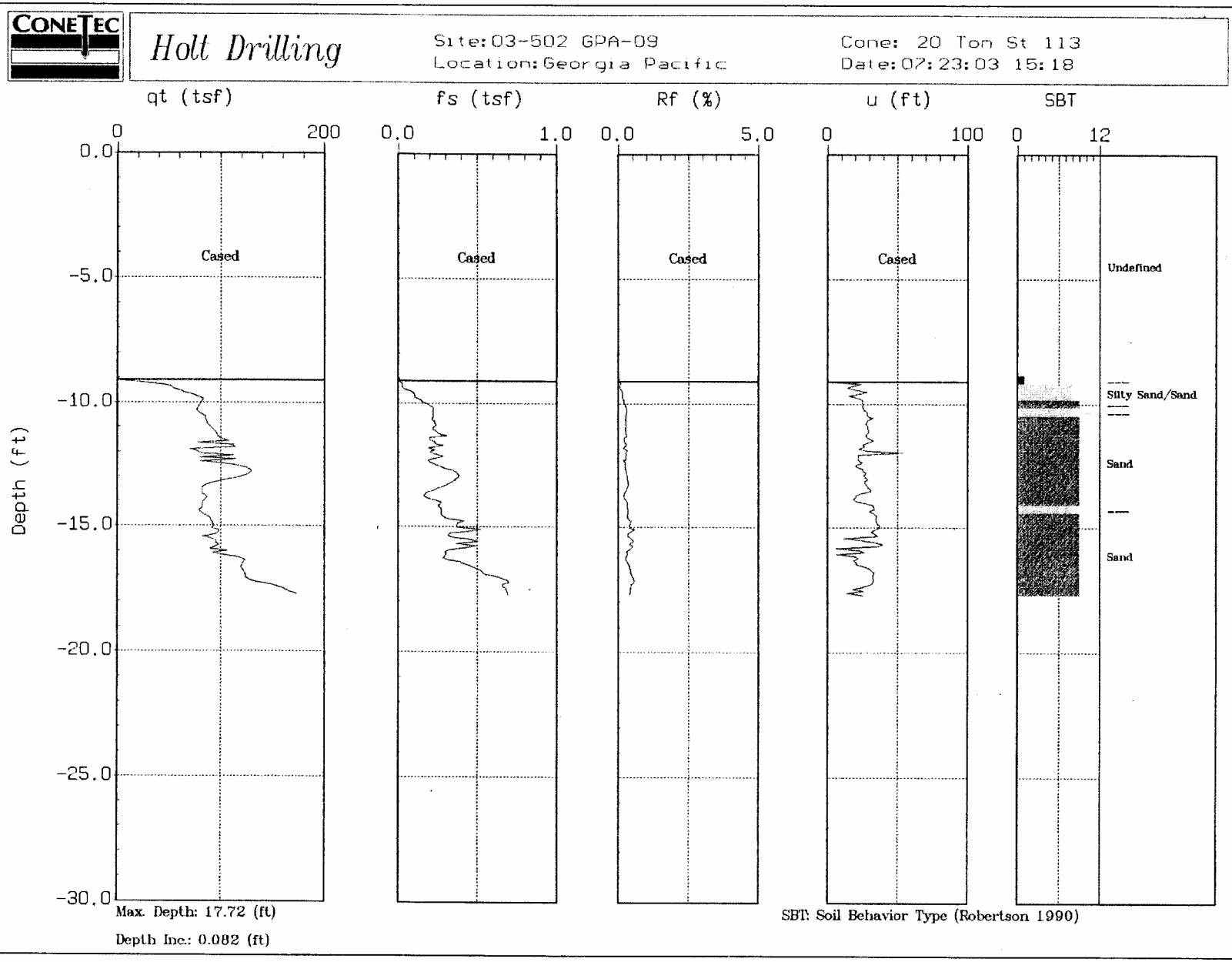
Figure A-9
CPT Log GPA-07
G-P ASB Supplemental RI/FS



10/20/03 K:\Jobs\030030_GEORGIA_PACIFIC\03003002\FIG A-8-a-11.cdr

ANCHOR ENVIRONMENTAL, L.L.C.

Figure A-10
CPT Log GPA-08
G-P ASB Supplemental RI/FS



10/20/03 K:\Jobs\030030_GEORGIA_PACIFIC\03003002\FIG A-8-a-11.cdr

ANCHOR ENVIRONMENTAL, L.L.C.

Figure A-11
CPT Log GPA-09
G-P ASB Supplemental RI/FS

ANCHOR
ENVIRONMENTAL, L.L.C.

Appendix B

Geotechnical Laboratory
Data
Test Logs

Analytical Resources, Incorporated
Analytical Chemists and Consultants

August 29, 2003

Mr. John Verduin
Anchor Environmental, Inc.
1423 Third Avenue
Suite 300
Seattle, WA 98101

Subject: 030030-02 GP ASB; ARI Project No.: FT20

Dear Mr. Verduin;

Samples from the referenced project were analyzed and the results are on the following pages. Please call me to discuss any questions, or comments you may have on the data or its presentation.

Best Regards,
Analytical Resources, Incorporated

Harold Benny

Harold Benny
Geotechnical Division Manager

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Anchor Environmental, Inc.	ARI Project No.: FT20
Client Project: 030030-02 GP ASB	

Case Narrative

1. Twenty four samples were received for testing on August 12, 2003. All samples were received in good condition.
2. The moisture content for all samples was measured according to ASTM D2216. The results are presented in a table.
3. Three samples were tested for grain size distribution according to ASTM D422 using a set of standard sieves. The data is presented in summary tables and plots.
4. Nine samples were tested for grain size by washing over a #200 sieve according to ASTM D1140. The results are presented in a table. It's important to note that all of sample GPA-04 4-6 would have passed through the #200 sieve. Those particles that were retained on the sieve were oven-dried agglomerations that would not break apart.
5. Two samples were tested for specific gravity according to ASTM D854. The data is presented in a table. Both samples had low specific gravity values, one was exceptionally low.
6. The Atterberg limits were measured for fourteen samples according to ASTM D4318. The data is presented in summary tables and plots. One sample, with an unusually low specific gravity also had unusually high Atterberg Limits.
7. There were no other anomalies to the samples or testing.

Approved by: Harold Benny Date: 9/1/03
Title: Geotechnical Division Manager

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila WA 98168
206-695-6200 206-695-6201 (fax)

Chain of Custody Record & Laboratory Analysis Request

Page 1 of 2 Turn Around Requested: _____

Report to: JOHN VERDUIN	Proj Name: GP ASB
Company: ANCHOR	Proj Number: 030030-02
Address: 1423 3RD AVE	Sampler: HANFORD
SUITE 300 98101	
Phone: 287-9130	Shipping Method:
Fax: 287-9131	AirBill:

Sample ID	Sample Date	Sample Time	Sample Matrix	No Containers	Water Content	Atterberg Limit	Specific Gravity	Grain Size MH	Grain Size #200 Wash					Notes/Comments
ALL SAMPLES					X									
GPA-01 20-22						X								
" 22-24						X								
" 25-27									X					
" 30-32									X					
" 32-34								X						
" 36-39						X								
" 41-44						X								
GPA-02 14.5-17.5						X			X					
" 22.5-25.5						X								
" 27.5-29						X								
GPA-03 19.5-22.5									X					
" 12.5-14.5								X						
" 29-32						X								
GPA-04 4-6						X	X		X					
" 13.5-16.5									X					
" 25.5-26.9									X					
" 28.5-29.9									X					
" 35.5-38.5						X								
" 38.5-40.5						X								

Relinquished: (Signature)	Received by: (Signature)	Special Instructions/Notes
Printed name: JOHN VERDUIN	Printed name: BRIAN KEOEL	
Company: ANCHOR	Company: ARI	
Date: 8/12/03 Time: 12:45PM	Date: 8/12/03 Time: 1245	

Number of Coolers:	
Cooler Temp(s):	
COC Seals Intact?	
Bottles Intact?	

Please sign here if you would like these samples disposed of after expiration of standard archive times (60 days for waters 90 days for soils, sediments per contract). If you do not want these samples discarded we will begin charging you for storage after the disposal date. **Samples to be discarded after expiration:**

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila WA 98168
206-695-6200 206-695-6201 (fax)

Chain of Custody Record & Laboratory Analysis Request

Page 2 of 2 Turn Around Requested: _____

Report to: VERDUIN	Proj Name:	Analyses Requested												Notes/Comments
Company: ANCHOR	Proj Number: 030030-02	WATER CONTENT	ATTERBERG LIMIT	SPECIFIC GRAVITY	GRAIN SIZE - MA	GRAIN SIZE #200	HOLD							
Address:	Sampler:					X								
Phone:	Shipping Method:													
Fax:	AirBill:													

Sample ID	Sample Date	Sample Time	Sample Matrix	No Containers												
GPA-05 18-21																
26-28						X										
31-33						X										
43-46						X										
0-6.5							X	X								
GPA-05 36-38										X						
28-31										X						
21-23										X						
41-43										X						
38-41										X						
33-36										X						
GPA 04 23.5-25.5										X						
30.5-33.5										X						
GPA 01 39-41										X						
9.5 12.5										X						
28-26										X						

Relinquished: (Signature)	Received by: (Signature)	Special Instructions/Notes
Printed name: JOHN VERDUIN	Printed name: BRIAN ILSLEY	
Company: ANCHOR	Company: ARI	
Date: 8/12/03 Time: 12:45pm	Date: 8/12/03 Time: 1245	

Number of Coolers:	
Cooler Temp(s):	
COC Seals Intact?	
Bottles Intact?	

Limits of Liability: Analytical Resources, Inc. (ARI) will perform all requested services in accordance with appropriate methodology follow ARI Standard Operating Procedures and Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI releases ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the client.

Please sign here if you would like these samples disposed of after expiration of standard archive times (60 days for waters 90 days for soils, sediments per contract). If you do not want these samples discarded we will begin charging you for storage after the disposal date. **Samples to be discarded after expiration:**

ANALYTICAL RESOURCES INCORPORATED

Anchor Environmental, Inc.
030030-02 GP ASB

Moisture Content

Boring Number	Depth (ft)	Moisture Content (%)
GPA-01	20-22	43.4
GPA-01	22-24	40.8
GPA-01	25-27	33.9
GPA-01	30-32	17.6
GPA-01	32-34	13.6
GPA-01	36-39	36.0
GPA-01	41-44	23.3
GPA-02	14.5-17.5	29.8
GPA-02	22.5-25.5	22.9
GPA-02	27.5-29	18.6
GPA-03	19.5-22.5	21.9
GPA-03	12.5-14.5	20.7
GPA-03	29-32	11.2
GPA-04	4-6	586.7
GPA-04	13.5-15.5	21.8
GPA-04	25.5-26.4	21.2
GPA-04	28.5-29.4	21.1
GPA-04	35.5-38.5	30.9
GPA-04	38.5-40.5	30.8
GPA-05	18-21	22.9
GPA-05	26-28	34.6
GPA-05	31-33	66.2
GPA-05	43-46	32.2
GPA-05	0-6.5	270.2

Moisture content by ASTM D2216.

FT20

ANALYTICAL RESOURCES INCORPORATED

Anchor Environmental
030030-02 GP ASB

Percent Finer Than Indicated Size, By ASTM D422

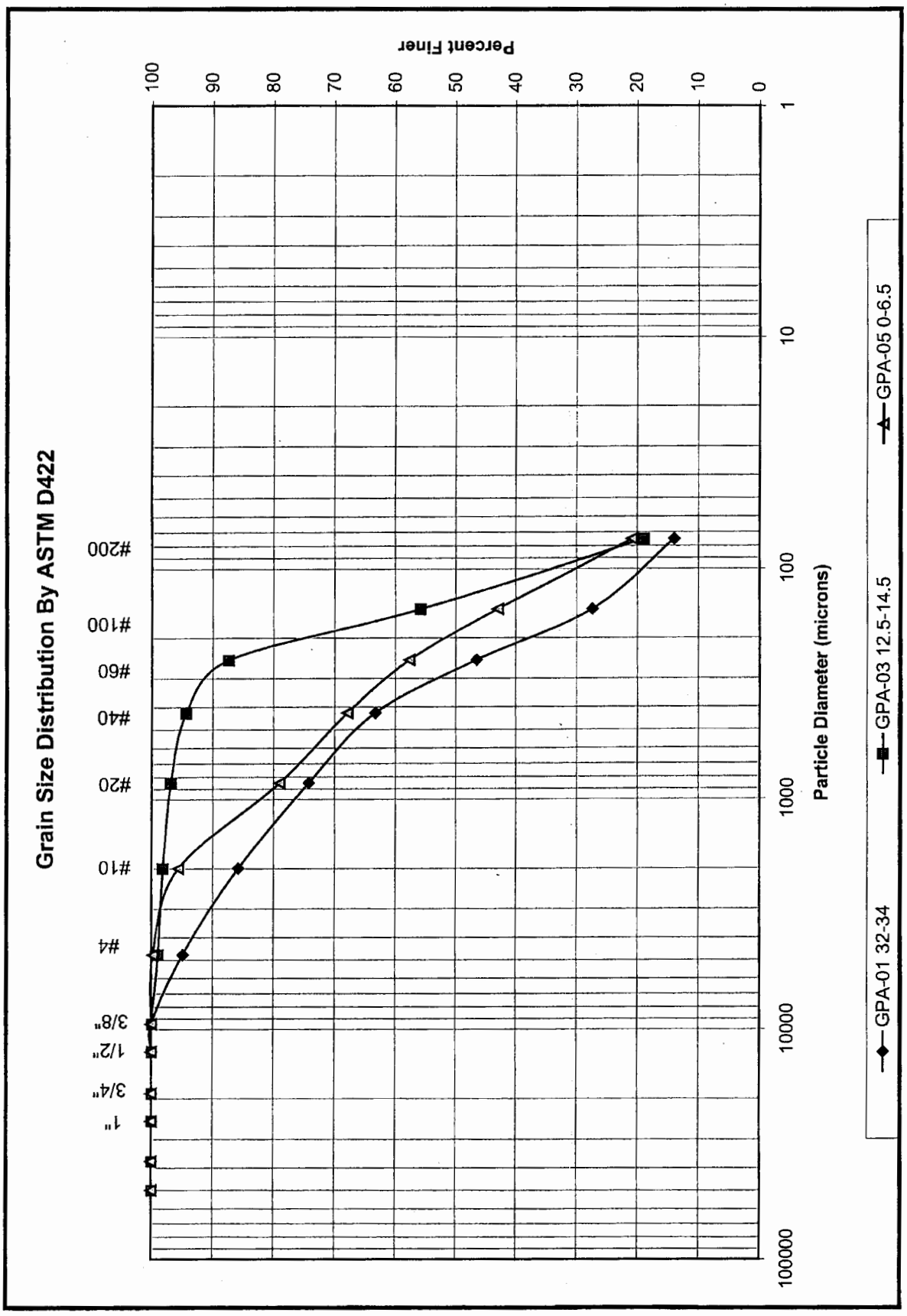
Sample ID	Depth (ft)	Moisture Content (%)	3"	2"	1.5"	1"	3/4"	1/2"	3/8"	#4	#10	#20	#40	#60	#100	#200
GPA-01	32-34	31.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	94.8	85.8	74.2	63.3	46.5	27.4	13.9
GPA-03	12.5-14.5	27.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.9	98.2	96.8	94.3	87.4	55.8	18.9
GPA-05	0-6.5	217.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	95.6	79.0	67.8	57.6	42.9	20.8

Anchor Environmental
030030-02 GP ASB

Percent Retained in Each Size Fraction, By ASTM D422

Sieve Size (microns)	>4750	4750-2000	2000-850	850-425	425-250	250-150	150-75	<75
GPA-01	0.0	14.2	11.6	10.9	16.8	19.1	13.5	13.9
GPA-03	0.0	1.8	1.3	2.5	6.9	31.6	36.9	18.9
GPA-05	0.0	4.4	16.6	11.2	10.2	14.7	22.1	20.8

ANALYTICAL RESOURCES INCORPORATED



ANALYTICAL RESOURCES INCORPORATED

Anchor Environmental

030030-02 GP ASB

Sample Identification	Moisture Content (%)	Percent Fines (-#200 Sieve)
GPA-01 25-27	33.9	95.1
GPA-01 30-32	17.6	24.2
GPA-02 14.5-17.5	29.8	76.4
GPA-03 19.5-22.5	21.9	23.5
GPA-04 4-6	586.7	8.3
GPA-04 13.5-15.5	21.8	25.6
GPA-04 25.5-26.4	21.2	10.9
GPA-04 28.5-29.4	21.1	11.0
GPA-05 18-21	22.9	18.6

FT20

Note - Sample GPA-04 @ 4-6' baked into a large block and could not be adequately broken down. Visually, this entire sample should have passed the #200 sieve.

ANALYTICAL RESOURCES INCORPORATED

Anchor Environmental
030030-02 GP ASB

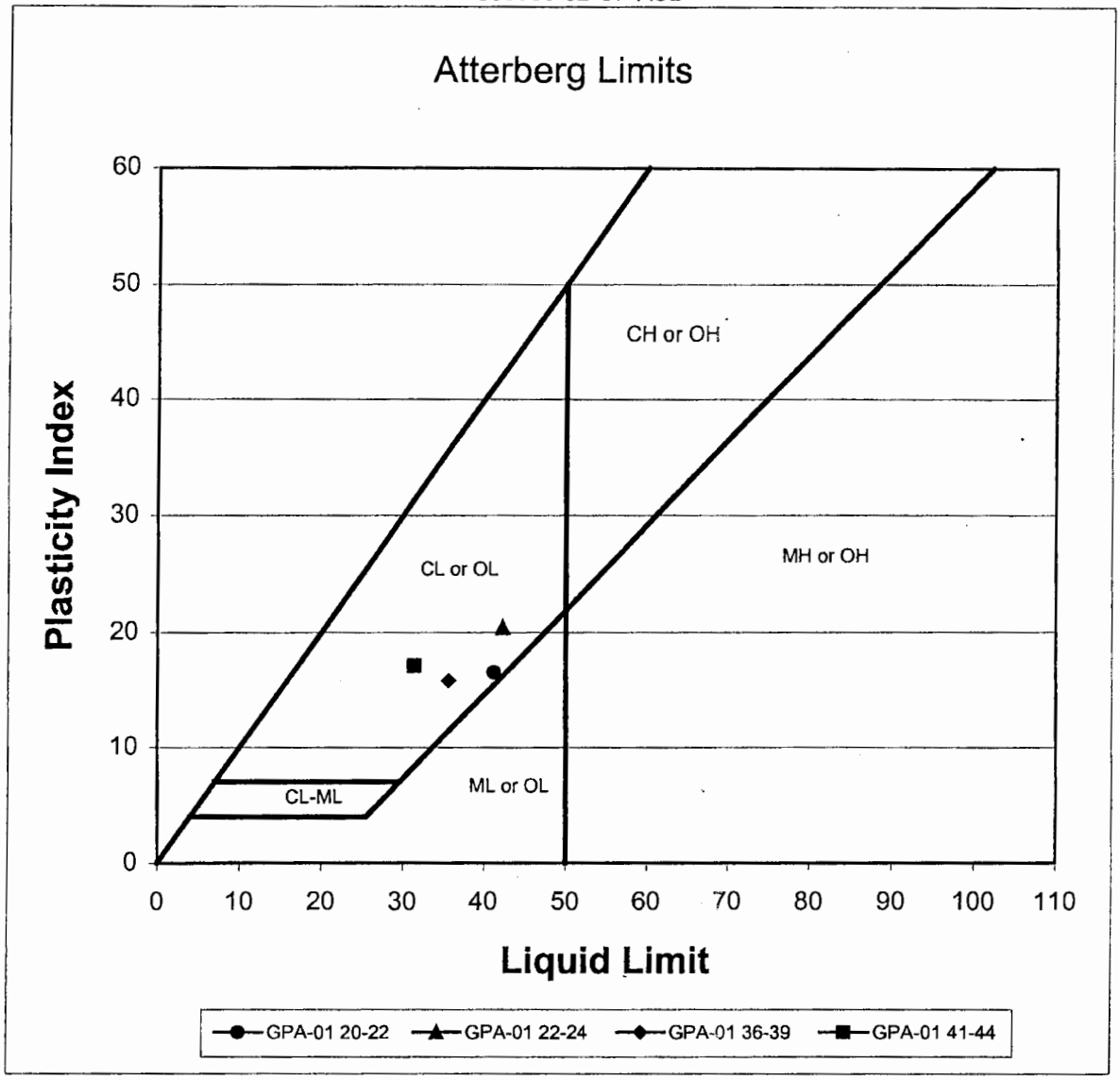
Specific Gravity of Soil Solids

Sample Number	Specific Gravity
GPA-04 4-6	1.148
GPA-05 0-6.5	2.371

Specific Gravity procedure was performed according to ASTM D-854.

FT20

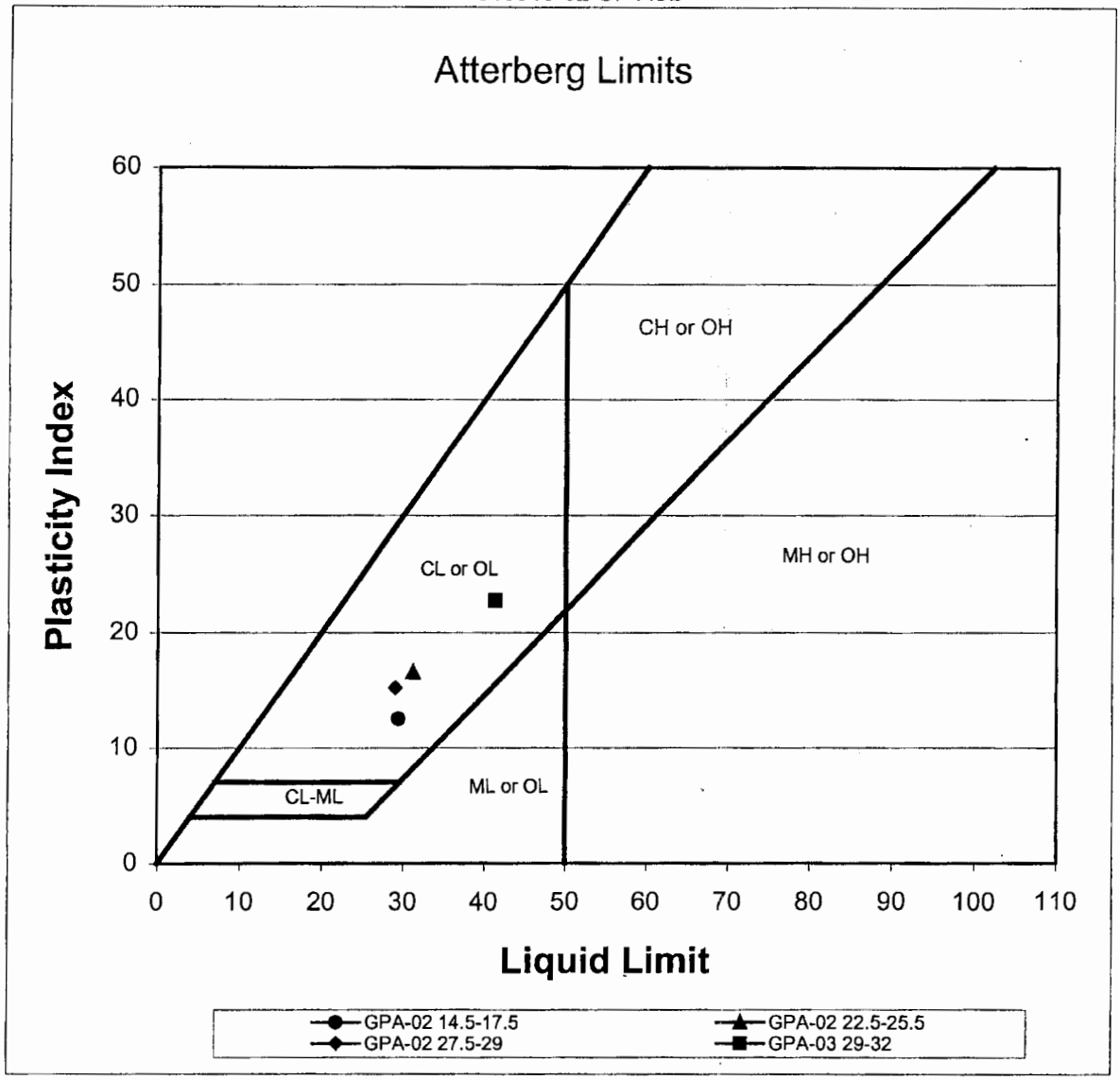
Anchor Environmental
030030-02 GP ASB



Sample Number	Depth	Plasticity Index	Liquid Limit	Plastic Limit	Classification
GPA-01 20-22	20-22	16.5	41.2	24.6	CL
GPA-01 22-24	22-24	20.4	42.2	21.8	CL
GPA-01 36-39	36-39	15.8	35.6	19.8	CL
GPA-01 41-44	41-44	17.1	31.4	14.3	CL

FT20

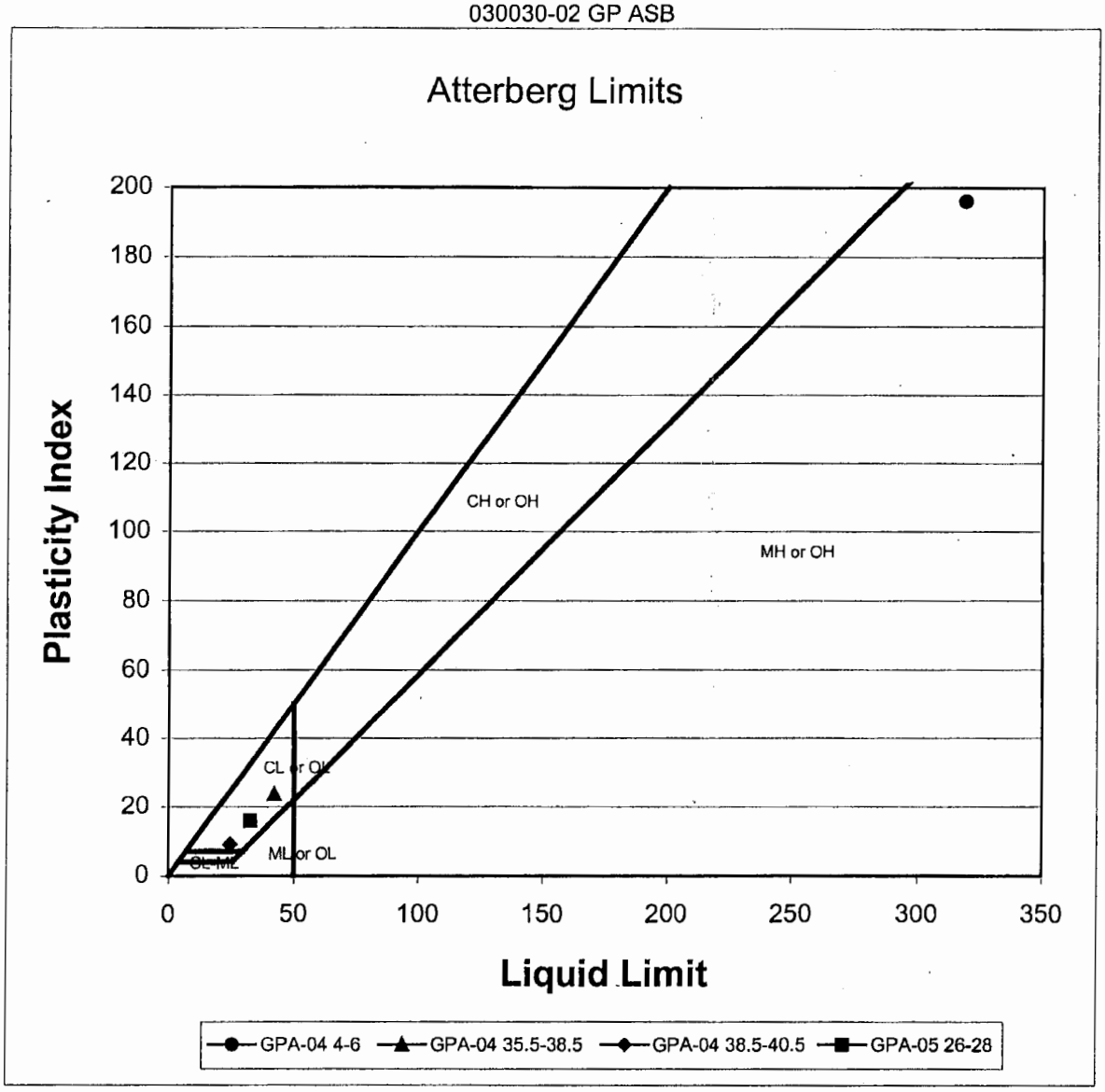
Anchor Environmental
030030-02 GP ASB



Sample Number	Depth	Plasticity Index	Liquid Limit	Plastic Limit	Classification
GPA-02 14.5-17.5	14.5-17.5	12.5	29.5	16.9	CL
GPA-02 22.5-25.5	22.5-25.5	16.6	31.2	14.6	CL
GPA-02 27.5-29	27.5-29	15.2	29.0	13.8	CL
GPA-03 29-32	29-32	22.7	41.3	18.6	CL

FT20

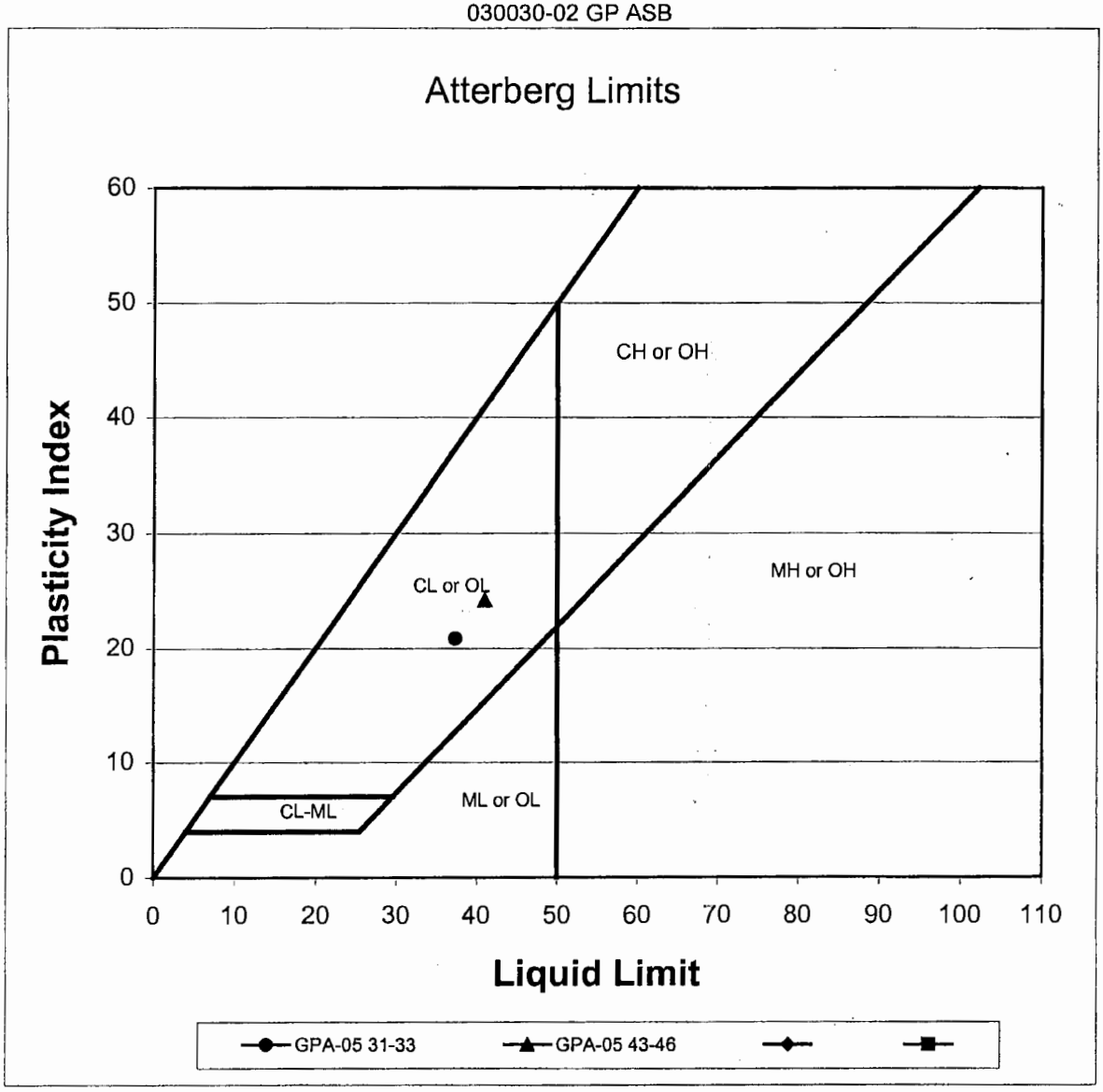
Anchor Environmental
030030-02 GP ASB



Sample Number	Depth	Plasticity Index	Liquid Limit	Plastic Limit	Classification
GPA-04 4-6	4.0-6.0	196.0	318.9	122.9	MH or OH
GPA-04 35.5-38.5	35.5-38.5	23.8	42.1	18.3	CL
GPA-04 38.5-40.5	38.5-40.5	8.9	24.4	15.5	CL
GPA-05 26-28	26-28	15.8	32.6	16.8	CL

FT20

Anchor Environmental
030030-02 GP ASB



Sample Number	Depth	Plasticity Index	Liquid Limit	Plastic Limit	Classification
GPA-05 31-33	31-33	20.9	37.4	16.5	CL
GPA-05 43-46	43-46	24.2	41.0	16.8	CL

FT20

Analytical Resources, Incorporated
Analytical Chemists and Consultants

September 9, 2003

Mr. John Verduin, PE
Anchor Environmental, LLC
1423 3rd Avenue, Suite 300
Seattle, WA 98101

Subject: GE ABS, ARI Project No.: FT74

Dear Mr. Verduin;

Attached are the results of the analyses you requested on the subject project. Please call with any questions or comments you may have on the data or its presentation.

Best Regards,
Analytical Resources, Incorporated

Harold Benny
Harold Benny
Geotechnical Division Manager

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: Anchor Environmental, Inc.	ARI Project No.: FT74
Client Project: GP ABS	

Case Narrative

1. Four sediment core samples were received on August 19, 2003. All samples were received in good condition. The cores were extruded and logged. From this information, additional testing was specified by Anchor.
2. The samples were tested for one dimensional consolidation according to ASTM D2434. Plots of settlement versus load and void ratio versus load, and a summary table are provided. Sample 03 @ 22.5-24 began to swell when first inundated with water. Sample 04 @ 6.5-8.5 began to consolidate when the seating load was applied. When it was inundated with water, the sample began to swell, ending at about its initial height. Sample 04 @ 33.5 swelled when inundated with water.
3. A consolidated, undrained triaxial strength test was run according to ASTM D4767. A summary table and plots are provided. The sample failed with a bulge at the top (the softest part of the sample).
4. The Atterberg limits were measured according to ASTM D4318. Plots of the data are provided. Sample GPA-04-6.5-8.5 was a dark brown highly organic material with a liquid limit over 300 and a plasticity index over 200. Classification of this material as OH assumes that it is a soil. This soil may not have formed from naturally occurring processes.
5. There were no perceived anomalies to the samples or testing.

Approved by: Harold Benny Date: 9/9/03
Title: Geotechnical Division Manager

FT74

Relog for Geotech Testing

Chain of Custody Record & Laboratory Analysis Request

Page 1 of 1 Turn Around Requested: 4wk

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila WA 98168
206-695-6200 206-695-6201 (fax)

Report to: John Verduin	Proj Name: G.P. ASB	Analyses Requested												Notes/Comments
Company: Anchor Env.	Proj Number: 020030-02													
Address: Seattle	Sampler:													
Phone:	Shipping Method:													
Fax:	AirBill:													

Sample ID	Sample Date	Sample Time	Sample Matrix	No Containers	Core Log	Atterberg Limits	Consolidation	CU Triax						
GPA-02 4-6.5	7/29/03	NA	Soil	4		X	X							
GPA-03 22.5-24	7/29/03	NA	"	4	X	X	X							
GPA-04 6.5-8.5	7/29/03	NA	"	4	X	X	X	X						
GPA-04 33.5-35.5	7/29/03	NA	"	4	X	X	X							

All Labeling to be completed & checked by Geotech Labs per SOP. 7/30/03

Sample Rec.

Relinquished:	Received by:	Special Instructions/Notes
(Signature)	(Signature) HBenny	Consol/Triax if Possible on 02 Testing per phone conversation w/ John Verduin 8/19/03
Printed name:	Printed name:	
Company:	Company:	
Date: Time:	Date: 8/19/03 Time:	

Number of Coolers:	
Cooler Temp(s):	
COC Seals Intact?	
Bottles Intact?	

Please sign here if you would like these samples disposed of after expiration of standard archive times (60 days for waters 90 days for soils, sediments per contract). If you do not want these samples discarded we will begin charging you for storage after the disposal date. **Samples to be discarded after expiration:**

Core Logs

VISUAL CORE LOG

ANALYTICAL RESOURCES INCORPORATED

Client: Anchor Environmental
Project No. FT74
Core No. GPA-02
Sample No. NA
Depth of Sample 4-6.5
Sample Recovery 25"

Date: August 7, 2003
Sample Extruded by: HB
Sample Logged by: HB
Type: Shelby Tube
Diameter of Sample 2.85
Sample Photograph: ___ Yes _X_ No

Specimen Saved	Water Content	Test Type	Depth (ft)	Sketch	Classification and Description
			4.0		Top of Recovery
Jar 1					Wet, Soft, Dark Gray Silty Clay
					Possibly Slough
Jar 2			4.5		
Jar 3					
					Moist, Firm, Dark Gray Clay/Silt
Jar 4			5.0		
Jar 5					1" Black Silt Layer
	52.0	Consol			1" light Brown Silt/Clay Layer
Jar 6					1" Black Silty Fine Sand Layer
		Atterberg Limits	5.5		
Jar 7					1" Light Gray Sandy Layer
Jar 8					
			6.0		½ inch Gray Sandy Layer, with Shell Fragments
Jar 9					
					Bottom of Recovery
			6.5		

VISUAL CORE LOG

ANALYTICAL RESOURCES INCORPORATED

Client: Anchor Environmental
Project No. FT74
Core No. GPA-03
Sample No. NA
Depth of Sample 22.5-24
Sample Recovery 24"

Date: August 19, 2003
Sample Extruded by: HB
Sample Logged by: HB
Type: Shelby Tube
Diameter of Sample 2.85
Sample Photograph: ___ Yes _X_ No

Specimen Saved	Water Content	Test Type	Depth (ft)	Sketch	Classification and Description
			22.5		Top of Recovery Moist, Gray Fine Sand
			23.0		
	24.5		23.5		
			24		
	34.9	Consol Atterberg Limits	24.5		Clay, Grading to Clayey Silt
					Bottom of Recovery

VISUAL CORE LOG

ANALYTICAL RESOURCES INCORPORATED

Client: Anchor Environmental
Project No. FT74
Core No. GPA-04
Sample No. NA
Depth of Sample 6.5-8.5
Sample Recovery 24"

Date: August 19, 2003
Sample Extruded by: HB
Sample Logged by: HB
Type: Shelby Tube
Diameter of Sample 2.85
Sample Photograph: ___ Yes _X_ No

Specimen Saved	Water Content	Test Type	Depth (ft)	Sketch	Classification and Description
			6.5		Top of Recovery Moist, Medium Soft Brown Organic Silt
		TV = 0	7.0		
	335	Consol			
	215.1	CU Triax & Atterberg Limits	7.5		
	32.6	PP=0.25	8		3 Thin Sand Layers Moist Brown Silt Sand Brown Silty Fine Sand
			8.5		Moist Gray Sand
					Bottom of Recovery

VISUAL CORE LOG

ANALYTICAL RESOURCES INCORPORATED

Client: Anchor Environmental
Project No. FT74
Core No. GPA-04
Sample No. NA
Depth of Sample 33.5-35.5
Sample Recovery 24"

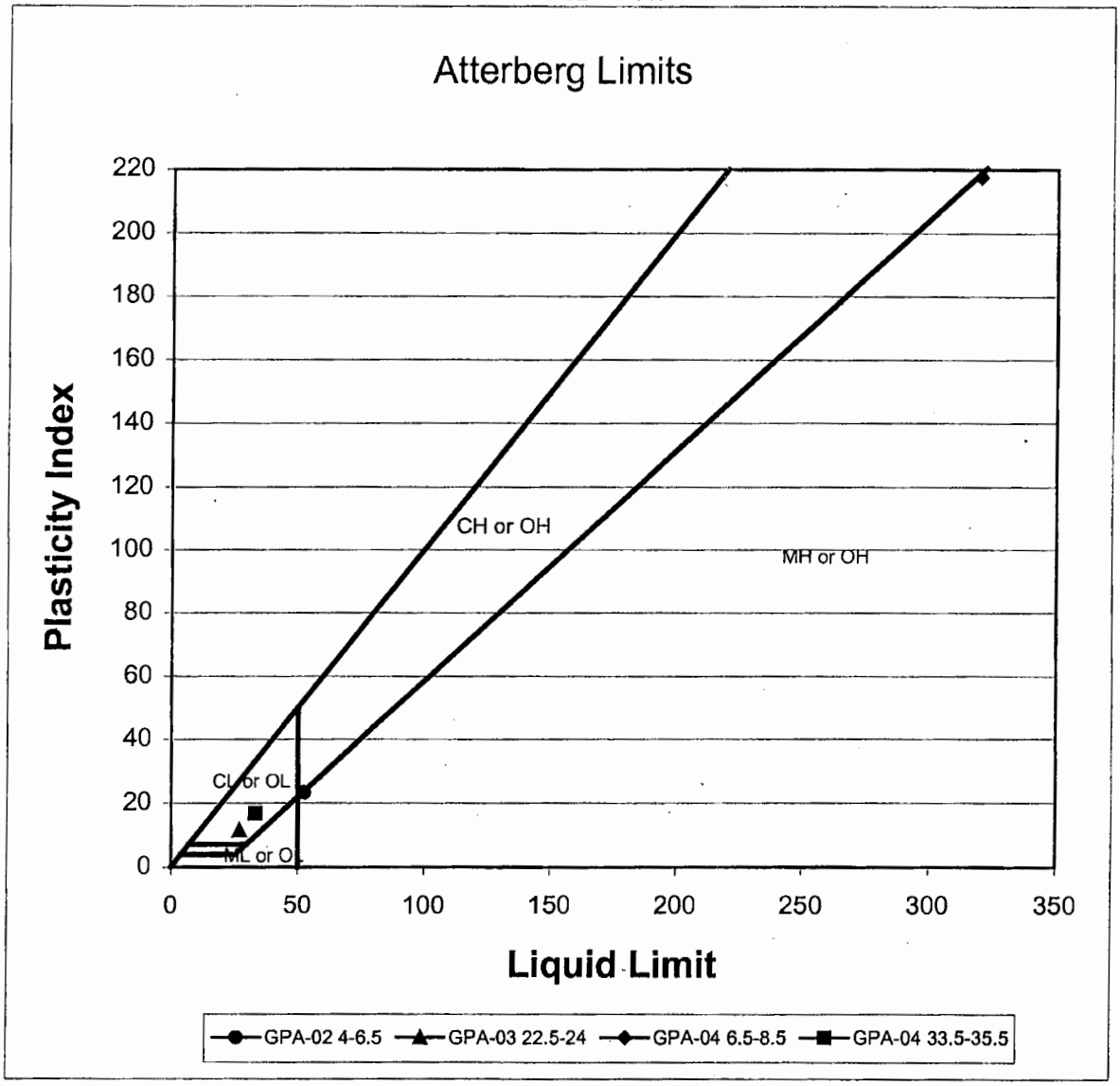
Date: August 19, 2003
Sample Extruded by: HB
Sample Logged by: HB
Type: Shelby Tube
Diameter of Sample 2.85
Sample Photograph: ___ Yes _X_ No

Specimen Saved	Water Content	Test Type	Depth (ft)	Sketch	Classification and Description
			33.5		Top of Recovery Moist Gray Sand Grading to Silty Sand
			34.0		
			34.5		Moist Gray Firm Clay
	30.8	Consol			
		Atterberg Limits	35.0		
		TV = 2.5 PP = 0.75			
	26.9		35.5		
					Bottom of Recovery

Atterberg Limits

ASTM D4318

Anchor Environmental
020030-02 GP ASB



Sample Number	Depth	Plasticity Index	Liquid Limit	Plastic Limit	Classification
GPA-02 4-6.5	4-6.5	23.4	52.5	29.1	OH
GPA-03 22.5-24	22.5-24	11.5	26.9	15.4	CL
GPA-04 6.5-8.5	6.5-8.5	217.7	319.9	102.2	OH*
GPA-04 33.5-35.5	33.5-35.5	16.8	33.3	16.5	CL

FT74

One Dimensional Consolidation

ASTM D2435
(Method "B")

ANALYTICAL RESOURCES INCORPORATED

Project Number:	FT74	Job Name:	GP ASB
Boring / Sample	GPA-02 @ 6'	Job Number	020030-02
Sample Initial Height	0.8830	Job Location	NA
Initial Dial Indicator	0.3930	DI after Seating load	0.391

Consolidation Test Summary

S_0	S_{90}	S_{100}	S_f	t_{90} (min)	Sample Height	Drainage Path	Cv (ft^2/day)	Load (tsf)	Strain Ratio
0.3888	0.3831	0.3825	0.3818	1.50	0.8738	0.4369	0.108	0.03125	0.0127
0.3812	0.3756	0.3750	0.3735	2.00	0.8655	0.4328	0.079	0.0625	0.0221
0.3673	0.3510	0.3492	0.3460	2.00	0.8380	0.4190	0.074	0.25	0.0532
0.3438	0.3265	0.3246	0.3240	4.00	0.8160	0.4080	0.035	0.5	0.0781
0.3215	0.2985	0.2959	0.2955	3.80	0.7875	0.3938	0.035	1	0.1104
0.2910	0.2575	0.2538	0.2505	3.00	0.7425	0.3713	0.039	2	0.1614
0.2480	0.2120	0.2080	0.2095	3.50	0.7015	0.3508	0.030	4	0.2078
0.2130	0.2167	0.2171	0.2178	0.75	0.7098	0.3549	0.142	1	0.1984
0.2195	0.2296	0.2307	0.2308	3.50	0.7228	0.3614	0.032	0.25	0.1837
0.2313	0.2465	0.2482	0.2472	14.00	0.7392	0.3696	0.008	0.0625	0.1651

Sample Parameters

Initial Moisture Content, %	52	Final Moisture Content, %	40
Initial Dry Unit Weight, lb/ft^3	68	Final Dry Unit Weight, lb/ft^3	81
Initial Void Ratio	1.43	Final Void Ratio	1.04
Initial Saturation	0.96	Final Saturation	1.03

The following equations were used to calculate the values shown in the table above:

$$Cv = T H^2/t_{90}$$

Where:

T = the time factor for 90% consolidation

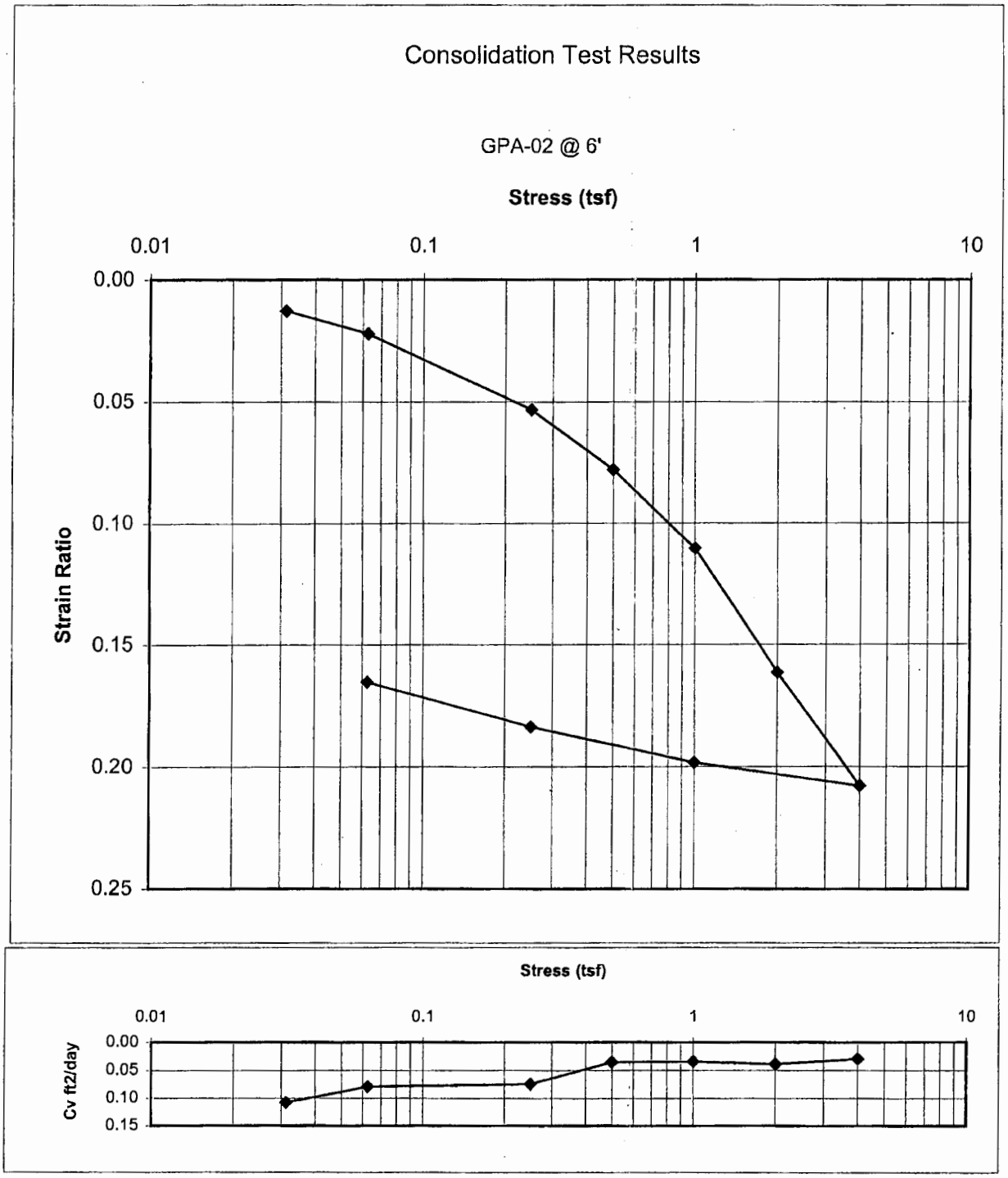
H = average of initial and final heights of the sample at each load, divided by 2

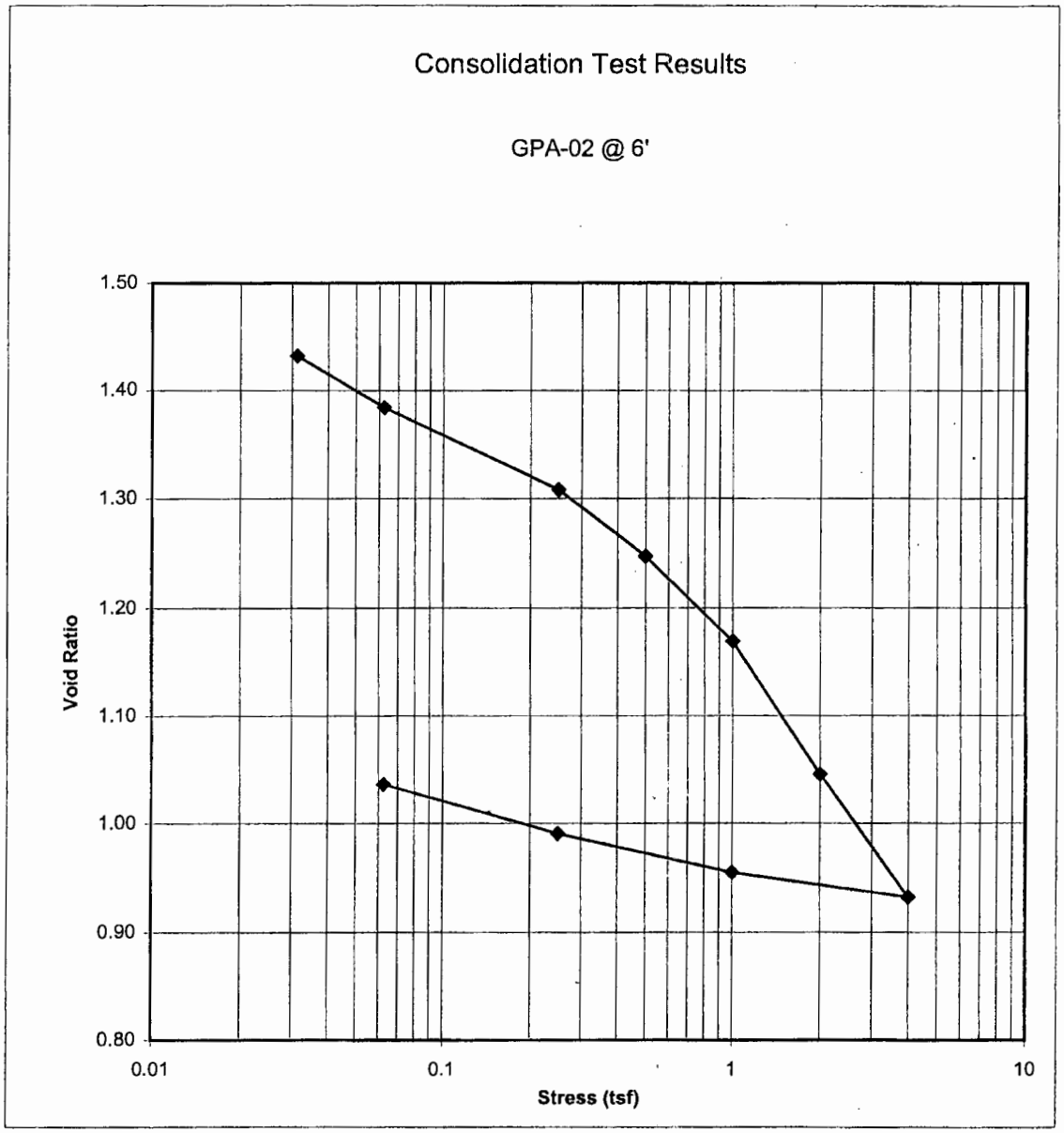
$(S_0 + S_{100})/2$ (for double drainage paths)

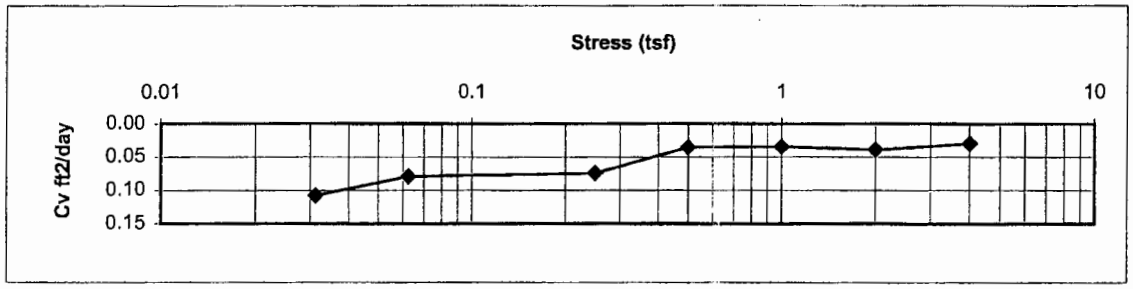
t_{90} = the time at which 90% consolidation has occurred, as derived from square root of time plots for each load.

Notes to the Testing:

1. The sample was extruded from the sample tube and trimmed into a consolidation ring. The sample was inundated at the time of the seating load was applied. The test was run according to ASTM D-2435, Method B.
2. The sample was organic silt.


Consolidation Test Results
GPA-02 @ 6'
Stress (tsf)
0.01
0.1
1
10
0.00
0.05
0.10
0.15
0.20
0.25
Strain Ratio
Stress (tsf)
0.01
0.1
1
10
0.00
0.05
0.10
0.15
Cv ft2/day


Consolidation Test Results
GPA-02 @ 6'
Void Ratio
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.01
0.1
1
10
Stress (tsf)


Stress (tsf)
0.01
0.1
1
10
Cv ft2/day
0.00
0.05
0.10
0.15

ANALYTICAL RESOURCES INCORPORATED

Project Number:	FT74	Job Name:	GP ASB
Boring / Sample	GPA-03 @ 22.5-24'	Job Number	020030-02
Sample Initial Height	0.8864	Job Location	NA
Initial Dial Indicator	0.4618	DI after Seating load	0.4632

Consolidation Test Summary

S_0	S_{90}	S_{100}	S_f	t_{90} (min)	Sample Height	Drainage Path	Cv (ft^2/day)	Load (tsf)	Strain Ratio
0.4608	0.4596	0.4595	0.4595	0.50	0.8827	0.4414	0.330	0.03125	0.0026
0.4595	0.4586	0.4585	0.4579	0.40	0.8811	0.4406	0.411	0.0625	0.0044
0.4567	0.4543	0.4540	0.4536	1.50	0.8768	0.4384	0.109	0.125	0.0093
0.4518	0.4490	0.4487	0.4480	0.50	0.8712	0.4356	0.322	0.25	0.0156
0.4446	0.4410	0.4406	0.4398	0.60	0.8630	0.4315	0.263	0.5	0.0248
0.4345	0.4291	0.4285	0.4275	0.80	0.8507	0.4254	0.192	1	0.0387
0.4185	0.4088	0.4077	0.4071	1.50	0.8303	0.4152	0.097	2	0.0617
0.4037	0.3908	0.3894	0.3875	1.10	0.8107	0.4054	0.127	4	0.0838
0.3820	0.3610	0.3587	0.3575	2.00	0.7807	0.3904	0.065	8	0.1177
0.3515	0.3282	0.3256	0.3250	1.80	0.7482	0.3741	0.066	16	0.1543
0.3250	0.3212	0.3208	0.3318	0.40	0.7550	0.3775	0.302	4	0.1467
0.3360	0.3408	0.3413	0.3418	1.70	0.7650	0.3825	0.073	1	0.1354
0.3436	0.3504	0.3512	0.3520	2.20	0.7752	0.3876	0.058	0.25	0.1239
0.3528	0.3597	0.3605	0.3607	5.00	0.7839	0.3920	0.026	0.0625	0.1141

Sample Parameters

Initial Moisture Content, %	35	Final Moisture Content, %	26
Initial Dry Unit Weight, lb/ft^3	88	Final Dry Unit Weight, lb/ft^3	102
Initial Void Ratio	0.92	Final Void Ratio	0.70
Initial Saturation	0.92	Final Saturation	1.02

The following equations were used to calculate the values shown in the table above:

$$Cv = T H^2/t_{90}$$

Where:

T = the time factor for 90% consolidation

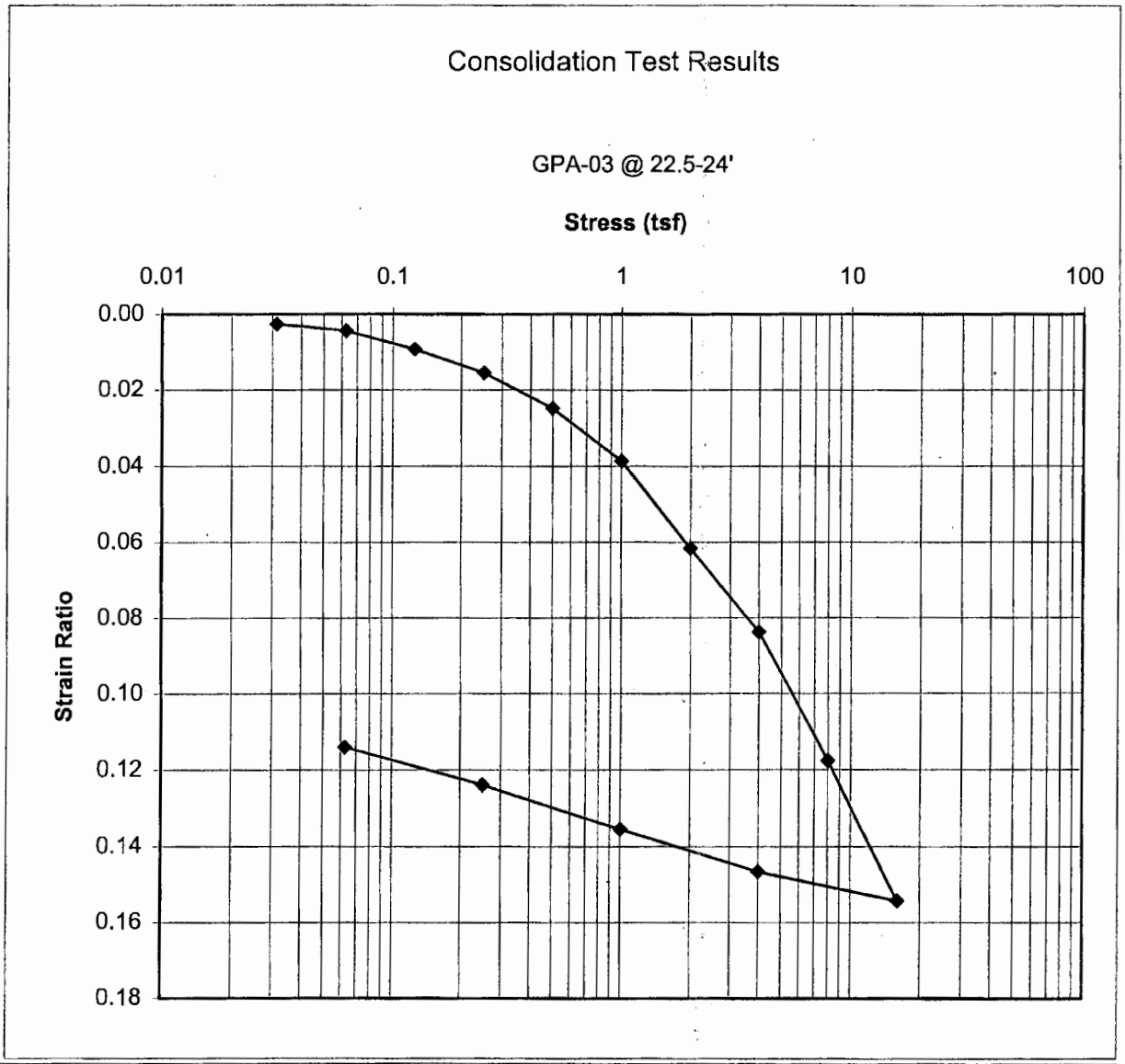
H = average of initial and final heights of the sample at each load, divided by 2

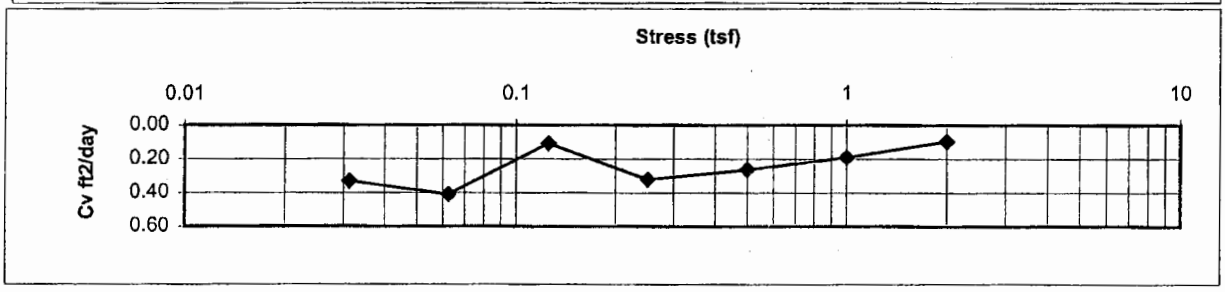
$(S_0 + S_{100})/2$ (for double drainage paths)

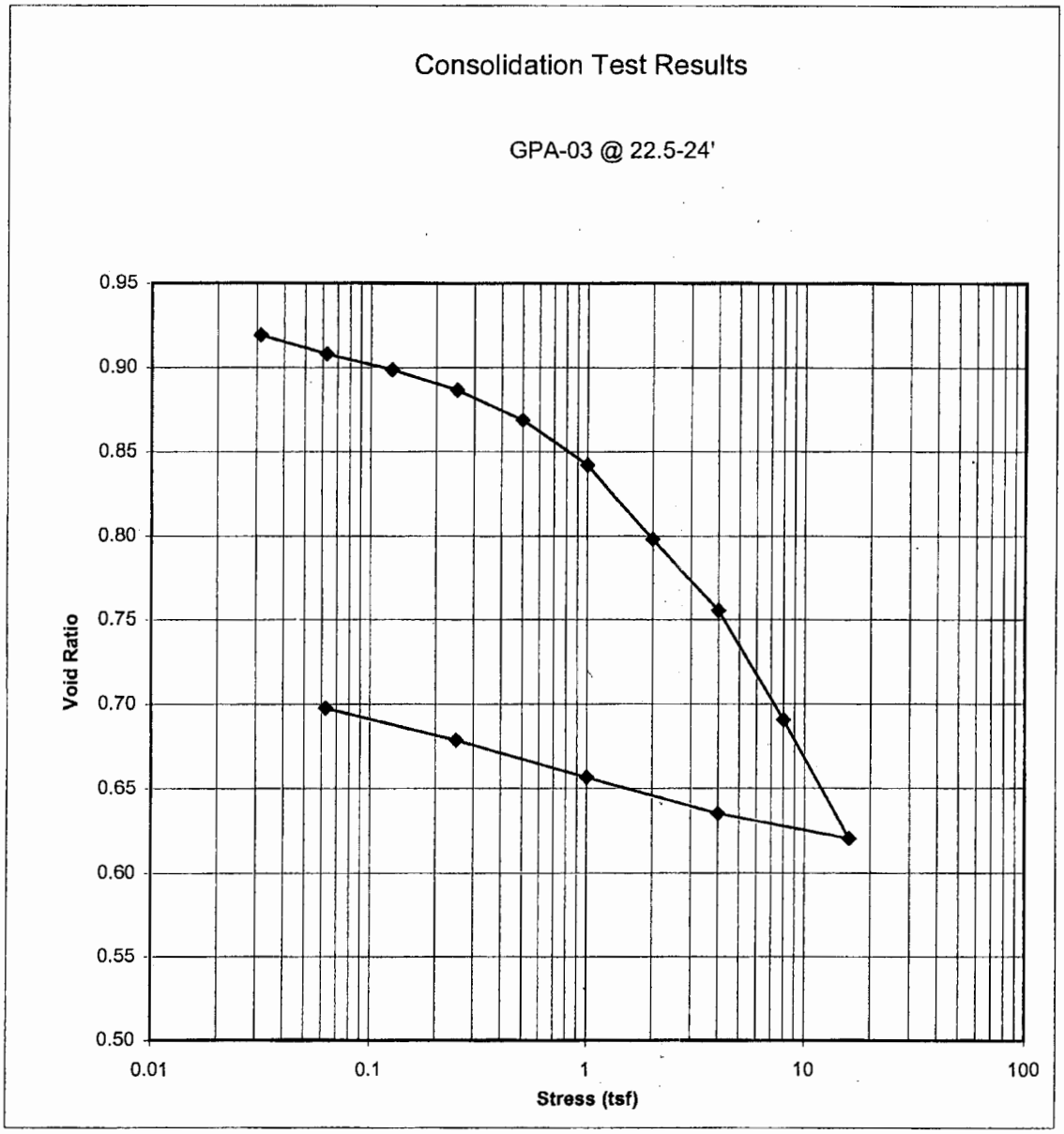
t_{90} = the time at which 90% consolidation has occurred, as derived from square root of time plots for each load.

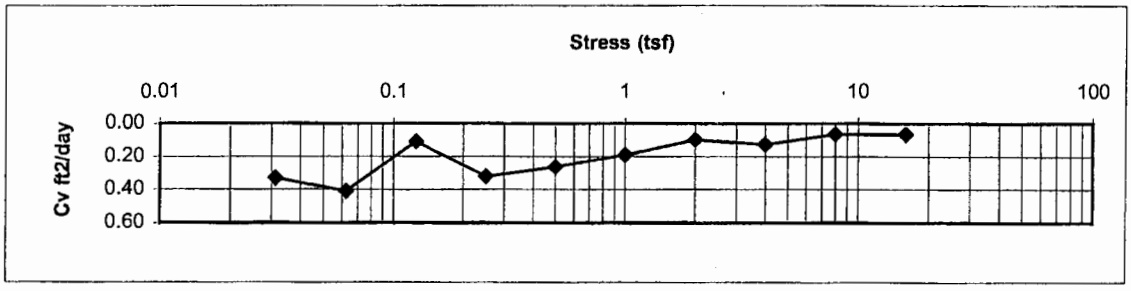
Notes to the Testing:

1. The sample was extruded from the sample tube and trimmed into a consolidation ring. The sample was inundated at the time of the seating load was applied. The test was run according to ASTM D-2435, Method B.
2. The sample was clay.


Consolidation Test Results
GPA-03 @ 22.5-24'
Stress (tsf)
0.01
0.1
1
10
100
Strain Ratio
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
0.18


Stress (tsf)
0.01
0.1
1
10
Cv ft2/day
0.00
0.20
0.40
0.60


Consolidation Test Results
GPA-03 @ 22.5-24'
Void Ratio
0.95
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.01
0.1
1
10
100
Stress (tsf)


Stress (tsf)
0.01
0.1
1
10
100
Cv ft2/day
0.00
0.20
0.40
0.60

ANALYTICAL RESOURCES INCORPORATED

Project Number:	FT74	Job Name:	GP ASB
Boring / Sample	GPA-04 @ 6.5-8.5	Job Number	020030-02
Sample Initial Height	0.8955	Job Location	NA
Initial Dial Indicator	0.4490	DI after Seating load	0.4595

Consolidation Test Summary

S_0	S_{90}	S_{100}	S_f	t_{90} (min)	Sample Height	Drainage Path	Cv (ft^2/day)	Load (tsf)	Strain Ratio
0.4530	0.4450	0.4441	0.4417	0.5	0.8777	0.4389	0.327	0.03125	0.0082
0.4407	0.4343	0.4336	0.4315	0.5	0.8675	0.4338	0.319	0.0625	0.0195
0.4314	0.4210	0.4198	0.4163	1.2	0.8523	0.4262	0.128	0.125	0.0365
0.4135	0.3983	0.3966	0.3910	1.5	0.8270	0.4135	0.097	0.25	0.0648
0.3860	0.2430	0.2271	0.2060	225	0.6420	0.3210	0.000	0.5	0.2714
0.2074	0.2161	0.2171	0.2180	23	0.6540	0.3270	0.004	0.125	0.2580
0.2183	0.2465	0.2496	0.2505	260	0.6865	0.3433	0.000	0.03125	0.2217

Sample Parameters

Initial Moisture Content, %	335	Final Moisture Content, %	281
Initial Dry Unit Weight, lb/ft^3	15	Final Dry Unit Weight, lb/ft^3	19
Initial Void Ratio	10.40	Final Void Ratio	7.60
Initial Saturation	0.85	Final Saturation	0.98

The following equations were used to calculate the values shown in the table above:

$$Cv = T H^2/t_{90}$$

Where:

T = the time factor for 90% consolidation

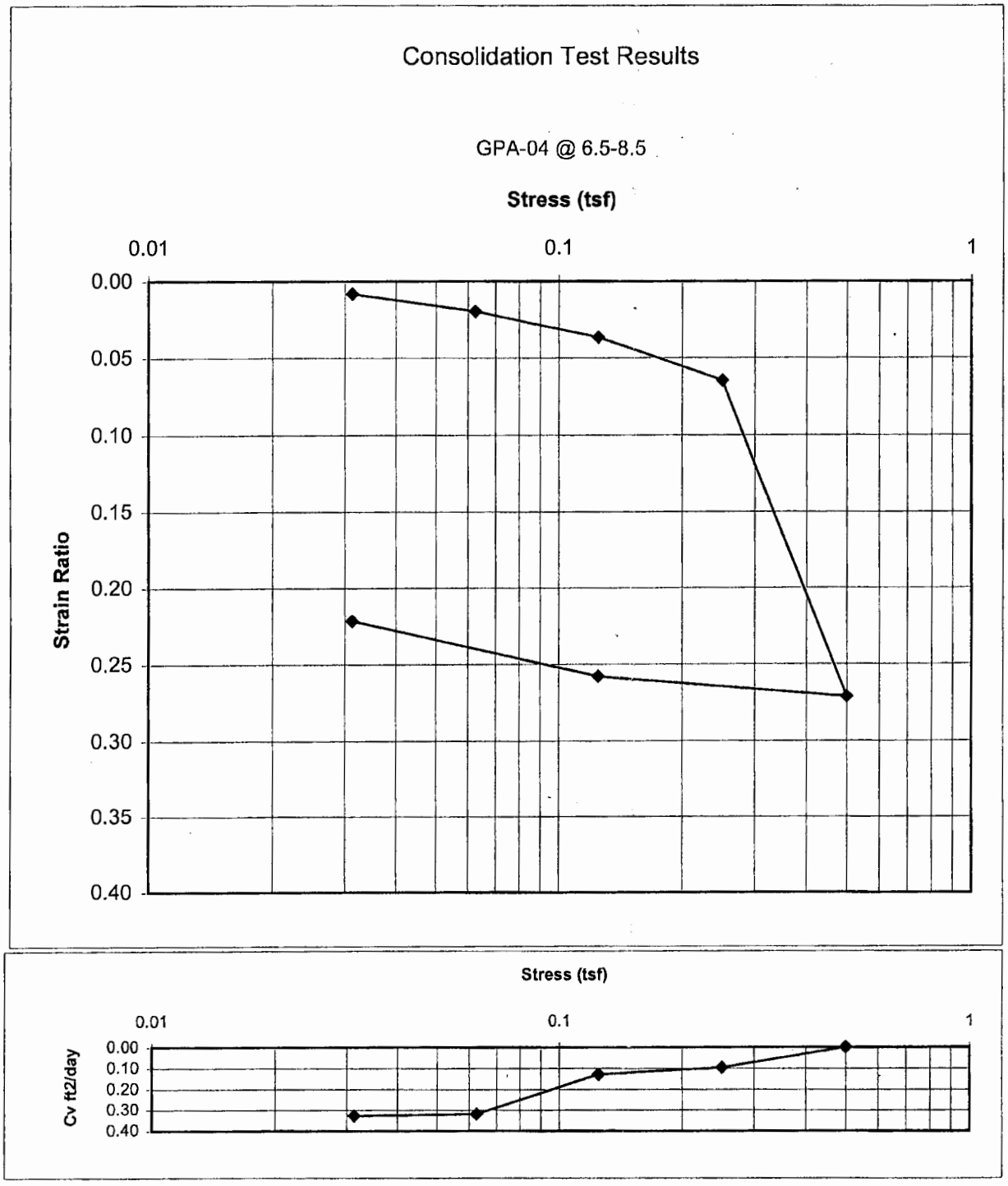
H = average of initial and final heights of the sample at each load, divided by 2

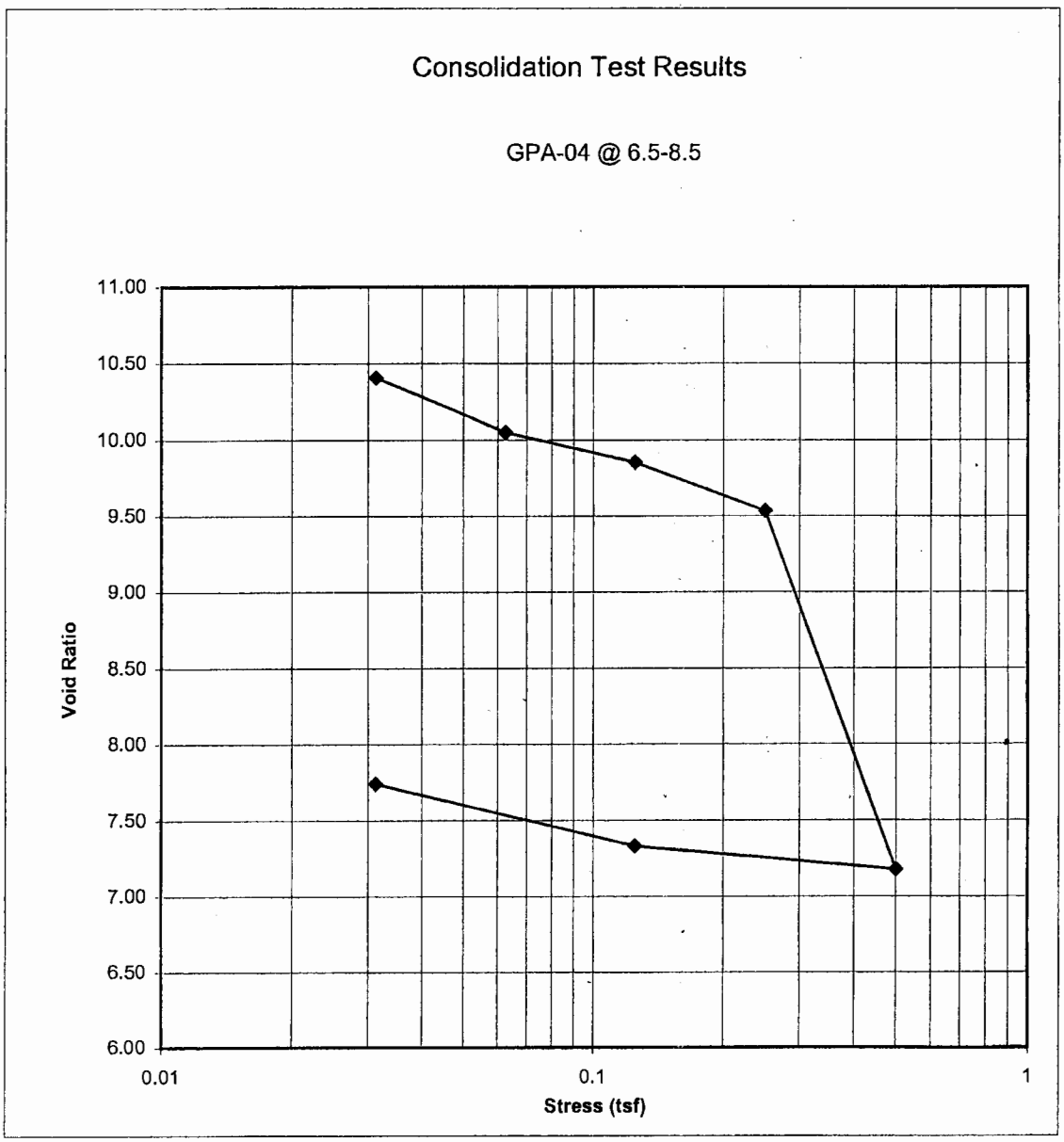
$(S_0 + S_{100})/2$ (for double drainage paths)

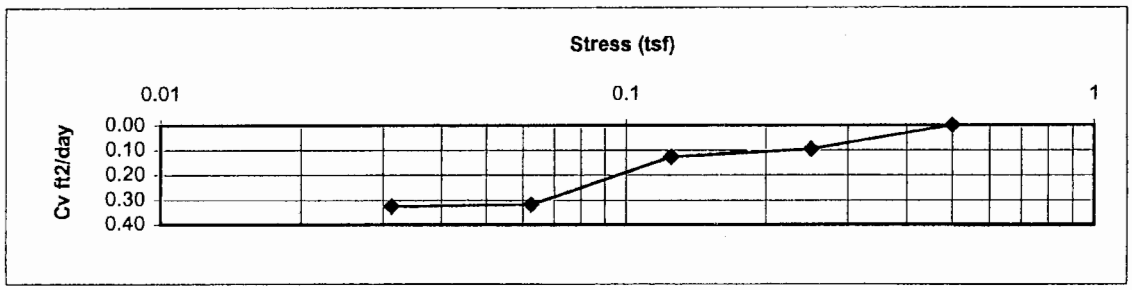
t_{90} = the time at which 90% consolidation has occurred, as derived from square root of time plots for each load.

Notes to the Testing:

1. The sample was extruded from the sample tube and trimmed into a consolidation ring. The sample was inundated at the time of the seating load was applied. The test was run according to ASTM D-2435, Method B.
2. The sample was an organic silt.


Consolidation Test Results
GPA-04 @ 6.5-8.5
Stress (tsf)
0.01
0.1
1
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0.40
Strain Ratio
Stress (tsf)
0.01
0.1
1
0.00
0.10
0.20
0.30
0.40
Cv ft2/day


Consolidation Test Results
GPA-04 @ 6.5-8.5
11.00
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
Void Ratio
0.01
0.1
1
Stress (tsf)


Stress (tsf)
0.01
0.1
1
0.00
0.10
0.20
0.30
0.40
Cv ft2/day

ANALYTICAL RESOURCES INCORPORATED

Project Number:	FT74	Job Name:	GP ASB
Boring / Sample	GPA-04 @ 33.5	Job Number	020030-02
Sample Initial Height	0.8867	Job Location	NA
Initial Dial Indicator	0.4627	DI after Seating load	0.4644

Consolidation Test Summary

S_0	S_{90}	S_{100}	S_f	t_{90} (min)	Sample Height	Drainage Path	Cv (ft^2/day)	Load (tsf)	Strain Ratio
0.4639	0.4625	0.4623	0.4624	7.0	0.8847	0.4424	0.024	0.0625	0.0003
0.4626	0.4611	0.4609	0.4605	1.0	0.8828	0.4414	0.165	0.125	0.0025
0.4597	0.4574	0.4571	0.4550	1.5	0.8773	0.4387	0.109	0.25	0.0087
0.4543	0.4463	0.4454	0.4460	10.5	0.8683	0.4342	0.015	0.5	0.0188
0.4443	0.4300	0.4284	0.4284	17.0	0.8507	0.4254	0.009	1	0.0387
0.4252	0.4090	0.4072	0.4050	22.0	0.8273	0.4137	0.007	2	0.0651
0.4063	0.3673	0.3630	0.3673	19.0	0.7896	0.3948	0.007	4	0.1076
0.3623	0.3370	0.3342	0.3370	13.0	0.7593	0.3797	0.009	8	0.1418
0.3330	0.3084	0.3057	0.3084	9.0	0.7307	0.3654	0.013	16	0.1740
0.3042	0.3078	0.3082	0.3092	0.7	0.7315	0.3658	0.162	4	0.1731
0.3126	0.3196	0.3204	0.3207	10.5	0.7430	0.3715	0.011	1	0.1601
0.3210	0.3325	0.3338	0.3325	32.0	0.7548	0.3774	0.004	0.25	0.1468
0.3327	0.3420	0.3430	0.3430	29.0	0.7653	0.3827	0.004	0.0625	0.1350

Sample Parameters

Initial Moisture Content, %	31	Final Moisture Content, %	23
Initial Dry Unit Weight, lb/ft^3	93	Final Dry Unit Weight, lb/ft^3	109
Initial Void Ratio	0.85	Final Void Ratio	0.59
Initial Saturation	0.99	Final Saturation	1.07

The following equations were used to calculate the values shown in the table above:

$$Cv = T H^2/t_{90}$$

Where:

T = the time factor for 90% consolidation

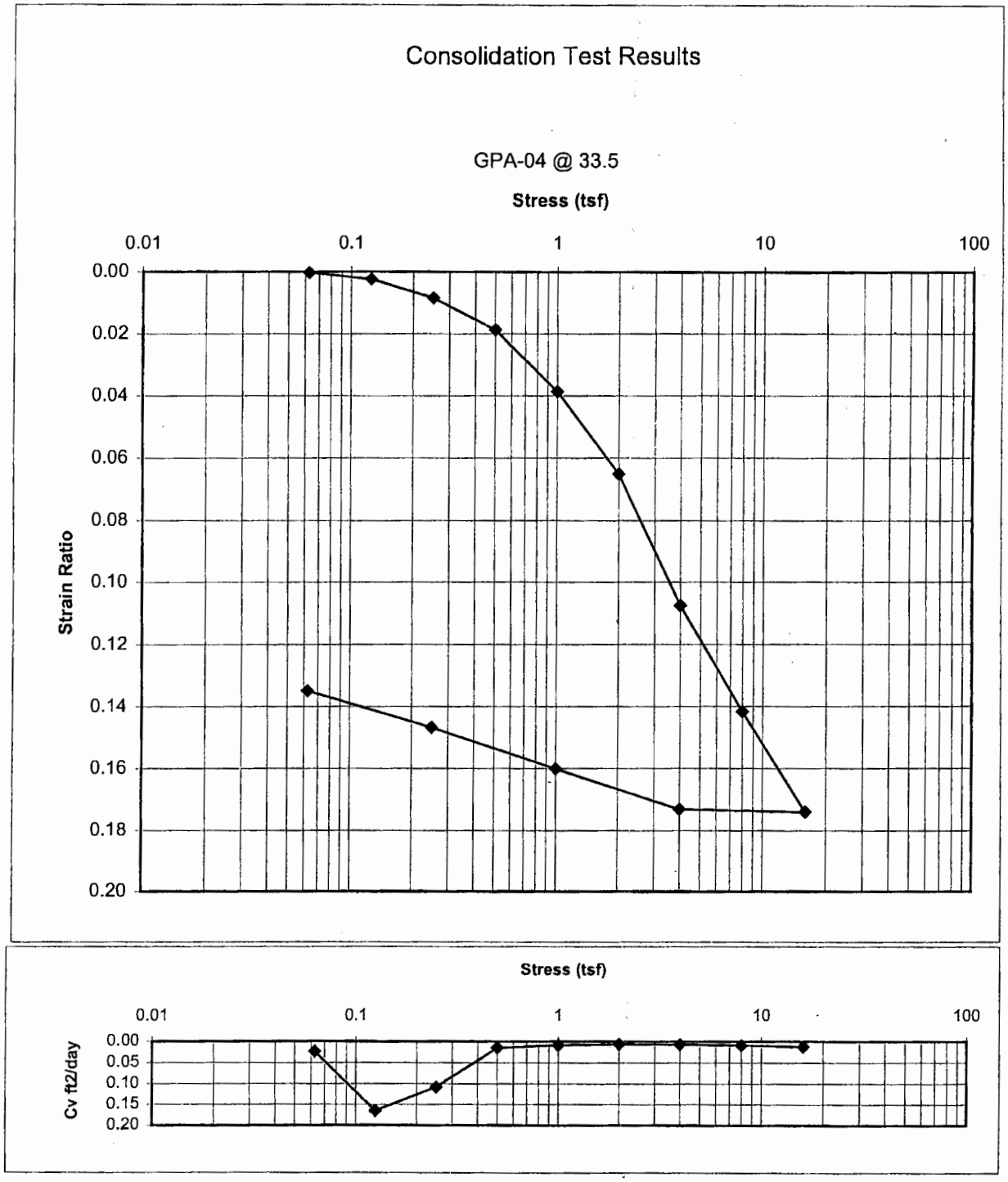
H = average of initial and final heights of the sample at each load, divided by 2

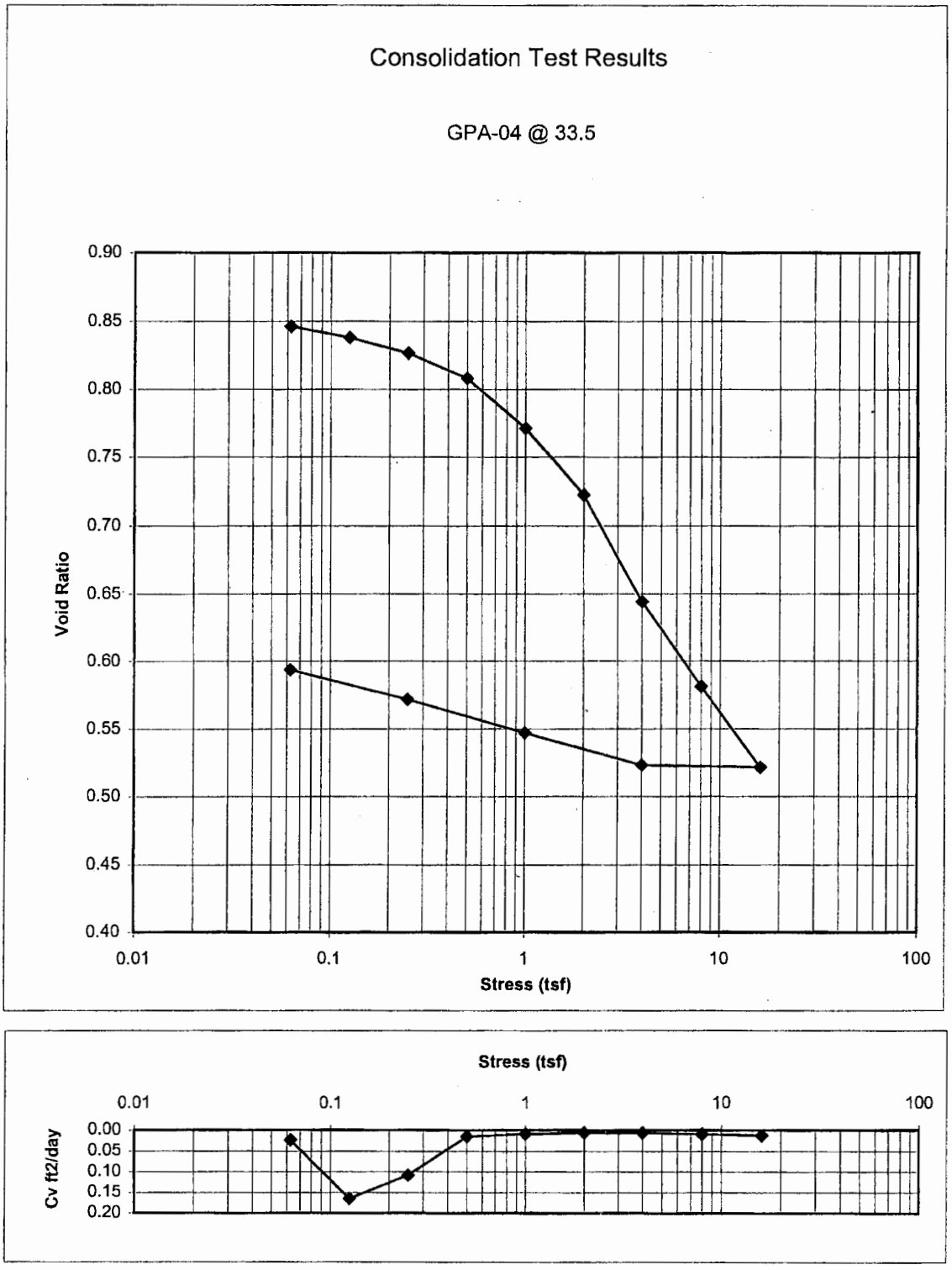
$(S_0 + S_{100})/2$ (for double drainage paths)

t_{90} = the time at which 90% consolidation has occurred, as derived from square root of time plots for each load.

Notes to the Testing:

1. The sample was extruded from the sample tube and trimmed into a consolidation ring. The sample was inundated at the time of the seating load was applied. The test was run according to ASTM D-2435, Method B.
2. The sample was clay.


Consolidation Test Results
GPA-04 @ 33.5
Stress (tsf)
0.01
0.1
1
10
100
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
0.18
0.20
Strain Ratio
Stress (tsf)
0.01
0.1
1
10
100
Cv ft2/day
0.00
0.05
0.10
0.15
0.20

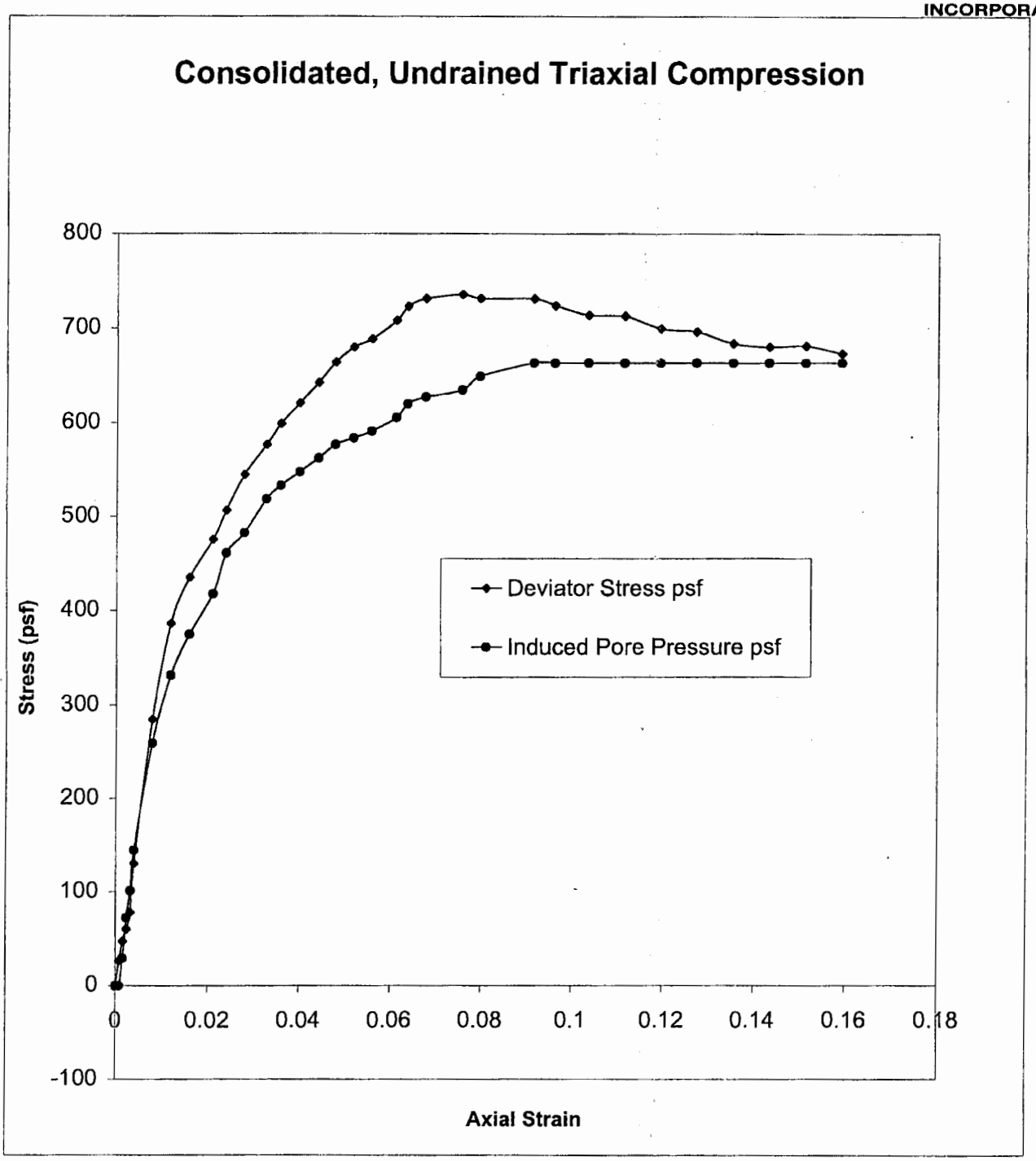

Consolidation Test Results
GPA-04 @ 33.5
Void Ratio
0.90
0.85
0.80
0.75
0.70
0.65
0.60
0.55
0.50
0.45
0.40
0.01
0.1
1
10
100
Stress (tsf)
Stress (tsf)
0.01
0.1
1
10
100
Cv ft2/day
0.00
0.05
0.10
0.15
0.20

Consolidated, Undrained Triaxial Compression

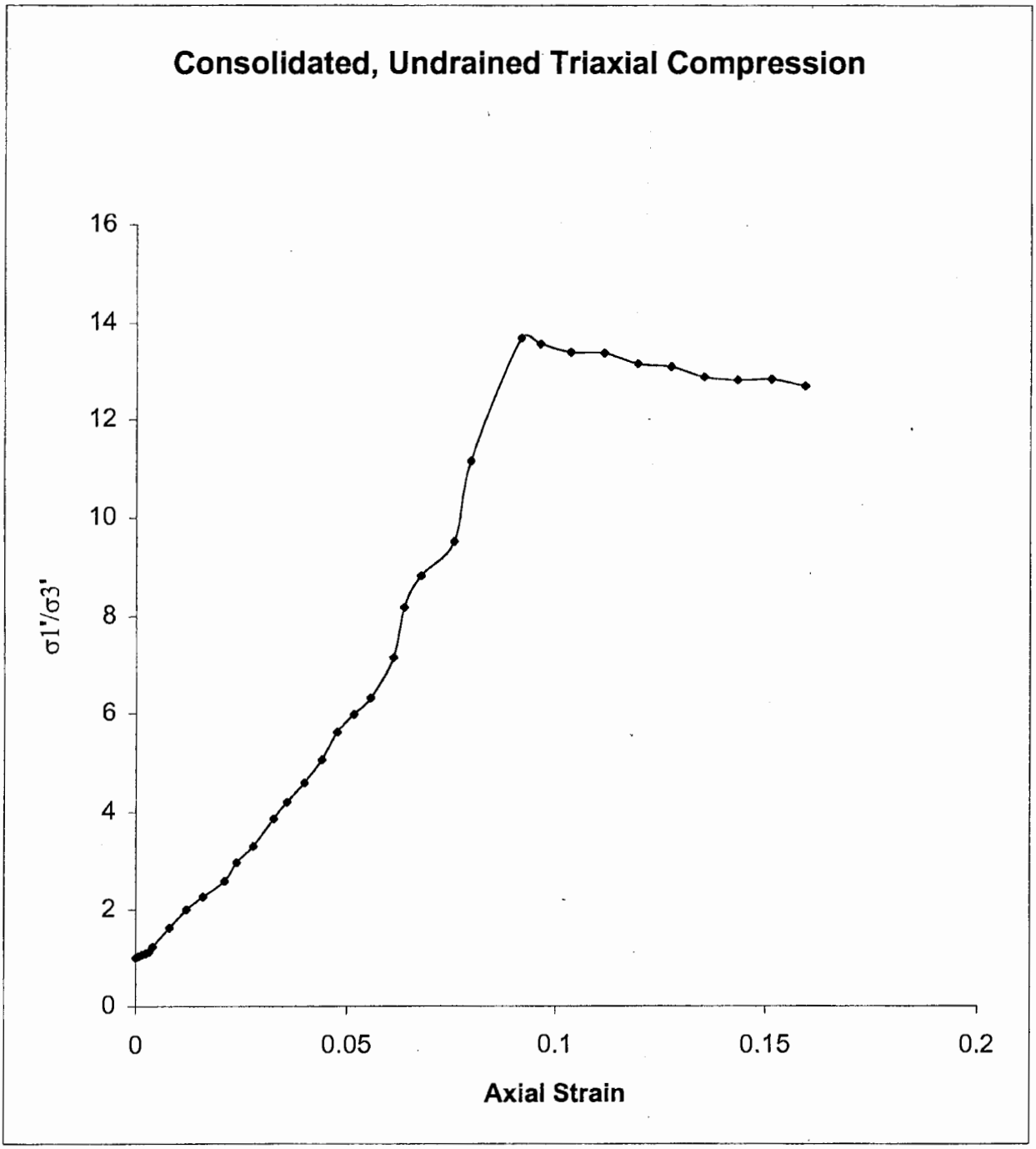
ASTM D4767

Consolidated Undrained Triaxial Compression Test

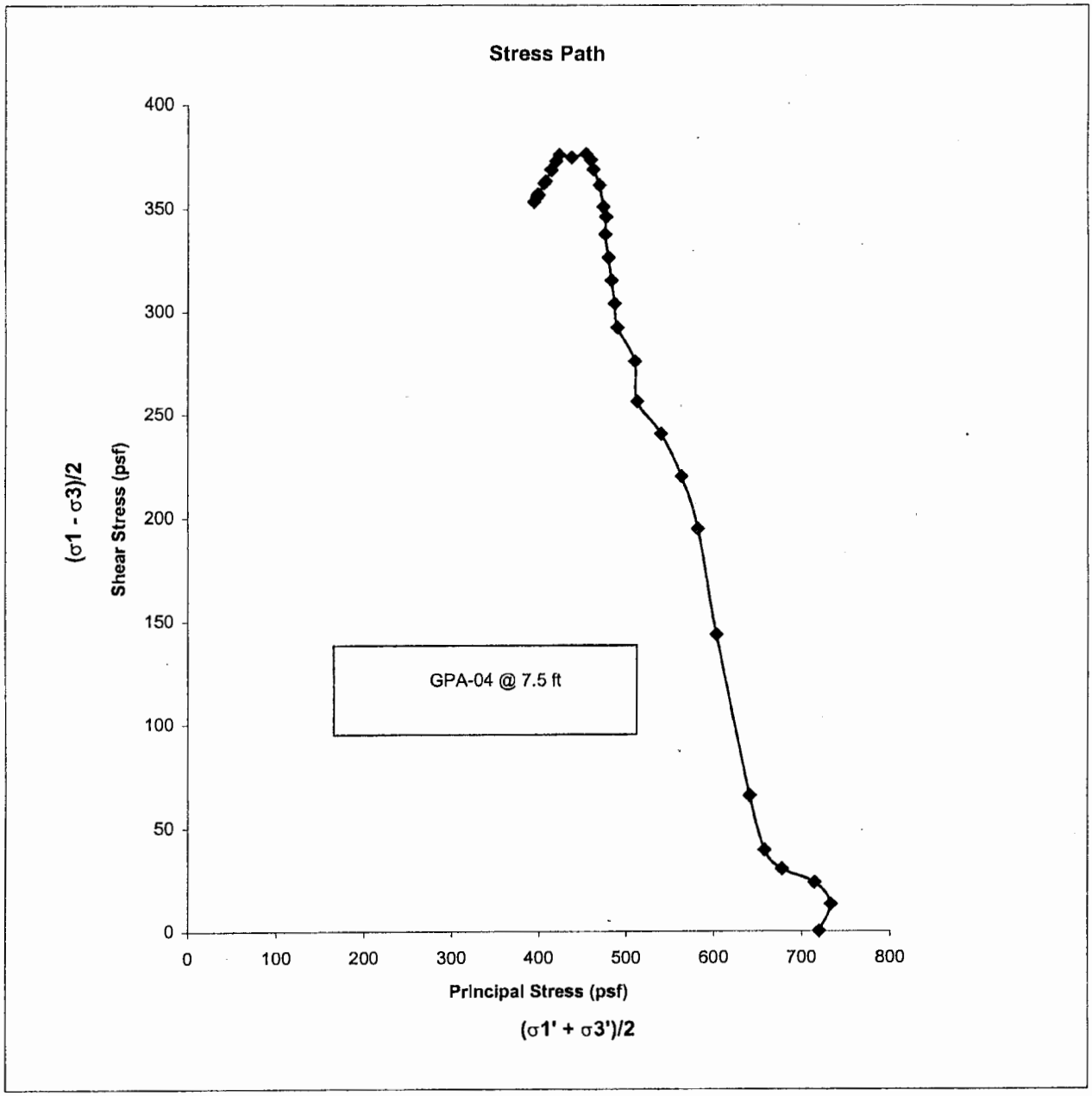
Project Number	FT24	LVDT	Load Cell	Strain Ratio	Corrected Area	Deviator Stress	Corrected Stress	Pore Pressure	Δ U	Induced Pore Pressure	σ'3	σ'1	σ'1/σ'3	(σ1−σ3)/2	(σ'1+σ'3)/2
Units		.001"	lbs		ft^2	psf	psf	psi	psi	psf	psf	psf			
Sample #	GPA-04	0	0	0	0.0381	0	0	15.0	0.0	0	720	720	1	0	720
Depth	7.5	5	1	0.001	0.0381	26	26	15.0	0.0	0	720	746	1.04	13	733
Cell pressure	20	10	1.8	0.002	0.0382	47	47	15.2	0.2	29	691	738	1.07	24	715
Back Pressure	15	15	2.3	0.002	0.0382	60	60	15.5	0.5	72	648	708	1.09	30	678
Strain Rate	0.002	20	3	0.003	0.0382	78	78	15.7	0.7	101	619	697	1.13	39	658
Initial Platten Height	0	25	5	0.004	0.0383	131	130	16.0	1.0	144	576	706	1.23	65	641
Initial Load Cell Reading	0	50	11	0.008	0.0384	286	284	16.8	1.8	259	461	745	1.62	143	603
Initial Length	6.309	75	15	0.012	0.0386	389	386	17.3	2.3	331	389	775	1.99	194	582
Initial Area	0.0381	100	17	0.016	0.0387	439	435	17.6	2.6	374	346	781	2.26	220	563
Height after Saturation	6.299	132	18.7	0.021	0.0389	480	475	17.9	2.9	418	302	778	2.57	240	540
Height after Consolidation	6.284	150	20	0.024	0.0390	512	506	18.2	3.2	461	259	766	2.95	256	512
		175	21.6	0.028	0.0392	551	544	18.4	3.4	482	238	782	3.29	276	510
		205	23	0.033	0.0394	584	576	18.6	3.6	518	202	778	3.86	292	490
		225	24	0.036	0.0395	607	599	18.7	3.7	533	187	786	4.20	304	487
		251	25	0.040	0.0397	630	620	18.8	3.8	547	173	793	4.59	315	483
		277	26	0.044	0.0399	652	642	18.9	3.9	562	158	800	5.05	326	479
		300	27	0.048	0.0400	675	663	19.0	4.0	576	144	807	5.61	337	476
		325	27.8	0.052	0.0402	692	679	19.1	4.1	583	137	816	5.97	346	477
		350	28.3	0.056	0.0404	701	688	19.1	4.1	590	130	818	6.31	351	474
		384	29.3	0.061	0.0406	722	708	19.2	4.2	605	115	823	7.14	361	469
		400	30	0.064	0.0407	737	722	19.3	4.3	619	101	823	8.16	369	462
		425	30.5	0.068	0.0409	746	730	19.4	4.4	626	94	824	8.80	373	459
		475	31	0.076	0.0412	752	734	19.4	4.4	634	86	821	9.50	376	454
		500	31	0.080	0.0414	749	730	19.5	4.5	648	72	802	11.14	374	437
		575	31.5	0.092	0.0419	751	730	19.6	4.6	662	58	788	13.68	376	423
		604	31.4	0.096	0.0422	745	723	19.6	4.6	662	58	781	13.55	372	419
		650	31.3	0.103	0.0425	736	713	19.6	4.6	662	58	771	13.38	368	414
		700	31.6	0.111	0.0429	737	712	19.6	4.6	662	58	770	13.36	368	414
		750	31.4	0.119	0.0433	726	699	19.6	4.6	662	58	757	13.14	363	407
		800	31.6	0.127	0.0437	724	696	19.6	4.6	662	58	753	13.08	362	405
		850	31.4	0.135	0.0441	713	683	19.6	4.6	662	58	741	12.86	356	399
		900	31.6	0.143	0.0445	711	680	19.6	4.6	662	58	737	12.80	355	397
		950	32	0.151	0.04489	713	681	19.6	4.6	662	58	738	12.81	356	398
		1000	32	0.159	0.045315	706	672	19.6	4.6	662	58	730	12.67	353	394



Sample	Depth	Water Content		Void Ratio		Saturation		Unit Weight		Pressure		
Number	feet	Initial	Final	Initial	Final	Initial	Final	Initial Wet	Initial Dry	Consol	Cell	Back
GPA-04	7.5	215.1	188.6	2.943	2.548	1.030	1.043	70.3	24.4	5	20	15



Sample	Depth	Water Content		Void Ratio		Saturation		Unit Weight		Pressure		
Number	Feet	Initial	Final	Initial	Final	Initial	Final	Initial Wet	Initial Dry	Consol	Cell	Back
GPA-04	7.5	215.1	188.6	2.943	2.548	1.030	1.043	70.3	24.4	5.0	20.0	15.0


Stress Path
400
350
300
250
200
150
100
50
0
(σ1 - σ3)/2
Shear Stress (psf)
GPA-04 @ 7.5 ft
0
100
200
300
400
500
600
700
800
Principal Stress (psf)
(σ1' + σ3')/2

ANCHOR
ENVIRONMENTAL, L.L.C.

Appendix C

Chemistry Data

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-025D-A
SAMPLE

Lab Sample ID: FS37A
LIMS ID: 03-10320
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/25/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/20/03 14:06
Instrument/Analyst: FINN8/Van
GPC Cleanup: NO

Sample Amount: 5.20 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 85.3%
pH: 7.3

CAS Number	Analyte	µg/kg	
108-95-2	**Phenol**	**1,900**	
541-73-1	1,3-Dichlorobenzene	96	U
106-46-7	1,4-Dichlorobenzene	96	U
100-51-6	Benzyl Alcohol	96	U
95-50-1	1,2-Dichlorobenzene	96	U
95-48-7	**2-Methylphenol**	**270**	
106-44-5	**4-Methylphenol**	**80,000**	**E** R
105-67-9	2,4-Dimethylphenol	96	U
65-85-0	Benzoic Acid	960	U
120-82-1	1,2,4-Trichlorobenzene	96	U
91-20-3	**Naphthalene**	**8,400**	**E** R
87-68-3	Hexachlorobutadiene	96	U
91-57-6	**2-Methylnaphthalene**	**300**	
131-11-3	Dimethylphthalate	96	U
208-96-8	**Acenaphthylene**	**860**	
83-32-9	**Acenaphthene**	**350**	
84-66-2	Diethylphthalate	96	U
86-73-7	**Fluorene**	**130**	
86-30-6	N-Nitrosodiphenylamine	96	U
118-74-1	Hexachlorobenzene	96	U
87-86-5	Pentachlorophenol	480	U
85-01-8	**Phenanthrene**	**1,500**	
120-12-7	**Anthracene**	**130**	
84-74-2	Di-n-Butylphthalate	96	U
206-44-0	**Fluoranthene**	**920**	
129-00-0	**Pyrene**	**700**	
85-68-7	Butylbenzylphthalate	96	U
56-55-3	Benzo(a)anthracene	96	U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**1,000**	**B**
218-01-9	Chrysene	96	U
117-84-0	Di-n-Octyl phthalate	96	U
205-99-2	Benzo(b)fluoranthene	96	U
207-08-9	Benzo(k)fluoranthene	96	U
50-32-8	Benzo(a)pyrene	96	U
193-39-5	Indeno(1,2,3-cd)pyrene	96	U
53-70-3	Dibenz(a,h)anthracene	96	U
191-24-2	Benzo(g,h,i)perylene	96	U

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.2%	2-Fluorobiphenyl	80.4%
d14-p-Terphenyl	86.0%	d4-1,2-Dichlorobenzene	55.2%
d5-Phenol	82.4%	2-Fluorophenol	86.4%
2,4,6-Tribromophenol	87.7%	d4-2-Chlorophenol	73.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-025D-A
DILUTION

Lab Sample ID: FS37A
LIMS ID: 03-10320
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/25/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 15:57
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.20 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 30.0
Percent Moisture: 85.3%
pH: 7.3

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	2,900 U	R
541-73-1	1,3-Dichlorobenzene	2,900 U	
106-46-7	1,4-Dichlorobenzene	2,900 U	
100-51-6	Benzyl Alcohol	2,900 U	
95-50-1	1,2-Dichlorobenzene	2,900 U	
95-48-7	2-Methylphenol	2,900 U	
106-44-5	**4-Methylphenol**	**170,000**	
105-67-9	2,4-Dimethylphenol	2,900 U	R
65-85-0	Benzoic Acid	29,000 U	
120-82-1	1,2,4-Trichlorobenzene	2,900 U	
91-20-3	**Naphthalene**	**15,000**	
87-68-3	Hexachlorobutadiene	2,900 U	R
91-57-6	2-Methylnaphthalene	2,900 U	
131-11-3	Dimethylphthalate	2,900 U	
208-96-8	Acenaphthylene	2,900 U	
83-32-9	Acenaphthene	2,900 U	
84-66-2	Diethylphthalate	2,900 U	
86-73-7	Fluorene	2,900 U	
86-30-6	N-Nitrosodiphenylamine	2,900 U	
118-74-1	Hexachlorobenzene	2,900 U	
87-86-5	Pentachlorophenol	14,000 U	
85-01-8	Phenanthrene	2,900 U	
120-12-7	Anthracene	2,900 U	
84-74-2	Di-n-Butylphthalate	2,900 U	
206-44-0	Fluoranthene	2,900 U	
129-00-0	Pyrene	2,900 U	
85-68-7	Butylbenzylphthalate	2,900 U	
56-55-3	Benzo(a)anthracene	2,900 U	
117-81-7	bis(2-Ethylhexyl)phthalate	2,900 U	
218-01-9	Chrysene	2,900 U	
117-84-0	Di-n-Octyl phthalate	2,900 U	
205-99-2	Benzo(b)fluoranthene	2,900 U	
207-08-9	Benzo(k)fluoranthene	2,900 U	
50-32-8	Benzo(a)pyrene	2,900 U	
193-39-5	Indeno(1,2,3-cd)pyrene	2,900 U	
53-70-3	Dibenz(a,h)anthracene	2,900 U	
191-24-2	Benzo(g,h,i)perylene	2,900 U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-025D-B
SAMPLE

Lab Sample ID: FS37B
LIMS ID: 03-10321
Matrix: Sediment
Data Release Authorized: AMB
Reported: 08/27/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/25/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/20/03 17:18
Instrument/Analyst: FINN8/LJR
GPC Cleanup: NO

Sample Amount: 0.48 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 77.2%
pH: 7.5

CAS Number	Analyte	µg/kg	
108-95-2	**Phenol**	**1,200**	R
541-73-1	1,3-Dichlorobenzene	1,000 U	
106-46-7	1,4-Dichlorobenzene	1,000 U	
100-51-6	Benzyl Alcohol	1,000 U	
95-50-1	1,2-Dichlorobenzene	1,000 U	
95-48-7	2-Methylphenol	1,000 U	
106-44-5	**4-Methylphenol**	**47,000**	
105-67-9	2,4-Dimethylphenol	1,000 U	
65-85-0	Benzoic Acid	10,000 U	
120-82-1	1,2,4-Trichlorobenzene	1,000 U	
91-20-3	**Naphthalene**	**34,000**	
87-68-3	Hexachlorobutadiene	1,000 U	
91-57-6	**2-Methylnaphthalene**	**1,800**	
131-11-3	Dimethylphthalate	1,000 U	
208-96-8	**Acenaphthylene**	**5,900**	
83-32-9	**Acenaphthene**	**2,200**	
84-66-2	Diethylphthalate	1,000 U	
86-73-7	**Fluorene**	**1,200**	
86-30-6	N-Nitrosodiphenylamine	1,000 U	
118-74-1	Hexachlorobenzene	1,000 U	
87-86-5	Pentachlorophenol	5,200 U	
85-01-8	**Phenanthrene**	**30,000**	
120-12-7	**Anthracene**	**3,500**	
84-74-2	Di-n-Butylphthalate	1,000 U	
206-44-0	**Fluoranthene**	**32,000**	
129-00-0	**Pyrene**	**32,000**	
85-68-7	Butylbenzylphthalate	1,000 U	
56-55-3	**Benzo(a)anthracene**	**2,600**	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**1,800 B**	
218-01-9	**Chrysene**	**4,700**	
117-84-0	Di-n-Octyl phthalate	1,000 U	
205-99-2	**Benzo(b)fluoranthene**	**3,800**	
207-08-9	**Benzo(k)fluoranthene**	**5,300**	
50-32-8	**Benzo(a)pyrene**	**4,200**	
193-39-5	**Indeno(1,2,3-cd)pyrene**	**NV**	
53-70-3	**Dibenz(a,h)anthracene**	**NV**	
191-24-2	**Benzo(g,h,i)perylene**	**NV**	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.0%	2-Fluorobiphenyl	68.0%
d14-p-Terphenyl	73.6%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	67.2%	2-Fluorophenol	73.9%
2,4,6-Tribromophenol	75.2%	d4-2-Chlorophenol	67.5%

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS
Page 1 of 1

Sample ID: GPA-025D-B
REANALYSIS

Lab Sample ID: FS37B
LIMS ID: 03-10321
Matrix: Sediment
Data Release Authorized:
Reported: 08/27/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/25/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/27/03 14:12
Instrument/Analyst: NT6/LJR
GPC Cleanup: NO

Sample Amount: 0.48 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 77.2%
pH: 7.5

CAS Number	Analyte	µg/kg	
108-95-2	**Phenol**	**1,300**	
541-73-1	1,3-Dichlorobenzene	1,000	U
106-46-7	1,4-Dichlorobenzene	1,000	U
100-51-6	Benzyl Alcohol	1,000	U
95-50-1	1,2-Dichlorobenzene	1,000	U
95-48-7	2-Methylphenol	1,000	U
106-44-5	**4-Methylphenol**	**56,000**	
105-67-9	2,4-Dimethylphenol	1,000	U
65-85-0	Benzoic Acid	10,000	U
120-82-1	1,2,4-Trichlorobenzene	1,000	U
91-20-3	**Naphthalene**	**40,000**	
87-68-3	Hexachlorobutadiene	1,000	U
91-57-6	**2-Methylnaphthalene**	**2,300**	
131-11-3	Dimethylphthalate	1,000	U
208-96-8	**Acenaphthylene**	**6,500**	
83-32-9	**Acenaphthene**	**2,500**	
84-66-2	Diethylphthalate	1,000	U
86-73-7	**Fluorene**	**1,700**	
86-30-6	N-Nitrosodiphenylamine	1,000	U
118-74-1	Hexachlorobenzene	1,000	U
87-86-5	Pentachlorophenol	5,200	U
85-01-8	**Phenanthrene**	**32,000**	
120-12-7	**Anthracene**	**3,200**	
84-74-2	Di-n-Butylphthalate	1,600	Y
206-44-0	**Fluoranthene**	**37,000**	
129-00-0	**Pyrene**	**35,000**	
85-68-7	Butylbenzylphthalate	1,300	Y
56-55-3	**Benzo(a)anthracene**	**3,700**	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**2,100**	**B**
218-01-9	**Chrysene**	**5,000**	
117-84-0	Di-n-Octyl phthalate	1,000	U
205-99-2	**Benzo(b)fluoranthene**	**5,400**	
207-08-9	**Benzo(k)fluoranthene**	**6,200**	
50-32-8	**Benzo(a)pyrene**	**4,400**	
193-39-5	**Indeno(1,2,3-cd)pyrene**	**4,900**	
53-70-3	**Dibenz(a,h)anthracene**	**1,600**	**M**
191-24-2	**Benzo(g,h,i)perylene**	**4,900**	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	82.8%	2-Fluorobiphenyl	79.2%
d14-p-Terphenyl	110%	d4-1,2-Dichlorobenzene	61.6%
d5-Phenol	79.2%	2-Fluorophenol	76.3%
2,4,6-Tribromophenol	83.5%	d4-2-Chlorophenol	74.9%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-025D-D
SAMPLE

Lab Sample ID: FS37C
LIMS ID: 03-10322
Matrix: Sediment
Data Release Authorized: [signature]
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/18/03 19:33
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 26.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 22.5%
pH: 7.8

CAS Number	Analyte	µg/kg
108-95-2	Phenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	19 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
106-44-5	**4-Methylphenol**	**140**
105-67-9	2,4-Dimethylphenol	19 U
65-85-0	Benzoic Acid	190 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	**Naphthalene**	**100**
87-68-3	Hexachlorobutadiene	19 U
91-57-6	2-Methylnaphthalene	19 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
83-32-9	Acenaphthene	19 U
84-66-2	**Diethylphthalate**	**31**
86-73-7	Fluorene	19 U
86-30-6	N-Nitrosodiphenylamine	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	96 U
85-01-8	**Phenanthrene**	**93**
120-12-7	Anthracene	19 U
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	**Fluoranthene**	**94**
129-00-0	**Pyrene**	**86**
85-68-7	**Butylbenzylphthalate**	**21**
56-55-3	Benzo(a)anthracene	19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~240~~ 240 U
218-01-9	Chrysene	19 U
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	19 U
207-08-9	Benzo(k)fluoranthene	19 U
50-32-8	Benzo(a)pyrene	19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19 U
53-70-3	Dibenz(a,h)anthracene	19 U
191-24-2	Benzo(g,h,i)perylene	19 U

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.0%	2-Fluorobiphenyl	73.0%
d14-p-Terphenyl	74.8%	d4-1,2-Dichlorobenzene	59.8%
d5-Phenol	71.9%	2-Fluorophenol	78.3%
2,4,6-Tribromophenol	113%	d4-2-Chlorophenol	71.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-035D-A
SAMPLE

Lab Sample ID: FS37D
LIMS ID: 03-10323
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 12:33
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.09 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 88.8%
pH: 6.9

CAS Number	Analyte	µg/kg	
108-95-2	**Phenol**	1,000	
541-73-1	1,3-Dichlorobenzene	98	U
106-46-7	1,4-Dichlorobenzene	98	U
100-51-6	Benzyl Alcohol	98	U
95-50-1	1,2-Dichlorobenzene	98	U
95-48-7	2-Methylphenol	98	U
106-44-5	**4-Methylphenol**	53,000	E R
105-67-9	2,4-Dimethylphenol	98	U
65-85-0	Benzoic Acid	980	U
120-82-1	1,2,4-Trichlorobenzene	98	U
91-20-3	**Naphthalene**	5,700	
87-68-3	Hexachlorobutadiene	98	U
91-57-6	**2-Methylnaphthalene**	270	
131-11-3	Dimethylphthalate	98	U
208-96-8	**Acenaphthylene**	500	
83-32-9	**Acenaphthene**	240	
84-66-2	Diethylphthalate	98	U
86-73-7	**Fluorene**	200	
86-30-6	N-Nitrosodiphenylamine	98	U
118-74-1	Hexachlorobenzene	98	U
87-86-5	Pentachlorophenol	490	U
85-01-8	**Phenanthrene**	1,500	
120-12-7	**Anthracene**	170	
84-74-2	Di-n-Butylphthalate	98	U
206-44-0	**Fluoranthene**	960	
129-00-0	**Pyrene**	700	
85-68-7	Butylbenzylphthalate	98	U
56-55-3	Benzo(a)anthracene	98	U
117-81-7	**bis(2-Ethylhexyl)phthalate**	1,400	B
218-01-9	Chrysene	98	U
117-84-0	Di-n-Octyl phthalate	98	U
205-99-2	Benzo(b)fluoranthene	98	U
207-08-9	Benzo(k)fluoranthene	98	U
50-32-8	Benzo(a)pyrene	98	U
193-39-5	Indeno(1,2,3-cd)pyrene	98	U
53-70-3	Dibenz(a,h)anthracene	98	U
191-24-2	Benzo(g,h,i)perylene	98	U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	85.2%	2-Fluorobiphenyl	78.8%
d14-p-Terphenyl	75.6%	d4-1,2-Dichlorobenzene	66.4%
d5-Phenol	93.3%	2-Fluorophenol	55.7%
2,4,6-Tribromophenol	79.2%	d4-2-Chlorophenol	74.4%

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

000025

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-035D-A
DILUTION

Lab Sample ID: FS37D
LIMS ID: 03-10323
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 16:39
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.09 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 88.8%
pH: 6.9

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	2,000 U	R
541-73-1	1,3-Dichlorobenzene	2,000 U	
106-46-7	1,4-Dichlorobenzene	2,000 U	
100-51-6	Benzyl Alcohol	2,000 U	
95-50-1	1,2-Dichlorobenzene	2,000 U	
95-48-7	2-Methylphenol	2,000 U	
106-44-5	**4-Methylphenol**	**98,000**	
105-67-9	2,4-Dimethylphenol	2,000 U	R
65-85-0	Benzoic Acid	20,000 U	
120-82-1	1,2,4-Trichlorobenzene	2,000 U	
91-20-3	**Naphthalene**	**7,600**	
87-68-3	Hexachlorobutadiene	2,000 U	
91-57-6	2-Methylnaphthalene	2,000 U	
131-11-3	Dimethylphthalate	2,000 U	
208-96-8	Acenaphthylene	2,000 U	
83-32-9	Acenaphthene	2,000 U	
84-66-2	Diethylphthalate	2,000 U	
86-73-7	Fluorene	2,000 U	
86-30-6	N-Nitrosodiphenylamine	2,000 U	
118-74-1	Hexachlorobenzene	2,000 U	
87-86-5	Pentachlorophenol	9,800 U	
85-01-8	Phenanthrene	2,000 U	
120-12-7	Anthracene	2,000 U	
84-74-2	Di-n-Butylphthalate	2,000 U	
206-44-0	Fluoranthene	2,000 U	
129-00-0	Pyrene	2,000 U	
85-68-7	Butylbenzylphthalate	2,000 U	
56-55-3	Benzo(a)anthracene	2,000 U	
117-81-7	bis(2-Ethylhexyl)phthalate	2,000 U	
218-01-9	Chrysene	2,000 U	
117-84-0	Di-n-Octyl phthalate	2,000 U	
205-99-2	Benzo(b)fluoranthene	2,000 U	
207-08-9	Benzo(k)fluoranthene	2,000 U	
50-32-8	Benzo(a)pyrene	2,000 U	
193-39-5	Indeno(1,2,3-cd)pyrene	2,000 U	
53-70-3	Dibenz(a,h)anthracene	2,000 U	
191-24-2	Benzo(g,h,i)perylene	2,000 U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-035D-B
SAMPLE

Lab Sample ID: FS37E
LIMS ID: 03-10324
Matrix: Sediment
Data Release Authorized: BB
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 13:17
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.06 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 87.4%
pH: 7.1

CAS Number	Analyte	µg/kg	
108-95-2	**Phenol**	**520**	
541-73-1	1,3-Dichlorobenzene	99	U
106-46-7	1,4-Dichlorobenzene	99	U
100-51-6	Benzyl Alcohol	99	U
95-50-1	1,2-Dichlorobenzene	99	U
95-48-7	2-Methylphenol	99	U
106-44-5	**4-Methylphenol**	**32,000**	**E** R
105-67-9	2,4-Dimethylphenol	99	U
65-85-0	Benzoic Acid	990	U
120-82-1	1,2,4-Trichlorobenzene	99	U
91-20-3	**Naphthalene**	**6,600**	
87-68-3	Hexachlorobutadiene	99	U
91-57-6	**2-Methylnaphthalene**	**390**	
131-11-3	Dimethylphthalate	99	U
208-96-8	**Acenaphthylene**	**630**	
83-32-9	**Acenaphthene**	**480**	
84-66-2	Diethylphthalate	99	U
86-73-7	**Fluorene**	**320**	
86-30-6	N-Nitrosodiphenylamine	99	U
118-74-1	Hexachlorobenzene	99	U
87-86-5	Pentachlorophenol	490	U
85-01-8	**Phenanthrene**	**2,800**	
120-12-7	**Anthracene**	**300**	
84-74-2	Di-n-Butylphthalate	99	U
206-44-0	**Fluoranthene**	**1,900**	
129-00-0	**Pyrene**	**1,700**	
85-68-7	Butylbenzylphthalate	99	U
56-55-3	Benzo(a)anthracene	99	U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**3,600**	**B**
218-01-9	Chrysene	99	U
117-84-0	Di-n-Octyl phthalate	99	U
205-99-2	**Benzo(b)fluoranthene**	**240**	
207-08-9	**Benzo(k)fluoranthene**	**220**	
50-32-8	**Benzo(a)pyrene**	**200**	**M**
193-39-5	Indeno(1,2,3-cd)pyrene	99	U
53-70-3	Dibenz(a,h)anthracene	99	U
191-24-2	Benzo(g,h,i)perylene	400	Y

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

Semivolatile Surrogate Recovery

d5-Nitrobenzene	76.8%	2-Fluorobiphenyl	82.0%
d14-p-Terphenyl	98.4%	d4-1,2-Dichlorobenzene	66.0%
d5-Phenol	89.1%	2-Fluorophenol	72.0%
2,4,6-Tribromophenol	72.5%	d4-2-Chlorophenol	78.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-035D-B
DILUTION

Lab Sample ID: FS37E
LIMS ID: 03-10324
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 17:27
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.06 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 87.4%
pH: 7.1

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	2,000 U	R
541-73-1	1,3-Dichlorobenzene	2,000 U	
106-46-7	1,4-Dichlorobenzene	2,000 U	
100-51-6	Benzyl Alcohol	2,000 U	
95-50-1	1,2-Dichlorobenzene	2,000 U	
95-48-7	2-Methylphenol	2,000 U	
106-44-5	**4-Methylphenol**	**48,000**	
105-67-9	2,4-Dimethylphenol	2,000 U	R
65-85-0	Benzoic Acid	20,000 U	
120-82-1	1,2,4-Trichlorobenzene	2,000 U	
91-20-3	**Naphthalene**	**9,800**	
87-68-3	Hexachlorobutadiene	2,000 U	
91-57-6	2-Methylnaphthalene	2,000 U	
131-11-3	Dimethylphthalate	2,000 U	
208-96-8	Acenaphthylene	2,000 U	
83-32-9	Acenaphthene	2,000 U	
84-66-2	Diethylphthalate	2,000 U	
86-73-7	Fluorene	2,000 U	
86-30-6	N-Nitrosodiphenylamine	2,000 U	
118-74-1	Hexachlorobenzene	2,000 U	
87-86-5	Pentachlorophenol	9,900 U	
85-01-8	**Phenanthrene**	**3,100**	
120-12-7	Anthracene	2,000 U	
84-74-2	Di-n-Butylphthalate	2,000 U	
206-44-0	**Fluoranthene**	**2,000**	
129-00-0	Pyrene	2,000 U	
85-68-7	Butylbenzylphthalate	2,000 U	
56-55-3	Benzo(a)anthracene	2,000 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**3,100 B**	
218-01-9	Chrysene	2,000 U	
117-84-0	Di-n-Octyl phthalate	2,000 U	
205-99-2	Benzo(b)fluoranthene	2,000 U	
207-08-9	Benzo(k)fluoranthene	2,000 U	
50-32-8	Benzo(a)pyrene	2,000 U	
193-39-5	Indeno(1,2,3-cd)pyrene	2,000 U	
53-70-3	Dibenz(a,h)anthracene	2,000 U	
191-24-2	Benzo(g,h,i)perylene	2,000 U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-035D-C
SAMPLE

Lab Sample ID: FS37F
LIMS ID: 03-10325
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/18/03 21:56
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 29.5%
pH: 7.6

CAS Number	Analyte	µg/kg
108-95-2	**Phenol**	36
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	19 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
106-44-5	**4-Methylphenol**	1,100
105-67-9	2,4-Dimethylphenol	19 U
65-85-0	Benzoic Acid	190 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	**Naphthalene**	610
87-68-3	Hexachlorobutadiene	19 U
91-57-6	**2-Methylnaphthalene**	45
131-11-3	Dimethylphthalate	19 U
208-96-8	**Acenaphthylene**	82
83-32-9	**Acenaphthene**	45
84-66-2	**Diethylphthalate**	50
86-73-7	**Fluorene**	41
86-30-6	N-Nitrosodiphenylamine	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	96 U
85-01-8	**Phenanthrene**	580
120-12-7	**Anthracene**	67
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	**Fluoranthene**	610
129-00-0	**Pyrene**	490
85-68-7	Butylbenzylphthalate	19 U
56-55-3	**Benzo(a)anthracene**	54 M
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~160 M~~ 160 U
218-01-9	**Chrysene**	99 M
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	**Benzo(b)fluoranthene**	110 M
207-08-9	**Benzo(k)fluoranthene**	94 M
50-32-8	**Benzo(a)pyrene**	98 M
193-39-5	**Indeno(1,2,3-cd)pyrene**	67 M
53-70-3	Dibenz(a,h)anthracene	19 U
191-24-2	Benzo(g,h,i)perylene	51 Y

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.6%	2-Fluorobiphenyl	74.4%
d14-p-Terphenyl	77.1%	d4-1,2-Dichlorobenzene	64.2%
d5-Phenol	74.2%	2-Fluorophenol	72.4%
2,4,6-Tribromophenol	108%	d4-2-Chlorophenol	78.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-035D-D
SAMPLE

Lab Sample ID: FS37G
LIMS ID: 03-10326
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/19/03 13:24
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 18.2%
pH: 7.7

CAS Number	Analyte	µg/kg
108-95-2	Phenol	20 U
541-73-1	1,3-Dichlorobenzene	20 U
106-46-7	1,4-Dichlorobenzene	20 U
100-51-6	Benzyl Alcohol	20 U
95-50-1	1,2-Dichlorobenzene	20 U
95-48-7	2-Methylphenol	20 U
106-44-5	**4-Methylphenol**	**70**
105-67-9	2,4-Dimethylphenol	20 U
65-85-0	Benzoic Acid	200 U
120-82-1	1,2,4-Trichlorobenzene	20 U
91-20-3	**Naphthalene**	**45**
87-68-3	Hexachlorobutadiene	20 U
91-57-6	2-Methylnaphthalene	20 U
131-11-3	Dimethylphthalate	20 U
208-96-8	Acenaphthylene	20 U
83-32-9	Acenaphthene	20 U
84-66-2	Diethylphthalate	20 U
86-73-7	Fluorene	20 U
86-30-6	N-Nitrosodiphenylamine	20 U
118-74-1	Hexachlorobenzene	20 U
87-86-5	Pentachlorophenol	98 U
85-01-8	**Phenanthrene**	**60**
120-12-7	Anthracene	20 U
84-74-2	Di-n-Butylphthalate	20 U
206-44-0	**Fluoranthene**	**69**
129-00-0	**Pyrene**	**54**
85-68-7	Butylbenzylphthalate	20 U
56-55-3	Benzo(a)anthracene	20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~74~~ 744
218-01-9	Chrysene	20 U
117-84-0	Di-n-Octyl phthalate	20 U
205-99-2	Benzo(b)fluoranthene	20 U
207-08-9	Benzo(k)fluoranthene	20 U
50-32-8	Benzo(a)pyrene	20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20 U
53-70-3	Dibenz(a,h)anthracene	20 U
191-24-2	**Benzo(g,h,i)perylene**	**23**

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.0%	2-Fluorobiphenyl	64.3%
d14-p-Terphenyl	67.6%	d4-1,2-Dichlorobenzene	53.4%
d5-Phenol	72.9%	2-Fluorophenol	88.2%
2,4,6-Tribromophenol	98.3%	d4-2-Chlorophenol	70.9%

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-015D-A
SAMPLE

Lab Sample ID: FS37H
LIMS ID: 03-10327
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 14:15
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.06 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 92.3%
pH: 6.8

CAS Number	Analyte	µg/kg		
108-95-2	**Phenol**	**910**		
541-73-1	1,3-Dichlorobenzene	99	U	
106-46-7	1,4-Dichlorobenzene	99	U	
100-51-6	Benzyl Alcohol	99	U	
95-50-1	1,2-Dichlorobenzene	99	U	
95-48-7	2-Methylphenol	99	U	
106-44-5	**4-Methylphenol**	**43,000**	**E**	R
105-67-9	2,4-Dimethylphenol	99	U	
65-85-0	Benzoic Acid	990	U	
120-82-1	1,2,4-Trichlorobenzene	99	U	
91-20-3	**Naphthalene**	**7,800**		
87-68-3	Hexachlorobutadiene	99	U	
91-57-6	**2-Methylnaphthalene**	**270**		
131-11-3	Dimethylphthalate	99	U	
208-96-8	**Acenaphthylene**	**940**		
83-32-9	**Acenaphthene**	**240**		
84-66-2	Diethylphthalate	99	U	
86-73-7	**Fluorene**	**270**		
86-30-6	N-Nitrosodiphenylamine	99	U	
118-74-1	Hexachlorobenzene	99	U	
87-86-5	Pentachlorophenol	490	U	
85-01-8	**Phenanthrene**	**3,400**		
120-12-7	**Anthracene**	**280**		
84-74-2	Di-n-Butylphthalate	99	U	
206-44-0	**Fluoranthene**	**2,600**		
129-00-0	**Pyrene**	**1,900**		
85-68-7	Butylbenzylphthalate	99	U	
56-55-3	**Benzo(a)anthracene**	**140**	**M**	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**23,000**	**BE**	R
218-01-9	**Chrysene**	**300**	**M**	
117-84-0	Di-n-Octyl phthalate	99	U	
205-99-2	**Benzo(b)fluoranthene**	**320**	**M**	
207-08-9	**Benzo(k)fluoranthene**	**260**	**M**	
50-32-8	**Benzo(a)pyrene**	**250**	**M**	
193-39-5	Indeno(1,2,3-cd)pyrene	99	U	
53-70-3	Dibenz(a,h)anthracene	99	U	
191-24-2	Benzo(g,h,i)perylene	99	U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	84.0%	2-Fluorobiphenyl	84.8%
d14-p-Terphenyl	75.2%	d4-1,2-Dichlorobenzene	68.4%
d5-Phenol	93.9%	2-Fluorophenol	77.9%
2,4,6-Tribromophenol	66.1%	d4-2-Chlorophenol	76.5%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS
Page 1 of 1

Sample ID: GPA-015D-A
DILUTION

Lab Sample ID: FS37H
LIMS ID: 03-10327
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 18:14
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.06 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 92.3%
pH: 6.8

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	2,000 U	R
541-73-1	1,3-Dichlorobenzene	2,000 U	
106-46-7	1,4-Dichlorobenzene	2,000 U	
100-51-6	Benzyl Alcohol	2,000 U	
95-50-1	1,2-Dichlorobenzene	2,000 U	
95-48-7	2-Methylphenol	2,000 U	
106-44-5	**4-Methylphenol**	**59,000**	
105-67-9	2,4-Dimethylphenol	2,000 U	R
65-85-0	Benzoic Acid	20,000 U	
120-82-1	1,2,4-Trichlorobenzene	2,000 U	
91-20-3	**Naphthalene**	**12,000**	
87-68-3	Hexachlorobutadiene	2,000 U	
91-57-6	2-Methylnaphthalene	2,000 U	
131-11-3	Dimethylphthalate	2,000 U	
208-96-8	Acenaphthylene	2,000 U	
83-32-9	Acenaphthene	2,000 U	
84-66-2	Diethylphthalate	2,000 U	
86-73-7	Fluorene	2,000 U	
86-30-6	N-Nitrosodiphenylamine	2,000 U	
118-74-1	Hexachlorobenzene	2,000 U	
87-86-5	Pentachlorophenol	9,900 U	
85-01-8	**Phenanthrene**	**3,600**	
120-12-7	Anthracene	2,000 U	
84-74-2	Di-n-Butylphthalate	2,000 U	
206-44-0	**Fluoranthene**	**2,200**	
129-00-0	**Pyrene**	**2,300**	
85-68-7	Butylbenzylphthalate	2,000 U	
56-55-3	Benzo(a)anthracene	2,000 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**34,000 B**	
218-01-9	Chrysene	2,000 U	R
117-84-0	Di-n-Octyl phthalate	2,000 U	
205-99-2	Benzo(b)fluoranthene	2,000 U	
207-08-9	Benzo(k)fluoranthene	2,000 U	
50-32-8	Benzo(a)pyrene	2,000 U	
193-39-5	Indeno(1,2,3-cd)pyrene	2,000 U	
53-70-3	Dibenz(a,h)anthracene	2,000 U	
191-24-2	Benzo(g,h,i)perylene	2,000 U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-015D-B
SAMPLE

Lab Sample ID: FS37I
LIMS ID: 03-10328
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 15:01
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.12 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 88.7%
pH: 7.4

CAS Number	Analyte	µg/kg		
108-95-2	**Phenol**	**560**		
541-73-1	1,3-Dichlorobenzene	98	U	
106-46-7	1,4-Dichlorobenzene	98	U	
100-51-6	Benzyl Alcohol	98	U	
95-50-1	1,2-Dichlorobenzene	98	U	
95-48-7	2-Methylphenol	98	U	
106-44-5	**4-Methylphenol**	**30,000**	**E**	R
105-67-9	2,4-Dimethylphenol	98	U	
65-85-0	Benzoic Acid	980	U	
120-82-1	1,2,4-Trichlorobenzene	98	U	
91-20-3	**Naphthalene**	**5,600**		
87-68-3	Hexachlorobutadiene	98	U	
91-57-6	**2-Methylnaphthalene**	**300**		
131-11-3	Dimethylphthalate	98	U	
208-96-8	**Acenaphthylene**	**510**		
83-32-9	**Acenaphthene**	**240**		
84-66-2	Diethylphthalate	98	U	
86-73-7	**Fluorene**	**260**		
86-30-6	N-Nitrosodiphenylamine	98	U	
118-74-1	Hexachlorobenzene	98	U	
87-86-5	Pentachlorophenol	490	U	
85-01-8	**Phenanthrene**	**2,800**		
120-12-7	**Anthracene**	**250**		
84-74-2	Di-n-Butylphthalate	98	U	
206-44-0	**Fluoranthene**	**2,100**		
129-00-0	**Pyrene**	**1,800**	**M**	
85-68-7	Butylbenzylphthalate	98	U	
56-55-3	Benzo(a)anthracene	98	U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	3,600	B	
218-01-9	Chrysene	98	U	
117-84-0	Di-n-Octyl phthalate	98	U	
205-99-2	**Benzo(b)fluoranthene**	**350**	**M**	
207-08-9	**Benzo(k)fluoranthene**	**310**	**M**	
50-32-8	**Benzo(a)pyrene**	**300**	**M**	
193-39-5	Indeno(1,2,3-cd)pyrene	98	U	R
53-70-3	Dibenz(a,h)anthracene	98	U	R
191-24-2	Benzo(g,h,i)perylene	240	Y	J

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.4%	2-Fluorobiphenyl	87.6%
d14-p-Terphenyl	152%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	89.1%	2-Fluorophenol	66.7%
2,4,6-Tribromophenol	73.1%	d4-2-Chlorophenol	76.3%

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-015D-B
DILUTION

Lab Sample ID: FS37I
LIMS ID: 03-10328
Matrix: Sediment
Data Release Authorized: GB
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 19:02
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.12 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 88.7%
pH: 7.4

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	2,000 U	R
541-73-1	1,3-Dichlorobenzene	2,000 U	
106-46-7	1,4-Dichlorobenzene	2,000 U	
100-51-6	Benzyl Alcohol	2,000 U	
95-50-1	1,2-Dichlorobenzene	2,000 U	
95-48-7	2-Methylphenol	2,000 U	
106-44-5	**4-Methylphenol**	**42,000**	
105-67-9	2,4-Dimethylphenol	2,000 U	R
65-85-0	Benzoic Acid	20,000 U	
120-82-1	1,2,4-Trichlorobenzene	2,000 U	
91-20-3	**Naphthalene**	**7,600**	
87-68-3	Hexachlorobutadiene	2,000 U	
91-57-6	2-Methylnaphthalene	2,000 U	
131-11-3	Dimethylphthalate	2,000 U	
208-96-8	Acenaphthylene	2,000 U	
83-32-9	Acenaphthene	2,000 U	
84-66-2	Diethylphthalate	2,000 U	
86-73-7	Fluorene	2,000 U	
86-30-6	N-Nitrosodiphenylamine	2,000 U	
118-74-1	Hexachlorobenzene	2,000 U	
87-86-5	Pentachlorophenol	9,800 U	
85-01-8	**Phenanthrene**	**3,000**	
120-12-7	Anthracene	2,000 U	
84-74-2	Di-n-Butylphthalate	2,000 U	
206-44-0	**Fluoranthene**	**2,100**	
129-00-0	**Pyrene**	**2,300**	
85-68-7	Butylbenzylphthalate	2,000 U	
56-55-3	Benzo(a)anthracene	2,000 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**2,000 B**	
218-01-9	Chrysene	2,000 U	
117-84-0	Di-n-Octyl phthalate	2,000 U	
205-99-2	Benzo(b)fluoranthene	2,000 U	
207-08-9	Benzo(k)fluoranthene	2,000 U	
50-32-8	Benzo(a)pyrene	2,000 U	
193-39-5	Indeno(1,2,3-cd)pyrene	2,000 U	
53-70-3	Dibenz(a,h)anthracene	2,000 U	
191-24-2	Benzo(g,h,i)perylene	2,000 U	R

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-015D-C
SAMPLE

Lab Sample ID: FS37J
LIMS ID: 03-10329
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/19/03 14:09
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 37.2%
pH: 7.5

CAS Number	Analyte	µg/kg
108-95-2	Phenol	20 U
541-73-1	1,3-Dichlorobenzene	20 U
106-46-7	1,4-Dichlorobenzene	20 U
100-51-6	Benzyl Alcohol	20 U
95-50-1	1,2-Dichlorobenzene	20 U
95-48-7	2-Methylphenol	20 U
106-44-5	**4-Methylphenol**	**540**
105-67-9	2,4-Dimethylphenol	20 U
65-85-0	Benzoic Acid	200 U
120-82-1	1,2,4-Trichlorobenzene	20 U
91-20-3	**Naphthalene**	**260**
87-68-3	Hexachlorobutadiene	20 U
91-57-6	**2-Methylnaphthalene**	**41**
131-11-3	Dimethylphthalate	20 U
208-96-8	**Acenaphthylene**	**29**
83-32-9	**Acenaphthene**	**20**
84-66-2	Diethylphthalate	20 U
86-73-7	**Fluorene**	**23**
86-30-6	N-Nitrosodiphenylamine	20 U
118-74-1	Hexachlorobenzene	20 U
87-86-5	Pentachlorophenol	98 U
85-01-8	**Phenanthrene**	**290**
120-12-7	**Anthracene**	**24**
84-74-2	Di-n-Butylphthalate	20 U
206-44-0	**Fluoranthene**	**280**
129-00-0	**Pyrene**	**240**
85-68-7	Butylbenzylphthalate	20 U
56-55-3	Benzo(a)anthracene	20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~130~~ 1304
218-01-9	Chrysene	20 U
117-84-0	Di-n-Octyl phthalate	20 U
205-99-2	**Benzo(b)fluoranthene**	**51 M**
207-08-9	**Benzo(k)fluoranthene**	**43 M**
50-32-8	**Benzo(a)pyrene**	**22 M**
193-39-5	Indeno(1,2,3-cd)pyrene	20 U
53-70-3	Dibenz(a,h)anthracene	20 U
191-24-2	Benzo(g,h,i)perylene	20 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.3%	2-Fluorobiphenyl	65.7%
d14-p-Terphenyl	66.4%	d4-1,2-Dichlorobenzene	57.7%
d5-Phenol	72.7%	2-Fluorophenol	82.3%
2,4,6-Tribromophenol	90.7%	d4-2-Chlorophenol	72.6%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-015D-D
SAMPLE

Lab Sample ID: FS37K
LIMS ID: 03-10330
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/19/03 14:57
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 26.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 19.8%
pH: 7.9

CAS Number	Analyte	µg/kg
108-95-2	Phenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	19 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
106-44-5	4-Methylphenol	19 U
105-67-9	2,4-Dimethylphenol	19 U
65-85-0	Benzoic Acid	190 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	Naphthalene	19 U
87-68-3	Hexachlorobutadiene	19 U
91-57-6	2-Methylnaphthalene	19 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
83-32-9	Acenaphthene	19 U
84-66-2	Diethylphthalate	19 U
86-73-7	Fluorene	19 U
86-30-6	N-Nitrosodiphenylamine	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	96 U
85-01-8	Phenanthrene	19 U
120-12-7	Anthracene	19 U
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	Fluoranthene	19 U
129-00-0	Pyrene	19 U
85-68-7	**Butylbenzylphthalate**	**160**
56-55-3	Benzo(a)anthracene	19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~240~~ 2404
218-01-9	Chrysene	19 U
117-84-0	**Di-n-Octyl phthalate**	**84**
205-99-2	Benzo(b)fluoranthene	19 U
207-08-9	Benzo(k)fluoranthene	19 U
50-32-8	Benzo(a)pyrene	19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19 U
53-70-3	Dibenz(a,h)anthracene	19 U
191-24-2	Benzo(g,h,i)perylene	19 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.2%	2-Fluorobiphenyl	64.9%
d14-p-Terphenyl	70.4%	d4-1,2-Dichlorobenzene	60.2%
d5-Phenol	72.2%	2-Fluorophenol	73.1%
2,4,6-Tribromophenol	110%	d4-2-Chlorophenol	70.2%

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-025D-A
SAMPLE

Lab Sample ID: FS37A
LIMS ID: 03-10320
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/25/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/20/03 14:06
Instrument/Analyst: FINN8/Van
GPC Cleanup: NO

Sample Amount: 5.20 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 85.3%
pH: 7.3

CAS Number	Analyte	µg/kg		
108-95-2	**Phenol**	**1,900**		
541-73-1	1,3-Dichlorobenzene	96	U	
106-46-7	1,4-Dichlorobenzene	96	U	
100-51-6	Benzyl Alcohol	96	U	
95-50-1	1,2-Dichlorobenzene	96	U	
95-48-7	**2-Methylphenol**	**270**		
106-44-5	**4-Methylphenol**	**80,000**	**E**	R
105-67-9	2,4-Dimethylphenol	96	U	
65-85-0	Benzoic Acid	960	U	
120-82-1	1,2,4-Trichlorobenzene	96	U	
91-20-3	**Naphthalene**	**8,400**	**E**	R
87-68-3	Hexachlorobutadiene	96	U	
91-57-6	**2-Methylnaphthalene**	**300**		
131-11-3	Dimethylphthalate	96	U	
208-96-8	**Acenaphthylene**	**860**		
83-32-9	**Acenaphthene**	**350**		
84-66-2	Diethylphthalate	96	U	
86-73-7	**Fluorene**	**130**		
86-30-6	N-Nitrosodiphenylamine	96	U	
118-74-1	Hexachlorobenzene	96	U	
87-86-5	Pentachlorophenol	480	U	
85-01-8	**Phenanthrene**	**1,500**		
120-12-7	**Anthracene**	**130**		
84-74-2	Di-n-Butylphthalate	96	U	
206-44-0	**Fluoranthene**	**920**		
129-00-0	**Pyrene**	**700**		
85-68-7	Butylbenzylphthalate	96	U	
56-55-3	Benzo(a)anthracene	96	U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**1,000**	**B**	
218-01-9	Chrysene	96	U	
117-84-0	Di-n-Octyl phthalate	96	U	
205-99-2	Benzo(b)fluoranthene	96	U	
207-08-9	Benzo(k)fluoranthene	96	U	
50-32-8	Benzo(a)pyrene	96	U	
193-39-5	Indeno(1,2,3-cd)pyrene	96	U	
53-70-3	Dibenz(a,h)anthracene	96	U	
191-24-2	Benzo(g,h,i)perylene	96	U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.2%	2-Fluorobiphenyl	80.4%
d14-p-Terphenyl	86.0%	d4-1,2-Dichlorobenzene	55.2%
d5-Phenol	82.4%	2-Fluorophenol	86.4%
2,4,6-Tribromophenol	87.7%	d4-2-Chlorophenol	73.3%

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-025D-A
DILUTION

Lab Sample ID: FS37A
LIMS ID: 03-10320
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/25/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 15:57
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.20 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 30.0
Percent Moisture: 85.3%
pH: 7.3

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	2,900 U	R
541-73-1	1,3-Dichlorobenzene	2,900 U	
106-46-7	1,4-Dichlorobenzene	2,900 U	
100-51-6	Benzyl Alcohol	2,900 U	
95-50-1	1,2-Dichlorobenzene	2,900 U	
95-48-7	2-Methylphenol	2,900 U	
106-44-5	**4-Methylphenol**	**170,000**	
105-67-9	2,4-Dimethylphenol	2,900 U	R
65-85-0	Benzoic Acid	29,000 U	
120-82-1	1,2,4-Trichlorobenzene	2,900 U	
91-20-3	**Naphthalene**	**15,000**	
87-68-3	Hexachlorobutadiene	2,900 U	R
91-57-6	2-Methylnaphthalene	2,900 U	
131-11-3	Dimethylphthalate	2,900 U	
208-96-8	Acenaphthylene	2,900 U	
83-32-9	Acenaphthene	2,900 U	
84-66-2	Diethylphthalate	2,900 U	
86-73-7	Fluorene	2,900 U	
86-30-6	N-Nitrosodiphenylamine	2,900 U	
118-74-1	Hexachlorobenzene	2,900 U	
87-86-5	Pentachlorophenol	14,000 U	
85-01-8	Phenanthrene	2,900 U	
120-12-7	Anthracene	2,900 U	
84-74-2	Di-n-Butylphthalate	2,900 U	
206-44-0	Fluoranthene	2,900 U	
129-00-0	Pyrene	2,900 U	
85-68-7	Butylbenzylphthalate	2,900 U	
56-55-3	Benzo(a)anthracene	2,900 U	
117-81-7	bis(2-Ethylhexyl)phthalate	2,900 U	
218-01-9	Chrysene	2,900 U	
117-84-0	Di-n-Octyl phthalate	2,900 U	
205-99-2	Benzo(b)fluoranthene	2,900 U	
207-08-9	Benzo(k)fluoranthene	2,900 U	
50-32-8	Benzo(a)pyrene	2,900 U	
193-39-5	Indeno(1,2,3-cd)pyrene	2,900 U	
53-70-3	Dibenz(a,h)anthracene	2,900 U	
191-24-2	Benzo(g,h,i)perylene	2,900 U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-025D-B
SAMPLE

Lab Sample ID: FS37B
LIMS ID: 03-10321
Matrix: Sediment
Data Release Authorized: DMS
Reported: 08/27/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/25/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/20/03 17:18
Instrument/Analyst: FINN8/LJR
GPC Cleanup: NO

Sample Amount: 0.48 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 77.2%
pH: 7.5

CAS Number	Analyte	µg/kg	
108-95-2	**Phenol**	**1,200**	R
541-73-1	1,3-Dichlorobenzene	1,000 U	
106-46-7	1,4-Dichlorobenzene	1,000 U	
100-51-6	Benzyl Alcohol	1,000 U	
95-50-1	1,2-Dichlorobenzene	1,000 U	
95-48-7	2-Methylphenol	1,000 U	
106-44-5	**4-Methylphenol**	**47,000**	
105-67-9	2,4-Dimethylphenol	1,000 U	
65-85-0	Benzoic Acid	10,000 U	
120-82-1	1,2,4-Trichlorobenzene	1,000 U	
91-20-3	**Naphthalene**	**34,000**	
87-68-3	Hexachlorobutadiene	1,000 U	
91-57-6	**2-Methylnaphthalene**	**1,800**	
131-11-3	Dimethylphthalate	1,000 U	
208-96-8	**Acenaphthylene**	**5,900**	
83-32-9	**Acenaphthene**	**2,200**	
84-66-2	Diethylphthalate	1,000 U	
86-73-7	**Fluorene**	**1,200**	
86-30-6	N-Nitrosodiphenylamine	1,000 U	
118-74-1	Hexachlorobenzene	1,000 U	
87-86-5	Pentachlorophenol	5,200 U	
85-01-8	**Phenanthrene**	**30,000**	
120-12-7	**Anthracene**	**3,500**	
84-74-2	Di-n-Butylphthalate	1,000 U	
206-44-0	**Fluoranthene**	**32,000**	
129-00-0	**Pyrene**	**32,000**	
85-68-7	Butylbenzylphthalate	1,000 U	
56-55-3	**Benzo(a)anthracene**	**2,600**	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**1,800 B**	
218-01-9	**Chrysene**	**4,700**	
117-84-0	Di-n-Octyl phthalate	1,000 U	
205-99-2	**Benzo(b)fluoranthene**	**3,800**	
207-08-9	**Benzo(k)fluoranthene**	**5,300**	
50-32-8	**Benzo(a)pyrene**	**4,200**	
193-39-5	**Indeno(1,2,3-cd)pyrene**	**NV**	
53-70-3	**Dibenz(a,h)anthracene**	**NV**	
191-24-2	**Benzo(g,h,i)perylene**	**NV**	

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.0%	2-Fluorobiphenyl	68.0%
d14-p-Terphenyl	73.6%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	67.2%	2-Fluorophenol	73.9%
2,4,6-Tribromophenol	75.2%	d4-2-Chlorophenol	67.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-025D-B
REANALYSIS

Lab Sample ID: FS37B
LIMS ID: 03-10321
Matrix: Sediment
Data Release Authorized:
Reported: 08/27/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/25/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/27/03 14:12
Instrument/Analyst: NT6/LJR
GPC Cleanup: NO

Sample Amount: 0.48 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 77.2%
pH: 7.5

CAS Number	Analyte	µg/kg	
108-95-2	**Phenol**	**1,300**	
541-73-1	1,3-Dichlorobenzene	1,000	U
106-46-7	1,4-Dichlorobenzene	1,000	U
100-51-6	Benzyl Alcohol	1,000	U
95-50-1	1,2-Dichlorobenzene	1,000	U
95-48-7	2-Methylphenol	1,000	U
106-44-5	**4-Methylphenol**	**56,000**	
105-67-9	2,4-Dimethylphenol	1,000	U
65-85-0	Benzoic Acid	10,000	U
120-82-1	1,2,4-Trichlorobenzene	1,000	U
91-20-3	**Naphthalene**	**40,000**	
87-68-3	Hexachlorobutadiene	1,000	U
91-57-6	**2-Methylnaphthalene**	**2,300**	
131-11-3	Dimethylphthalate	1,000	U
208-96-8	**Acenaphthylene**	**6,500**	
83-32-9	**Acenaphthene**	**2,500**	
84-66-2	Diethylphthalate	1,000	U
86-73-7	**Fluorene**	**1,700**	
86-30-6	N-Nitrosodiphenylamine	1,000	U
118-74-1	Hexachlorobenzene	1,000	U
87-86-5	Pentachlorophenol	5,200	U
85-01-8	**Phenanthrene**	**32,000**	
120-12-7	**Anthracene**	**3,200**	
84-74-2	Di-n-Butylphthalate	1,600	Y
206-44-0	**Fluoranthene**	**37,000**	
129-00-0	**Pyrene**	**35,000**	
85-68-7	Butylbenzylphthalate	1,300	Y
56-55-3	**Benzo(a)anthracene**	**3,700**	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**2,100**	**B**
218-01-9	**Chrysene**	**5,000**	
117-84-0	Di-n-Octyl phthalate	1,000	U
205-99-2	**Benzo(b)fluoranthene**	**5,400**	
207-08-9	**Benzo(k)fluoranthene**	**6,200**	
50-32-8	**Benzo(a)pyrene**	**4,400**	
193-39-5	**Indeno(1,2,3-cd)pyrene**	**4,900**	
53-70-3	**Dibenz(a,h)anthracene**	**1,600**	**M**
191-24-2	**Benzo(g,h,i)perylene**	**4,900**	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	82.8%	2-Fluorobiphenyl	79.2%
d14-p-Terphenyl	110%	d4-1,2-Dichlorobenzene	61.6%
d5-Phenol	79.2%	2-Fluorophenol	76.3%
2,4,6-Tribromophenol	83.5%	d4-2-Chlorophenol	74.9%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-025D-D
SAMPLE

Lab Sample ID: FS37C
LIMS ID: 03-10322
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/18/03 19:33
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 26.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 22.5%
pH: 7.8

CAS Number	Analyte	µg/kg
108-95-2	Phenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	19 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
106-44-5	**4-Methylphenol**	**140**
105-67-9	2,4-Dimethylphenol	19 U
65-85-0	Benzoic Acid	190 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	**Naphthalene**	**100**
87-68-3	Hexachlorobutadiene	19 U
91-57-6	2-Methylnaphthalene	19 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
83-32-9	Acenaphthene	19 U
84-66-2	**Diethylphthalate**	**31**
86-73-7	Fluorene	19 U
86-30-6	N-Nitrosodiphenylamine	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	96 U
85-01-8	**Phenanthrene**	**93**
120-12-7	Anthracene	19 U
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	**Fluoranthene**	**94**
129-00-0	**Pyrene**	**86**
85-68-7	**Butylbenzylphthalate**	**21**
56-55-3	Benzo(a)anthracene	19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~240~~ 240 U
218-01-9	Chrysene	19 U
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	19 U
207-08-9	Benzo(k)fluoranthene	19 U
50-32-8	Benzo(a)pyrene	19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19 U
53-70-3	Dibenz(a,h)anthracene	19 U
191-24-2	Benzo(g,h,i)perylene	19 U

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.0%	2-Fluorobiphenyl	73.0%
d14-p-Terphenyl	74.8%	d4-1,2-Dichlorobenzene	59.8%
d5-Phenol	71.9%	2-Fluorophenol	78.3%
2,4,6-Tribromophenol	113%	d4-2-Chlorophenol	71.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-035D-A
SAMPLE

Lab Sample ID: FS37D
LIMS ID: 03-10323
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 12:33
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.09 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 88.8%
pH: 6.9

CAS Number	Analyte	µg/kg	
108-95-2	**Phenol**	**1,000**	
541-73-1	1,3-Dichlorobenzene	98	U
106-46-7	1,4-Dichlorobenzene	98	U
100-51-6	Benzyl Alcohol	98	U
95-50-1	1,2-Dichlorobenzene	98	U
95-48-7	2-Methylphenol	98	U
106-44-5	**4-Methylphenol**	**53,000**	**E** R
105-67-9	2,4-Dimethylphenol	98	U
65-85-0	Benzoic Acid	980	U
120-82-1	1,2,4-Trichlorobenzene	98	U
91-20-3	**Naphthalene**	**5,700**	
87-68-3	Hexachlorobutadiene	98	U
91-57-6	**2-Methylnaphthalene**	**270**	
131-11-3	Dimethylphthalate	98	U
208-96-8	**Acenaphthylene**	**500**	
83-32-9	**Acenaphthene**	**240**	
84-66-2	Diethylphthalate	98	U
86-73-7	**Fluorene**	**200**	
86-30-6	N-Nitrosodiphenylamine	98	U
118-74-1	Hexachlorobenzene	98	U
87-86-5	Pentachlorophenol	490	U
85-01-8	**Phenanthrene**	**1,500**	
120-12-7	**Anthracene**	**170**	
84-74-2	Di-n-Butylphthalate	98	U
206-44-0	**Fluoranthene**	**960**	
129-00-0	**Pyrene**	**700**	
85-68-7	Butylbenzylphthalate	98	U
56-55-3	Benzo(a)anthracene	98	U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**1,400**	**B**
218-01-9	Chrysene	98	U
117-84-0	Di-n-Octyl phthalate	98	U
205-99-2	Benzo(b)fluoranthene	98	U
207-08-9	Benzo(k)fluoranthene	98	U
50-32-8	Benzo(a)pyrene	98	U
193-39-5	Indeno(1,2,3-cd)pyrene	98	U
53-70-3	Dibenz(a,h)anthracene	98	U
191-24-2	Benzo(g,h,i)perylene	98	U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	85.2%	2-Fluorobiphenyl	78.8%
d14-p-Terphenyl	75.6%	d4-1,2-Dichlorobenzene	66.4%
d5-Phenol	93.3%	2-Fluorophenol	55.7%
2,4,6-Tribromophenol	79.2%	d4-2-Chlorophenol	74.4%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

000025

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-035D-A
DILUTION

Lab Sample ID: FS37D
LIMS ID: 03-10323
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 16:39
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.09 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 88.8%
pH: 6.9

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	2,000 U	R
541-73-1	1,3-Dichlorobenzene	2,000 U	
106-46-7	1,4-Dichlorobenzene	2,000 U	
100-51-6	Benzyl Alcohol	2,000 U	
95-50-1	1,2-Dichlorobenzene	2,000 U	
95-48-7	2-Methylphenol	2,000 U	
106-44-5	**4-Methylphenol**	**98,000**	
105-67-9	2,4-Dimethylphenol	2,000 U	R
65-85-0	Benzoic Acid	20,000 U	
120-82-1	1,2,4-Trichlorobenzene	2,000 U	
91-20-3	**Naphthalene**	**7,600**	
87-68-3	Hexachlorobutadiene	2,000 U	
91-57-6	2-Methylnaphthalene	2,000 U	
131-11-3	Dimethylphthalate	2,000 U	
208-96-8	Acenaphthylene	2,000 U	
83-32-9	Acenaphthene	2,000 U	
84-66-2	Diethylphthalate	2,000 U	
86-73-7	Fluorene	2,000 U	
86-30-6	N-Nitrosodiphenylamine	2,000 U	
118-74-1	Hexachlorobenzene	2,000 U	
87-86-5	Pentachlorophenol	9,800 U	
85-01-8	Phenanthrene	2,000 U	
120-12-7	Anthracene	2,000 U	
84-74-2	Di-n-Butylphthalate	2,000 U	
206-44-0	Fluoranthene	2,000 U	
129-00-0	Pyrene	2,000 U	
85-68-7	Butylbenzylphthalate	2,000 U	
56-55-3	Benzo(a)anthracene	2,000 U	
117-81-7	bis(2-Ethylhexyl)phthalate	2,000 U	
218-01-9	Chrysene	2,000 U	
117-84-0	Di-n-Octyl phthalate	2,000 U	
205-99-2	Benzo(b)fluoranthene	2,000 U	
207-08-9	Benzo(k)fluoranthene	2,000 U	
50-32-8	Benzo(a)pyrene	2,000 U	
193-39-5	Indeno(1,2,3-cd)pyrene	2,000 U	
53-70-3	Dibenz(a,h)anthracene	2,000 U	
191-24-2	Benzo(g,h,i)perylene	2,000 U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-035D-B
SAMPLE

Lab Sample ID: FS37E
LIMS ID: 03-10324
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 13:17
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.06 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 87.4%
pH: 7.1

CAS Number	Analyte	µg/kg	
108-95-2	**Phenol**	**520**	
541-73-1	1,3-Dichlorobenzene	99	U
106-46-7	1,4-Dichlorobenzene	99	U
100-51-6	Benzyl Alcohol	99	U
95-50-1	1,2-Dichlorobenzene	99	U
95-48-7	2-Methylphenol	99	U
106-44-5	**4-Methylphenol**	**32,000**	**E** R
105-67-9	2,4-Dimethylphenol	99	U
65-85-0	Benzoic Acid	990	U
120-82-1	1,2,4-Trichlorobenzene	99	U
91-20-3	**Naphthalene**	**6,600**	
87-68-3	Hexachlorobutadiene	99	U
91-57-6	**2-Methylnaphthalene**	**390**	
131-11-3	Dimethylphthalate	99	U
208-96-8	**Acenaphthylene**	**630**	
83-32-9	**Acenaphthene**	**480**	
84-66-2	Diethylphthalate	99	U
86-73-7	**Fluorene**	**320**	
86-30-6	N-Nitrosodiphenylamine	99	U
118-74-1	Hexachlorobenzene	99	U
87-86-5	Pentachlorophenol	490	U
85-01-8	**Phenanthrene**	**2,800**	
120-12-7	**Anthracene**	**300**	
84-74-2	Di-n-Butylphthalate	99	U
206-44-0	**Fluoranthene**	**1,900**	
129-00-0	**Pyrene**	**1,700**	
85-68-7	Butylbenzylphthalate	99	U
56-55-3	Benzo(a)anthracene	99	U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**3,600**	**B**
218-01-9	Chrysene	99	U
117-84-0	Di-n-Octyl phthalate	99	U
205-99-2	**Benzo(b)fluoranthene**	**240**	
207-08-9	**Benzo(k)fluoranthene**	**220**	
50-32-8	**Benzo(a)pyrene**	**200**	**M**
193-39-5	Indeno(1,2,3-cd)pyrene	99	U
53-70-3	Dibenz(a,h)anthracene	99	U
191-24-2	Benzo(g,h,i)perylene	400	Y

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

Semivolatile Surrogate Recovery

d5-Nitrobenzene	76.8%	2-Fluorobiphenyl	82.0%
d14-p-Terphenyl	98.4%	d4-1,2-Dichlorobenzene	66.0%
d5-Phenol	89.1%	2-Fluorophenol	72.0%
2,4,6-Tribromophenol	72.5%	d4-2-Chlorophenol	78.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-035D-B
DILUTION

Lab Sample ID: FS37E
LIMS ID: 03-10324
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 17:27
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.06 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 87.4%
pH: 7.1

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	2,000 U	R
541-73-1	1,3-Dichlorobenzene	2,000 U	
106-46-7	1,4-Dichlorobenzene	2,000 U	
100-51-6	Benzyl Alcohol	2,000 U	
95-50-1	1,2-Dichlorobenzene	2,000 U	
95-48-7	2-Methylphenol	2,000 U	
106-44-5	**4-Methylphenol**	**48,000**	
105-67-9	2,4-Dimethylphenol	2,000 U	R
65-85-0	Benzoic Acid	20,000 U	
120-82-1	1,2,4-Trichlorobenzene	2,000 U	
91-20-3	**Naphthalene**	**9,800**	
87-68-3	Hexachlorobutadiene	2,000 U	
91-57-6	2-Methylnaphthalene	2,000 U	
131-11-3	Dimethylphthalate	2,000 U	
208-96-8	Acenaphthylene	2,000 U	
83-32-9	Acenaphthene	2,000 U	
84-66-2	Diethylphthalate	2,000 U	
86-73-7	Fluorene	2,000 U	
86-30-6	N-Nitrosodiphenylamine	2,000 U	
118-74-1	Hexachlorobenzene	2,000 U	
87-86-5	Pentachlorophenol	9,900 U	
85-01-8	**Phenanthrene**	**3,100**	
120-12-7	Anthracene	2,000 U	
84-74-2	Di-n-Butylphthalate	2,000 U	
206-44-0	**Fluoranthene**	**2,000**	
129-00-0	Pyrene	2,000 U	
85-68-7	Butylbenzylphthalate	2,000 U	
56-55-3	Benzo(a)anthracene	2,000 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**3,100 B**	
218-01-9	Chrysene	2,000 U	
117-84-0	Di-n-Octyl phthalate	2,000 U	
205-99-2	Benzo(b)fluoranthene	2,000 U	
207-08-9	Benzo(k)fluoranthene	2,000 U	
50-32-8	Benzo(a)pyrene	2,000 U	
193-39-5	Indeno(1,2,3-cd)pyrene	2,000 U	
53-70-3	Dibenz(a,h)anthracene	2,000 U	
191-24-2	Benzo(g,h,i)perylene	2,000 U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-035D-C
SAMPLE

Lab Sample ID: FS37F
LIMS ID: 03-10325
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/18/03 21:56
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 29.5%
pH: 7.6

CAS Number	Analyte	µg/kg	
108-95-2	**Phenol**	36	
541-73-1	1,3-Dichlorobenzene	19	U
106-46-7	1,4-Dichlorobenzene	19	U
100-51-6	Benzyl Alcohol	19	U
95-50-1	1,2-Dichlorobenzene	19	U
95-48-7	2-Methylphenol	19	U
106-44-5	**4-Methylphenol**	1,100	
105-67-9	2,4-Dimethylphenol	19	U
65-85-0	Benzoic Acid	190	U
120-82-1	1,2,4-Trichlorobenzene	19	U
91-20-3	**Naphthalene**	610	
87-68-3	Hexachlorobutadiene	19	U
91-57-6	**2-Methylnaphthalene**	45	
131-11-3	Dimethylphthalate	19	U
208-96-8	**Acenaphthylene**	82	
83-32-9	**Acenaphthene**	45	
84-66-2	**Diethylphthalate**	50	
86-73-7	**Fluorene**	41	
86-30-6	N-Nitrosodiphenylamine	19	U
118-74-1	Hexachlorobenzene	19	U
87-86-5	Pentachlorophenol	96	U
85-01-8	**Phenanthrene**	580	
120-12-7	**Anthracene**	67	
84-74-2	Di-n-Butylphthalate	19	U
206-44-0	**Fluoranthene**	610	
129-00-0	**Pyrene**	490	
85-68-7	Butylbenzylphthalate	19	U
56-55-3	**Benzo(a)anthracene**	54	M
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~160 M~~ 160	U
218-01-9	**Chrysene**	99	M
117-84-0	Di-n-Octyl phthalate	19	U
205-99-2	**Benzo(b)fluoranthene**	110	M
207-08-9	**Benzo(k)fluoranthene**	94	M
50-32-8	**Benzo(a)pyrene**	98	M
193-39-5	**Indeno(1,2,3-cd)pyrene**	67	M
53-70-3	Dibenz(a,h)anthracene	19	U
191-24-2	Benzo(g,h,i)perylene	51	Y

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.6%	2-Fluorobiphenyl	74.4%
d14-p-Terphenyl	77.1%	d4-1,2-Dichlorobenzene	64.2%
d5-Phenol	74.2%	2-Fluorophenol	72.4%
2,4,6-Tribromophenol	108%	d4-2-Chlorophenol	78.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-035D-D
SAMPLE

Lab Sample ID: FS37G
LIMS ID: 03-10326
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/19/03 13:24
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 18.2%
pH: 7.7

CAS Number	Analyte	µg/kg
108-95-2	Phenol	20 U
541-73-1	1,3-Dichlorobenzene	20 U
106-46-7	1,4-Dichlorobenzene	20 U
100-51-6	Benzyl Alcohol	20 U
95-50-1	1,2-Dichlorobenzene	20 U
95-48-7	2-Methylphenol	20 U
106-44-5	**4-Methylphenol**	**70**
105-67-9	2,4-Dimethylphenol	20 U
65-85-0	Benzoic Acid	200 U
120-82-1	1,2,4-Trichlorobenzene	20 U
91-20-3	**Naphthalene**	**45**
87-68-3	Hexachlorobutadiene	20 U
91-57-6	2-Methylnaphthalene	20 U
131-11-3	Dimethylphthalate	20 U
208-96-8	Acenaphthylene	20 U
83-32-9	Acenaphthene	20 U
84-66-2	Diethylphthalate	20 U
86-73-7	Fluorene	20 U
86-30-6	N-Nitrosodiphenylamine	20 U
118-74-1	Hexachlorobenzene	20 U
87-86-5	Pentachlorophenol	98 U
85-01-8	**Phenanthrene**	**60**
120-12-7	Anthracene	20 U
84-74-2	Di-n-Butylphthalate	20 U
206-44-0	**Fluoranthene**	**69**
129-00-0	**Pyrene**	**54**
85-68-7	Butylbenzylphthalate	20 U
56-55-3	Benzo(a)anthracene	20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~74~~ 744
218-01-9	Chrysene	20 U
117-84-0	Di-n-Octyl phthalate	20 U
205-99-2	Benzo(b)fluoranthene	20 U
207-08-9	Benzo(k)fluoranthene	20 U
50-32-8	Benzo(a)pyrene	20 U
193-39-5	Indeno(1,2,3-cd)pyrene	20 U
53-70-3	Dibenz(a,h)anthracene	20 U
191-24-2	**Benzo(g,h,i)perylene**	**23**

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.0%	2-Fluorobiphenyl	64.3%
d14-p-Terphenyl	67.6%	d4-1,2-Dichlorobenzene	53.4%
d5-Phenol	72.9%	2-Fluorophenol	88.2%
2,4,6-Tribromophenol	98.3%	d4-2-Chlorophenol	70.9%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-015D-A
SAMPLE

Lab Sample ID: FS37H
LIMS ID: 03-10327
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 14:15
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.06 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 92.3%
pH: 6.8

CAS Number	Analyte	µg/kg	
108-95-2	**Phenol**	**910**	
541-73-1	1,3-Dichlorobenzene	99 U	
106-46-7	1,4-Dichlorobenzene	99 U	
100-51-6	Benzyl Alcohol	99 U	
95-50-1	1,2-Dichlorobenzene	99 U	
95-48-7	2-Methylphenol	99 U	
106-44-5	**4-Methylphenol**	**43,000 E**	R
105-67-9	2,4-Dimethylphenol	99 U	
65-85-0	Benzoic Acid	990 U	
120-82-1	1,2,4-Trichlorobenzene	99 U	
91-20-3	**Naphthalene**	**7,800**	
87-68-3	Hexachlorobutadiene	99 U	
91-57-6	**2-Methylnaphthalene**	**270**	
131-11-3	Dimethylphthalate	99 U	
208-96-8	**Acenaphthylene**	**940**	
83-32-9	**Acenaphthene**	**240**	
84-66-2	Diethylphthalate	99 U	
86-73-7	**Fluorene**	**270**	
86-30-6	N-Nitrosodiphenylamine	99 U	
118-74-1	Hexachlorobenzene	99 U	
87-86-5	Pentachlorophenol	490 U	
85-01-8	**Phenanthrene**	**3,400**	
120-12-7	**Anthracene**	**280**	
84-74-2	Di-n-Butylphthalate	99 U	
206-44-0	**Fluoranthene**	**2,600**	
129-00-0	**Pyrene**	**1,900**	
85-68-7	Butylbenzylphthalate	99 U	
56-55-3	**Benzo(a)anthracene**	**140 M**	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**23,000 BE**	R
218-01-9	**Chrysene**	**300 M**	
117-84-0	Di-n-Octyl phthalate	99 U	
205-99-2	**Benzo(b)fluoranthene**	**320 M**	
207-08-9	**Benzo(k)fluoranthene**	**260 M**	
50-32-8	**Benzo(a)pyrene**	**250 M**	
193-39-5	Indeno(1,2,3-cd)pyrene	99 U	
53-70-3	Dibenz(a,h)anthracene	99 U	
191-24-2	Benzo(g,h,i)perylene	99 U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	84.0%	2-Fluorobiphenyl	84.8%
d14-p-Terphenyl	75.2%	d4-1,2-Dichlorobenzene	68.4%
d5-Phenol	93.9%	2-Fluorophenol	77.9%
2,4,6-Tribromophenol	66.1%	d4-2-Chlorophenol	76.5%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-015D-A
DILUTION

Lab Sample ID: FS37H
LIMS ID: 03-10327
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 18:14
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.06 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 92.3%
pH: 6.8

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	2,000 U	R
541-73-1	1,3-Dichlorobenzene	2,000 U	
106-46-7	1,4-Dichlorobenzene	2,000 U	
100-51-6	Benzyl Alcohol	2,000 U	
95-50-1	1,2-Dichlorobenzene	2,000 U	
95-48-7	2-Methylphenol	2,000 U	
106-44-5	**4-Methylphenol**	**59,000**	
105-67-9	2,4-Dimethylphenol	2,000 U	R
65-85-0	Benzoic Acid	20,000 U	
120-82-1	1,2,4-Trichlorobenzene	2,000 U	
91-20-3	**Naphthalene**	**12,000**	
87-68-3	Hexachlorobutadiene	2,000 U	
91-57-6	2-Methylnaphthalene	2,000 U	
131-11-3	Dimethylphthalate	2,000 U	
208-96-8	Acenaphthylene	2,000 U	
83-32-9	Acenaphthene	2,000 U	
84-66-2	Diethylphthalate	2,000 U	
86-73-7	Fluorene	2,000 U	
86-30-6	N-Nitrosodiphenylamine	2,000 U	
118-74-1	Hexachlorobenzene	2,000 U	
87-86-5	Pentachlorophenol	9,900 U	
85-01-8	**Phenanthrene**	**3,600**	
120-12-7	Anthracene	2,000 U	
84-74-2	Di-n-Butylphthalate	2,000 U	
206-44-0	**Fluoranthene**	**2,200**	
129-00-0	**Pyrene**	**2,300**	
85-68-7	Butylbenzylphthalate	2,000 U	
56-55-3	Benzo(a)anthracene	2,000 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**34,000 B**	
218-01-9	Chrysene	2,000 U	R
117-84-0	Di-n-Octyl phthalate	2,000 U	
205-99-2	Benzo(b)fluoranthene	2,000 U	
207-08-9	Benzo(k)fluoranthene	2,000 U	
50-32-8	Benzo(a)pyrene	2,000 U	
193-39-5	Indeno(1,2,3-cd)pyrene	2,000 U	
53-70-3	Dibenz(a,h)anthracene	2,000 U	
191-24-2	Benzo(g,h,i)perylene	2,000 U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-015D-B
SAMPLE

Lab Sample ID: FS37I
LIMS ID: 03-10328
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 15:01
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.12 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 88.7%
pH: 7.4

CAS Number	Analyte	µg/kg		
108-95-2	**Phenol**	**560**		
541-73-1	1,3-Dichlorobenzene	98	U	
106-46-7	1,4-Dichlorobenzene	98	U	
100-51-6	Benzyl Alcohol	98	U	
95-50-1	1,2-Dichlorobenzene	98	U	
95-48-7	2-Methylphenol	98	U	
106-44-5	**4-Methylphenol**	**30,000**	**E**	R
105-67-9	2,4-Dimethylphenol	98	U	
65-85-0	Benzoic Acid	980	U	
120-82-1	1,2,4-Trichlorobenzene	98	U	
91-20-3	**Naphthalene**	**5,600**		
87-68-3	Hexachlorobutadiene	98	U	
91-57-6	**2-Methylnaphthalene**	**300**		
131-11-3	Dimethylphthalate	98	U	
208-96-8	**Acenaphthylene**	**510**		
83-32-9	**Acenaphthene**	**240**		
84-66-2	Diethylphthalate	98	U	
86-73-7	**Fluorene**	**260**		
86-30-6	N-Nitrosodiphenylamine	98	U	
118-74-1	Hexachlorobenzene	98	U	
87-86-5	Pentachlorophenol	490	U	
85-01-8	**Phenanthrene**	**2,800**		
120-12-7	**Anthracene**	**250**		
84-74-2	Di-n-Butylphthalate	98	U	
206-44-0	**Fluoranthene**	**2,100**		
129-00-0	**Pyrene**	**1,800**	**M**	
85-68-7	Butylbenzylphthalate	98	U	
56-55-3	Benzo(a)anthracene	98	U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**3,600**	**B**	
218-01-9	Chrysene	98	U	
117-84-0	Di-n-Octyl phthalate	98	U	
205-99-2	**Benzo(b)fluoranthene**	**350**	**M**	
207-08-9	**Benzo(k)fluoranthene**	**310**	**M**	
50-32-8	**Benzo(a)pyrene**	**300**	**M**	
193-39-5	Indeno(1,2,3-cd)pyrene	98	U	R
53-70-3	Dibenz(a,h)anthracene	98	U	R
191-24-2	Benzo(g,h,i)perylene	240	Y	J

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.4%	2-Fluorobiphenyl	87.6%
d14-p-Terphenyl	152%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	89.1%	2-Fluorophenol	66.7%
2,4,6-Tribromophenol	73.1%	d4-2-Chlorophenol	76.3%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-015D-B
DILUTION

Lab Sample ID: FS37I
LIMS ID: 03-10328
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 19:02
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.12 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 88.7%
pH: 7.4

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	2,000 U	R
541-73-1	1,3-Dichlorobenzene	2,000 U	
106-46-7	1,4-Dichlorobenzene	2,000 U	
100-51-6	Benzyl Alcohol	2,000 U	
95-50-1	1,2-Dichlorobenzene	2,000 U	
95-48-7	2-Methylphenol	2,000 U	
106-44-5	**4-Methylphenol**	**42,000**	
105-67-9	2,4-Dimethylphenol	2,000 U	R
65-85-0	Benzoic Acid	20,000 U	
120-82-1	1,2,4-Trichlorobenzene	2,000 U	
91-20-3	**Naphthalene**	**7,600**	
87-68-3	Hexachlorobutadiene	2,000 U	
91-57-6	2-Methylnaphthalene	2,000 U	
131-11-3	Dimethylphthalate	2,000 U	
208-96-8	Acenaphthylene	2,000 U	
83-32-9	Acenaphthene	2,000 U	
84-66-2	Diethylphthalate	2,000 U	
86-73-7	Fluorene	2,000 U	
86-30-6	N-Nitrosodiphenylamine	2,000 U	
118-74-1	Hexachlorobenzene	2,000 U	
87-86-5	Pentachlorophenol	9,800 U	
85-01-8	**Phenanthrene**	**3,000**	
120-12-7	Anthracene	2,000 U	
84-74-2	Di-n-Butylphthalate	2,000 U	
206-44-0	**Fluoranthene**	**2,100**	
129-00-0	**Pyrene**	**2,300**	
85-68-7	Butylbenzylphthalate	2,000 U	
56-55-3	Benzo(a)anthracene	2,000 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**2,000 B**	
218-01-9	Chrysene	2,000 U	
117-84-0	Di-n-Octyl phthalate	2,000 U	
205-99-2	Benzo(b)fluoranthene	2,000 U	
207-08-9	Benzo(k)fluoranthene	2,000 U	
50-32-8	Benzo(a)pyrene	2,000 U	
193-39-5	Indeno(1,2,3-cd)pyrene	2,000 U	
53-70-3	Dibenz(a,h)anthracene	2,000 U	
191-24-2	Benzo(g,h,i)perylene	2,000 U	R

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS
Page 1 of 1

Sample ID: GPA-015D-C
SAMPLE

Lab Sample ID: FS37J
LIMS ID: 03-10329
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/19/03 14:09
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 37.2%
pH: 7.5

CAS Number	Analyte	µg/kg
108-95-2	Phenol	20 U
541-73-1	1,3-Dichlorobenzene	20 U
106-46-7	1,4-Dichlorobenzene	20 U
100-51-6	Benzyl Alcohol	20 U
95-50-1	1,2-Dichlorobenzene	20 U
95-48-7	2-Methylphenol	20 U
106-44-5	**4-Methylphenol**	**540**
105-67-9	2,4-Dimethylphenol	20 U
65-85-0	Benzoic Acid	200 U
120-82-1	1,2,4-Trichlorobenzene	20 U
91-20-3	**Naphthalene**	**260**
87-68-3	Hexachlorobutadiene	20 U
91-57-6	**2-Methylnaphthalene**	**41**
131-11-3	Dimethylphthalate	20 U
208-96-8	**Acenaphthylene**	**29**
83-32-9	**Acenaphthene**	**20**
84-66-2	Diethylphthalate	20 U
86-73-7	**Fluorene**	**23**
86-30-6	N-Nitrosodiphenylamine	20 U
118-74-1	Hexachlorobenzene	20 U
87-86-5	Pentachlorophenol	98 U
85-01-8	**Phenanthrene**	**290**
120-12-7	**Anthracene**	**24**
84-74-2	Di-n-Butylphthalate	20 U
206-44-0	**Fluoranthene**	**280**
129-00-0	**Pyrene**	**240**
85-68-7	Butylbenzylphthalate	20 U
56-55-3	Benzo(a)anthracene	20 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~130~~ 1304
218-01-9	Chrysene	20 U
117-84-0	Di-n-Octyl phthalate	20 U
205-99-2	**Benzo(b)fluoranthene**	**51 M**
207-08-9	**Benzo(k)fluoranthene**	**43 M**
50-32-8	**Benzo(a)pyrene**	**22 M**
193-39-5	Indeno(1,2,3-cd)pyrene	20 U
53-70-3	Dibenz(a,h)anthracene	20 U
191-24-2	Benzo(g,h,i)perylene	20 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.3%	2-Fluorobiphenyl	65.7%
d14-p-Terphenyl	66.4%	d4-1,2-Dichlorobenzene	57.7%
d5-Phenol	72.7%	2-Fluorophenol	82.3%
2,4,6-Tribromophenol	90.7%	d4-2-Chlorophenol	72.6%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-015D-D
SAMPLE

Lab Sample ID: FS37K
LIMS ID: 03-10330
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/19/03 14:57
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 26.1 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 19.8%
pH: 7.9

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	19 U	
541-73-1	1,3-Dichlorobenzene	19 U	
106-46-7	1,4-Dichlorobenzene	19 U	
100-51-6	Benzyl Alcohol	19 U	
95-50-1	1,2-Dichlorobenzene	19 U	
95-48-7	2-Methylphenol	19 U	
106-44-5	4-Methylphenol	19 U	
105-67-9	2,4-Dimethylphenol	19 U	
65-85-0	Benzoic Acid	190 U	
120-82-1	1,2,4-Trichlorobenzene	19 U	
91-20-3	Naphthalene	19 U	
87-68-3	Hexachlorobutadiene	19 U	
91-57-6	2-Methylnaphthalene	19 U	
131-11-3	Dimethylphthalate	19 U	
208-96-8	Acenaphthylene	19 U	
83-32-9	Acenaphthene	19 U	
84-66-2	Diethylphthalate	19 U	
86-73-7	Fluorene	19 U	
86-30-6	N-Nitrosodiphenylamine	19 U	
118-74-1	Hexachlorobenzene	19 U	
87-86-5	Pentachlorophenol	96 U	
85-01-8	Phenanthrene	19 U	
120-12-7	Anthracene	19 U	
84-74-2	Di-n-Butylphthalate	19 U	
206-44-0	Fluoranthene	19 U	
129-00-0	Pyrene	19 U	
85-68-7	**Butylbenzylphthalate**	**160**	
56-55-3	Benzo(a)anthracene	19 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~240~~	2404
218-01-9	Chrysene	19 U	
117-84-0	**Di-n-Octyl phthalate**	**84**	
205-99-2	Benzo(b)fluoranthene	19 U	
207-08-9	Benzo(k)fluoranthene	19 U	
50-32-8	Benzo(a)pyrene	19 U	
193-39-5	Indeno(1,2,3-cd)pyrene	19 U	
53-70-3	Dibenz(a,h)anthracene	19 U	
191-24-2	Benzo(g,h,i)perylene	19 U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.2%	2-Fluorobiphenyl	64.9%
d14-p-Terphenyl	70.4%	d4-1,2-Dichlorobenzene	60.2%
d5-Phenol	72.2%	2-Fluorophenol	73.1%
2,4,6-Tribromophenol	110%	d4-2-Chlorophenol	70.2%

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-045D-A
SAMPLE

Lab Sample ID: FS37L
LIMS ID: 03-10331
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 15:55
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.14 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 90.2%
pH: 7.2

CAS Number	Analyte	µg/kg		
108-95-2	**Phenol**	**350**		
541-73-1	1,3-Dichlorobenzene	97	U	
106-46-7	1,4-Dichlorobenzene	97	U	
100-51-6	Benzyl Alcohol	97	U	
95-50-1	1,2-Dichlorobenzene	97	U	
95-48-7	2-Methylphenol	97	U	
106-44-5	**4-Methylphenol**	**20,000**	**E**	R
105-67-9	2,4-Dimethylphenol	97	U	
65-85-0	Benzoic Acid	970	U	
120-82-1	1,2,4-Trichlorobenzene	97	U	
91-20-3	**Naphthalene**	**4,800**		
87-68-3	Hexachlorobutadiene	97	U	
91-57-6	**2-Methylnaphthalene**	**210**		
131-11-3	Dimethylphthalate	97	U	
208-96-8	**Acenaphthylene**	**460**		
83-32-9	**Acenaphthene**	**190**		
84-66-2	Diethylphthalate	97	U	
86-73-7	**Fluorene**	**140**		
86-30-6	N-Nitrosodiphenylamine	97	U	
118-74-1	Hexachlorobenzene	97	U	
87-86-5	Pentachlorophenol	490	U	
85-01-8	**Phenanthrene**	**2,600**		
120-12-7	**Anthracene**	**240**		
84-74-2	Di-n-Butylphthalate	97	U	
206-44-0	**Fluoranthene**	**2,100**		
129-00-0	**Pyrene**	**2,200**		
85-68-7	**Butylbenzylphthalate**	**2,800**		J
56-55-3	Benzo(a)anthracene	97	U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**4,600**	**B**	
218-01-9	Chrysene	97	U	
117-84-0	**Di-n-Octyl phthalate**	**1,100**		
205-99-2	**Benzo(b)fluoranthene**	**460**	**M**	
207-08-9	**Benzo(k)fluoranthene**	**410**	**M**	
50-32-8	**Benzo(a)pyrene**	**320**	**M**	
193-39-5	Indeno(1,2,3-cd)pyrene	97	U	R
53-70-3	Dibenz(a,h)anthracene	97	U	R
191-24-2	Benzo(g,h,i)perylene	230	Y	J

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.6%	2-Fluorobiphenyl	70.4%
d14-p-Terphenyl	73.6%	d4-1,2-Dichlorobenzene	56.4%
d5-Phenol	81.1%	2-Fluorophenol	75.2%
2,4,6-Tribromophenol	63.2%	d4-2-Chlorophenol	70.4%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

000037

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-045D-A
DILUTION

Lab Sample ID: FS37L
LIMS ID: 03-10331
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 19:50
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.14 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 90.2%
pH: 7.2

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	1,900 U	R
541-73-1	1,3-Dichlorobenzene	1,900 U	
106-46-7	1,4-Dichlorobenzene	1,900 U	
100-51-6	Benzyl Alcohol	1,900 U	
95-50-1	1,2-Dichlorobenzene	1,900 U	
95-48-7	2-Methylphenol	1,900 U	
106-44-5	**4-Methylphenol**	**26,000**	
105-67-9	2,4-Dimethylphenol	1,900 U	R
65-85-0	Benzoic Acid	19,000 U	
120-82-1	1,2,4-Trichlorobenzene	1,900 U	
91-20-3	**Naphthalene**	**5,800**	
87-68-3	Hexachlorobutadiene	1,900 U	
91-57-6	2-Methylnaphthalene	1,900 U	
131-11-3	Dimethylphthalate	1,900 U	
208-96-8	Acenaphthylene	1,900 U	
83-32-9	Acenaphthene	1,900 U	
84-66-2	Diethylphthalate	1,900 U	
86-73-7	Fluorene	1,900 U	
86-30-6	N-Nitrosodiphenylamine	1,900 U	
118-74-1	Hexachlorobenzene	1,900 U	
87-86-5	Pentachlorophenol	9,700 U	
85-01-8	**Phenanthrene**	**2,800**	
120-12-7	Anthracene	1,900 U	
84-74-2	Di-n-Butylphthalate	1,900 U	
206-44-0	**Fluoranthene**	**2,000**	
129-00-0	**Pyrene**	**2,200**	
85-68-7	**Butylbenzylphthalate**	**2,300**	
56-55-3	Benzo(a)anthracene	1,900 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**3,100 B**	
218-01-9	Chrysene	1,900 U	
117-84-0	Di-n-Octyl phthalate	1,900 U	
205-99-2	Benzo(b)fluoranthene	1,900 U	
207-08-9	Benzo(k)fluoranthene	1,900 U	
50-32-8	Benzo(a)pyrene	1,900 U	
193-39-5	Indeno(1,2,3-cd)pyrene	1,900 U	
53-70-3	Dibenz(a,h)anthracene	1,900 U	
191-24-2	Benzo(g,h,i)perylene	1,900 U	R

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-045D-B
SAMPLE

Lab Sample ID: FS37M
LIMS ID: 03-10332
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 16:37
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 1.59 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 83.4%
pH: 7.7

CAS Number	Analyte	µg/kg		
108-95-2	Phenol	310	U	
541-73-1	1,3-Dichlorobenzene	310	U	
106-46-7	1,4-Dichlorobenzene	310	U	
100-51-6	Benzyl Alcohol	310	U	
95-50-1	1,2-Dichlorobenzene	310	U	
95-48-7	2-Methylphenol	310	U	
106-44-5	**4-Methylphenol**	**7,700**		
105-67-9	2,4-Dimethylphenol	310	U	
65-85-0	Benzoic Acid	3,100	U	
120-82-1	1,2,4-Trichlorobenzene	310	U	
91-20-3	**Naphthalene**	**6,400**		
87-68-3	Hexachlorobutadiene	310	U	
91-57-6	**2-Methylnaphthalene**	**770**		
131-11-3	Dimethylphthalate	310	U	
208-96-8	**Acenaphthylene**	**770**		
83-32-9	**Acenaphthene**	**460**		
84-66-2	Diethylphthalate	310	U	
86-73-7	**Fluorene**	**620**		
86-30-6	N-Nitrosodiphenylamine	310	U	
118-74-1	Hexachlorobenzene	310	U	
87-86-5	Pentachlorophenol	1,600	U	
85-01-8	**Phenanthrene**	**10,000**		
120-12-7	**Anthracene**	**1,200**		
84-74-2	Di-n-Butylphthalate	310	U	
206-44-0	**Fluoranthene**	**8,800**		
129-00-0	**Pyrene**	**11,000**		
85-68-7	**Butylbenzylphthalate**	**160,000**	**E**	R
56-55-3	Benzo(a)anthracene	310	U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**300,000**	**BE**	R
218-01-9	Chrysene	310	U	
117-84-0	**Di-n-Octyl phthalate**	**39,000**	**E**	R
205-99-2	**Benzo(b)fluoranthene**	**4,800**	**M**	
207-08-9	**Benzo(k)fluoranthene**	**5,500**	**M**	
50-32-8	**Benzo(a)pyrene**	**3,000**	**M**	
193-39-5	Indeno(1,2,3-cd)pyrene	310	U	R
53-70-3	Dibenz(a,h)anthracene	310	U	R
191-24-2	Benzo(g,h,i)perylene	1,900	Y	J

Semivolatile Surrogate Recovery

d5-Nitrobenzene	75.6%	2-Fluorobiphenyl	77.2%
d14-p-Terphenyl	86.0%	d4-1,2-Dichlorobenzene	60.0%
d5-Phenol	77.1%	2-Fluorophenol	48.3%
2,4,6-Tribromophenol	56.0%	d4-2-Chlorophenol	69.1%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-045D-B
DILUTION

Lab Sample ID: FS37M
LIMS ID: 03-10332
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 22:11
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 1.59 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 100
Percent Moisture: 83.4%
pH: 7.7

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	31,000 U	R
541-73-1	1,3-Dichlorobenzene	31,000 U	
106-46-7	1,4-Dichlorobenzene	31,000 U	
100-51-6	Benzyl Alcohol	31,000 U	
95-50-1	1,2-Dichlorobenzene	31,000 U	
95-48-7	2-Methylphenol	31,000 U	
106-44-5	4-Methylphenol	31,000 U	
105-67-9	2,4-Dimethylphenol	31,000 U	
65-85-0	Benzoic Acid	310,000 U	
120-82-1	1,2,4-Trichlorobenzene	31,000 U	
91-20-3	Naphthalene	31,000 U	
87-68-3	Hexachlorobutadiene	31,000 U	
91-57-6	2-Methylnaphthalene	31,000 U	
131-11-3	Dimethylphthalate	31,000 U	
208-96-8	Acenaphthylene	31,000 U	
83-32-9	Acenaphthene	31,000 U	
84-66-2	Diethylphthalate	31,000 U	
86-73-7	Fluorene	31,000 U	
86-30-6	N-Nitrosodiphenylamine	31,000 U	
118-74-1	Hexachlorobenzene	31,000 U	
87-86-5	Pentachlorophenol	160,000 U	
85-01-8	Phenanthrene	31,000 U	
120-12-7	Anthracene	31,000 U	
84-74-2	Di-n-Butylphthalate	31,000 U	
206-44-0	Fluoranthene	31,000 U	
129-00-0	Pyrene	31,000 U	
85-68-7	**Butylbenzylphthalate**	**210,000**	
56-55-3	Benzo(a)anthracene	31,000 U	R
117-81-7	**bis(2-Ethylhexyl)phthalate**	**860,000 B**	
218-01-9	Chrysene	31,000 U	R
117-84-0	**Di-n-Octyl phthalate**	**52,000**	
205-99-2	Benzo(b)fluoranthene	31,000 U	R
207-08-9	Benzo(k)fluoranthene	31,000 U	
50-32-8	Benzo(a)pyrene	31,000 U	
193-39-5	Indeno(1,2,3-cd)pyrene	31,000 U	
53-70-3	Dibenz(a,h)anthracene	31,000 U	
191-24-2	Benzo(g,h,i)perylene	31,000 U	R

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-045D-C
SAMPLE

Lab Sample ID: FS37N
LIMS ID: 03-10333
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/19/03 15:44
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 22.7%
pH: 7.8

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	19 U	
541-73-1	1,3-Dichlorobenzene	19 U	
106-46-7	1,4-Dichlorobenzene	19 U	
100-51-6	Benzyl Alcohol	19 U	
95-50-1	1,2-Dichlorobenzene	19 U	
95-48-7	2-Methylphenol	19 U	
106-44-5	**4-Methylphenol**	**160**	
105-67-9	2,4-Dimethylphenol	19 U	
65-85-0	Benzoic Acid	190 U	
120-82-1	1,2,4-Trichlorobenzene	19 U	
91-20-3	**Naphthalene**	**120**	
87-68-3	Hexachlorobutadiene	19 U	
91-57-6	2-Methylnaphthalene	19 U	
131-11-3	Dimethylphthalate	19 U	
208-96-8	Acenaphthylene	19 U	
83-32-9	Acenaphthene	19 U	
84-66-2	Diethylphthalate	19 U	
86-73-7	Fluorene	19 U	
86-30-6	N-Nitrosodiphenylamine	19 U	
118-74-1	Hexachlorobenzene	19 U	
87-86-5	Pentachlorophenol	97 U	
85-01-8	**Phenanthrene**	**170**	
120-12-7	Anthracene	19 U	
84-74-2	Di-n-Butylphthalate	19 U	
206-44-0	**Fluoranthene**	**180**	
129-00-0	**Pyrene**	**160**	
85-68-7	Butylbenzylphthalate	19 U	
56-55-3	**Benzo(a)anthracene**	**20 M**	
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~160~~	160 U
218-01-9	**Chrysene**	**36 M**	
117-84-0	Di-n-Octyl phthalate	19 U	
205-99-2	**Benzo(b)fluoranthene**	**40 M**	
207-08-9	**Benzo(k)fluoranthene**	**39 M**	
50-32-8	**Benzo(a)pyrene**	**38 M**	
193-39-5	**Indeno(1,2,3-cd)pyrene**	**31 M**	
53-70-3	Dibenz(a,h)anthracene	19 U	
191-24-2	**Benzo(g,h,i)perylene**	**34 M**	

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

Semivolatile Surrogate Recovery

d5-Nitrobenzene	90.4%	2-Fluorobiphenyl	89.0%
d14-p-Terphenyl	95.2%	d4-1,2-Dichlorobenzene	79.2%
d5-Phenol	92.6%	2-Fluorophenol	103%
2,4,6-Tribromophenol	141%	d4-2-Chlorophenol	97.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-045D-D
SAMPLE

Lab Sample ID: FS37O
LIMS ID: 03-10334
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/19/03 16:32
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 17.7%
pH: 8.3

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	19 U	
541-73-1	1,3-Dichlorobenzene	19 U	
106-46-7	1,4-Dichlorobenzene	19 U	
100-51-6	Benzyl Alcohol	19 U	
95-50-1	1,2-Dichlorobenzene	19 U	
95-48-7	2-Methylphenol	19 U	
106-44-5	**4-Methylphenol**	**44**	
105-67-9	2,4-Dimethylphenol	19 U	
65-85-0	Benzoic Acid	190 U	
120-82-1	1,2,4-Trichlorobenzene	19 U	
91-20-3	**Naphthalene**	**26**	
87-68-3	Hexachlorobutadiene	19 U	
91-57-6	2-Methylnaphthalene	19 U	
131-11-3	Dimethylphthalate	19 U	
208-96-8	Acenaphthylene	19 U	
83-32-9	Acenaphthene	19 U	
84-66-2	Diethylphthalate	19 U	
86-73-7	Fluorene	19 U	
86-30-6	N-Nitrosodiphenylamine	19 U	
118-74-1	Hexachlorobenzene	19 U	
87-86-5	Pentachlorophenol	97 U	
85-01-8	**Phenanthrene**	**28**	
120-12-7	Anthracene	19 U	
84-74-2	**Di-n-Butylphthalate**	**27**	
206-44-0	**Fluoranthene**	**26**	
129-00-0	**Pyrene**	**23**	
85-68-7	Butylbenzylphthalate	19 U	
56-55-3	Benzo(a)anthracene	19 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~94~~	944
218-01-9	Chrysene	19 U	
117-84-0	Di-n-Octyl phthalate	19 U	
205-99-2	Benzo(b)fluoranthene	19 U	
207-08-9	Benzo(k)fluoranthene	19 U	
50-32-8	Benzo(a)pyrene	19 U	
193-39-5	Indeno(1,2,3-cd)pyrene	19 U	
53-70-3	Dibenz(a,h)anthracene	19 U	
191-24-2	Benzo(g,h,i)perylene	19 U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.9%	2-Fluorobiphenyl	64.6%
d14-p-Terphenyl	75.3%	d4-1,2-Dichlorobenzene	59.8%
d5-Phenol	74.8%	2-Fluorophenol	83.7%
2,4,6-Tribromophenol	118%	d4-2-Chlorophenol	74.6%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-055D-A
SAMPLE

Lab Sample ID: FS37P
LIMS ID: 03-10335
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 17:25
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.32 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 75.8%
pH: 7.5

CAS Number	Analyte	µg/kg		
108-95-2	**Phenol**	**1,300**		
541-73-1	1,3-Dichlorobenzene	94	U	
106-46-7	1,4-Dichlorobenzene	94	U	
100-51-6	Benzyl Alcohol	94	U	
95-50-1	1,2-Dichlorobenzene	94	U	
95-48-7	**2-Methylphenol**	**210**	**M**	
106-44-5	**4-Methylphenol**	**29,000**	**E**	R
105-67-9	2,4-Dimethylphenol	94	U	
65-85-0	Benzoic Acid	940	U	
120-82-1	1,2,4-Trichlorobenzene	94	U	
91-20-3	**Naphthalene**	**1,500**		
87-68-3	Hexachlorobutadiene	94	U	
91-57-6	2-Methylnaphthalene	94	U	
131-11-3	Dimethylphthalate	94	U	
208-96-8	**Acenaphthylene**	**100**		
83-32-9	Acenaphthene	94	U	
84-66-2	Diethylphthalate	94	U	
86-73-7	Fluorene	94	U	
86-30-6	N-Nitrosodiphenylamine	94	U	
118-74-1	Hexachlorobenzene	94	U	
87-86-5	Pentachlorophenol	470	U	
85-01-8	**Phenanthrene**	**130**		
120-12-7	Anthracene	94	U	
84-74-2	Di-n-Butylphthalate	94	U	
206-44-0	**Fluoranthene**	**100**		
129-00-0	**Pyrene**	**110**		
85-68-7	Butylbenzylphthalate	94	U	
56-55-3	Benzo(a)anthracene	94	U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~580~~	~~B~~	580 U
218-01-9	Chrysene	94	U	
117-84-0	Di-n-Octyl phthalate	94	U	
205-99-2	Benzo(b)fluoranthene	94	U	
207-08-9	Benzo(k)fluoranthene	94	U	
50-32-8	Benzo(a)pyrene	94	U	
193-39-5	Indeno(1,2,3-cd)pyrene	94	U	R
53-70-3	Dibenz(a,h)anthracene	94	U	R
191-24-2	Benzo(g,h,i)perylene	94	U	R

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.4%	2-Fluorobiphenyl	79.2%
d14-p-Terphenyl	74.4%	d4-1,2-Dichlorobenzene	52.4%
d5-Phenol	70.1%	2-Fluorophenol	65.3%
2,4,6-Tribromophenol	52.5%	d4-2-Chlorophenol	65.1%

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-055D-A
DILUTION

Lab Sample ID: FS37P
LIMS ID: 03-10335
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 21:24
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 5.32 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 20.0
Percent Moisture: 75.8%
pH: 7.5

CAS Number	Analyte	µg/kg	
108-95-2	Phenol	1,900 U	R
541-73-1	1,3-Dichlorobenzene	1,900 U	
106-46-7	1,4-Dichlorobenzene	1,900 U	
100-51-6	Benzyl Alcohol	1,900 U	
95-50-1	1,2-Dichlorobenzene	1,900 U	
95-48-7	2-Methylphenol	1,900 U	
106-44-5	**4-Methylphenol**	**37,000**	
105-67-9	2,4-Dimethylphenol	1,900 U	R
65-85-0	Benzoic Acid	19,000 U	
120-82-1	1,2,4-Trichlorobenzene	1,900 U	
91-20-3	Naphthalene	1,900 U	
87-68-3	Hexachlorobutadiene	1,900 U	
91-57-6	2-Methylnaphthalene	1,900 U	
131-11-3	Dimethylphthalate	1,900 U	
208-96-8	Acenaphthylene	1,900 U	
83-32-9	Acenaphthene	1,900 U	
84-66-2	Diethylphthalate	1,900 U	
86-73-7	Fluorene	1,900 U	
86-30-6	N-Nitrosodiphenylamine	1,900 U	
118-74-1	Hexachlorobenzene	1,900 U	
87-86-5	Pentachlorophenol	9,400 U	
85-01-8	Phenanthrene	1,900 U	
120-12-7	Anthracene	1,900 U	
84-74-2	Di-n-Butylphthalate	1,900 U	
206-44-0	Fluoranthene	1,900 U	
129-00-0	Pyrene	1,900 U	
85-68-7	Butylbenzylphthalate	1,900 U	
56-55-3	Benzo(a)anthracene	1,900 U	
117-81-7	bis(2-Ethylhexyl)phthalate	1,900 U	
218-01-9	Chrysene	1,900 U	
117-84-0	Di-n-Octyl phthalate	1,900 U	
205-99-2	Benzo(b)fluoranthene	1,900 U	
207-08-9	Benzo(k)fluoranthene	1,900 U	
50-32-8	Benzo(a)pyrene	1,900 U	
193-39-5	Indeno(1,2,3-cd)pyrene	1,900 U	
53-70-3	Dibenz(a,h)anthracene	1,900 U	
191-24-2	Benzo(g,h,i)perylene	1,900 U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	D	2-Fluorobiphenyl	D
d14-p-Terphenyl	D	d4-1,2-Dichlorobenzene	D
d5-Phenol	D	2-Fluorophenol	D
2,4,6-Tribromophenol	D	d4-2-Chlorophenol	D

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-055D-B
SAMPLE

Lab Sample ID: FS37Q
LIMS ID: 03-10336
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/19/03 17:20
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 29.5%
pH: 7.6

CAS Number	Analyte	µg/kg
108-95-2	**Phenol**	**73**
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	19 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
106-44-5	**4-Methylphenol**	**1,100**
105-67-9	2,4-Dimethylphenol	19 U
65-85-0	Benzoic Acid	190 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	**Naphthalene**	**250**
87-68-3	Hexachlorobutadiene	19 U
91-57-6	**2-Methylnaphthalene**	**40**
131-11-3	Dimethylphthalate	19 U
208-96-8	**Acenaphthylene**	**26**
83-32-9	**Acenaphthene**	**32**
84-66-2	Diethylphthalate	19 U
86-73-7	**Fluorene**	**25**
86-30-6	N-Nitrosodiphenylamine	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	97 U
85-01-8	**Phenanthrene**	**190**
120-12-7	**Anthracene**	**25**
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	**Fluoranthene**	**180**
129-00-0	**Pyrene**	**150 M**
85-68-7	Butylbenzylphthalate	19 U
56-55-3	**Benzo(a)anthracene**	**24 M**
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~170~~ 1704
218-01-9	**Chrysene**	**34 M**
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	**Benzo(b)fluoranthene**	**31 M**
207-08-9	**Benzo(k)fluoranthene**	**25 M**
50-32-8	Benzo(a)pyrene	19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19 U
53-70-3	Dibenz(a,h)anthracene	19 U
191-24-2	Benzo(g,h,i)perylene	19 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.1%	2-Fluorobiphenyl	70.8%
d14-p-Terphenyl	71.7%	d4-1,2-Dichlorobenzene	61.2%
d5-Phenol	80.7%	2-Fluorophenol	85.8%
2,4,6-Tribromophenol	109%	d4-2-Chlorophenol	78.1%

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-055D-C
SAMPLE

Lab Sample ID: FS37R
LIMS ID: 03-10337
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/19/03 18:08
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 19.3%
pH: 7.5

CAS Number	Analyte	µg/kg
108-95-2	Phenol	19 U
541-73-1	1,3-Dichlorobenzene	19 U
106-46-7	1,4-Dichlorobenzene	19 U
100-51-6	Benzyl Alcohol	19 U
95-50-1	1,2-Dichlorobenzene	19 U
95-48-7	2-Methylphenol	19 U
106-44-5	**4-Methylphenol**	**150**
105-67-9	2,4-Dimethylphenol	19 U
65-85-0	Benzoic Acid	190 U
120-82-1	1,2,4-Trichlorobenzene	19 U
91-20-3	**Naphthalene**	**76**
87-68-3	Hexachlorobutadiene	19 U
91-57-6	2-Methylnaphthalene	19 U
131-11-3	Dimethylphthalate	19 U
208-96-8	Acenaphthylene	19 U
83-32-9	Acenaphthene	19 U
84-66-2	Diethylphthalate	19 U
86-73-7	Fluorene	19 U
86-30-6	N-Nitrosodiphenylamine	19 U
118-74-1	Hexachlorobenzene	19 U
87-86-5	Pentachlorophenol	97 U
85-01-8	**Phenanthrene**	**46**
120-12-7	Anthracene	19 U
84-74-2	Di-n-Butylphthalate	19 U
206-44-0	**Fluoranthene**	**44**
129-00-0	**Pyrene**	**39**
85-68-7	**Butylbenzylphthalate**	**95**
56-55-3	Benzo(a)anthracene	19 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~250~~ 250U
218-01-9	Chrysene	19 U
117-84-0	Di-n-Octyl phthalate	19 U
205-99-2	Benzo(b)fluoranthene	19 U
207-08-9	Benzo(k)fluoranthene	19 U
50-32-8	Benzo(a)pyrene	19 U
193-39-5	Indeno(1,2,3-cd)pyrene	19 U
53-70-3	Dibenz(a,h)anthracene	19 U
191-24-2	Benzo(g,h,i)perylene	19 U

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.7%	2-Fluorobiphenyl	65.4%
d14-p-Terphenyl	69.6%	d4-1,2-Dichlorobenzene	61.1%
d5-Phenol	74.6%	2-Fluorophenol	77.0%
2,4,6-Tribromophenol	108%	d4-2-Chlorophenol	72.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS

Sample ID: GPA-055D-D
SAMPLE

Lab Sample ID: FS37S
LIMS ID: 03-10338
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/19/03 18:56
Instrument/Analyst: FINN8/PK
GPC Cleanup: NO

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 16.1%
pH: 7.5

CAS Number	Analyte	µg/kg	
108-95-2	**Phenol**	**24**	
541-73-1	1,3-Dichlorobenzene	20 U	
106-46-7	1,4-Dichlorobenzene	20 U	
100-51-6	Benzyl Alcohol	20 U	
95-50-1	1,2-Dichlorobenzene	20 U	
95-48-7	2-Methylphenol	20 U	
106-44-5	**4-Methylphenol**	**670**	
105-67-9	2,4-Dimethylphenol	20 U	
65-85-0	Benzoic Acid	200 U	
120-82-1	1,2,4-Trichlorobenzene	20 U	
91-20-3	**Naphthalene**	**120**	
87-68-3	Hexachlorobutadiene	20 U	
91-57-6	2-Methylnaphthalene	20 U	
131-11-3	Dimethylphthalate	20 U	
208-96-8	Acenaphthylene	20 U	
83-32-9	Acenaphthene	20 U	
84-66-2	Diethylphthalate	20 U	
86-73-7	Fluorene	20 U	
86-30-6	N-Nitrosodiphenylamine	20 U	
118-74-1	Hexachlorobenzene	20 U	
87-86-5	Pentachlorophenol	98 U	
85-01-8	**Phenanthrene**	**40**	
120-12-7	Anthracene	20 U	
84-74-2	Di-n-Butylphthalate	20 U	
206-44-0	**Fluoranthene**	**28**	
129-00-0	**Pyrene**	**24**	
85-68-7	Butylbenzylphthalate	20 U	
56-55-3	Benzo(a)anthracene	20 U	
117-81-7	**bis(2-Ethylhexyl)phthalate**	~~110~~	1104
218-01-9	Chrysene	20 U	
117-84-0	Di-n-Octyl phthalate	20 U	
205-99-2	Benzo(b)fluoranthene	20 U	
207-08-9	Benzo(k)fluoranthene	20 U	
50-32-8	Benzo(a)pyrene	20 U	
193-39-5	Indeno(1,2,3-cd)pyrene	20 U	
53-70-3	Dibenz(a,h)anthracene	20 U	
191-24-2	Benzo(g,h,i)perylene	20 U	

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.7%	2-Fluorobiphenyl	60.5%
d14-p-Terphenyl	58.0%	d4-1,2-Dichlorobenzene	57.2%
d5-Phenol	73.4%	2-Fluorophenol	82.6%
2,4,6-Tribromophenol	99.2%	d4-2-Chlorophenol	72.0%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Semivolatiles by GC/MS
Page 1 of 1

Sample ID: GPA-02 4.0-6.5
SAMPLE

Lab Sample ID: FT03A
LIMS ID: 03-10747
Matrix: Sediment
Data Release Authorized:
Reported: 08/21/03

QC Report No: FT03-Anchor Environmental
Project: 020030-02
Georgia Pacific ASB
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/13/03
Date Analyzed: 08/20/03 19:50
Instrument/Analyst: NT2/Van
GPC Cleanup: NO

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 5.00
Percent Moisture: 78.1%
pH: 7.8

CAS Number	Analyte	µg/kg
108-95-2	**Phenol**	210
541-73-1	1,3-Dichlorobenzene	99 U
106-46-7	1,4-Dichlorobenzene	99 U
100-51-6	Benzyl Alcohol	99 U
95-50-1	1,2-Dichlorobenzene	99 U
95-48-7	2-Methylphenol	99 U
106-44-5	4-Methylphenol	99 U
105-67-9	2,4-Dimethylphenol	99 U
65-85-0	Benzoic Acid	990 U
120-82-1	1,2,4-Trichlorobenzene	99 U
91-20-3	Naphthalene	99 U
87-68-3	Hexachlorobutadiene	99 U
91-57-6	2-Methylnaphthalene	99 U
131-11-3	Dimethylphthalate	99 U
208-96-8	Acenaphthylene	99 U
83-32-9	Acenaphthene	99 U
84-66-2	Diethylphthalate	99 U
86-73-7	Fluorene	99 U
86-30-6	N-Nitrosodiphenylamine	99 U
118-74-1	Hexachlorobenzene	99 U
87-86-5	Pentachlorophenol	500 U
85-01-8	**Phenanthrene**	200
120-12-7	Anthracene	99 U
84-74-2	Di-n-Butylphthalate	99 U
206-44-0	**Fluoranthene**	210
129-00-0	**Pyrene**	220
85-68-7	Butylbenzylphthalate	99 U
56-55-3	Benzo(a)anthracene	99 U
117-81-7	bis(2-Ethylhexyl)phthalate	99 U
218-01-9	Chrysene	99 U
117-84-0	Di-n-Octyl phthalate	99 U
205-99-2	Benzo(b)fluoranthene	99 U
207-08-9	Benzo(k)fluoranthene	99 U
50-32-8	Benzo(a)pyrene	99 U
193-39-5	Indeno(1,2,3-cd)pyrene	99 U
53-70-3	Dibenz(a,h)anthracene	99 U
191-24-2	Benzo(g,h,i)perylene	99 U

Semivolatile Surrogate Recovery

d5-Nitrobenzene	53.4%	2-Fluorobiphenyl	54.0%
d14-p-Terphenyl	57.4%	d4-1,2-Dichlorobenzene	46.4%
d5-Phenol	54.0%	2-Fluorophenol	55.5%
2,4,6-Tribromophenol	58.1%	d4-2-Chlorophenol	53.5%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: GPA-025D-A
SAMPLE

Lab Sample ID: FS37A
LIMS ID: 03-10320
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/25/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 04:54
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.3
Percent Moisture: 85.3%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	3.2	< 3.2 Y
72-54-8	4,4'-DDD	2.0	< 2.0
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 Y
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	69.5%
Tetrachlorometaxylene	33.5%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: GPA-025D-B
SAMPLE

Lab Sample ID: FS37B
LIMS ID: 03-10321
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/25/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 06:47
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.5
Percent Moisture: 77.2%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	5.0	< 5.0 Y
72-54-8	4,4'-DDD	2.0	< 2.0
50-29-3	4,4'-DDT	3.9	< 3.9 Y
118-74-1	Hexachlorobenzene	5.4	< 5.4 Y
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	NR
Tetrachlorometaxylene	45.8%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: GPA-025D-D
SAMPLE

Lab Sample ID: FS37C
LIMS ID: 03-10322
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 07:25
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 13.4 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.8
Percent Moisture: 22.5%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.93	< 0.93 U
87-68-3	Hexachlorobutadiene	0.93	< 0.93 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	43.5%
Tetrachlorometaxylene	39.5%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: GPA-035D-A
SAMPLE

Lab Sample ID: FS37D
LIMS ID: 03-10323
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 08:02
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 6.9
Percent Moisture: 88.8%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0
72-54-8	4,4'-DDD	2.0	< 2.0
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	0.99	< 0.99
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	23.0%
Tetrachlorometaxylene	NR

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: GPA-035D-B
SAMPLE

Lab Sample ID: FS37E
LIMS ID: 03-10324
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 12:09
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.1
Percent Moisture: 87.4%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0
72-54-8	4,4'-DDD	2.0	< 2.0
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	**Hexachlorobenzene**	**0.99**	**1.8**
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	NR
Tetrachlorometaxylene	105%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: GPA-035D-C
SAMPLE

Lab Sample ID: FS37F
LIMS ID: 03-10325
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 12:46
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 13.4 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.6
Percent Moisture: 29.5%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9
72-54-8	4,4'-DDD	1.9	< 1.9
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.93	< 0.93
87-68-3	Hexachlorobutadiene	0.93	< 0.93 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	69.8%
Tetrachlorometaxylene	44.5%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: GPA-035D-D
SAMPLE

Lab Sample ID: FS37G
LIMS ID: 03-10326
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 13:23
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 13.2 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
pH: 7.7
Percent Moisture: 18.2%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.94	< 0.94 U
87-68-3	Hexachlorobutadiene	0.94	< 0.94 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	40.8%
Tetrachlorometaxylene	37.2%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: GPA-015D-A
SAMPLE

Lab Sample ID: FS37H
LIMS ID: 03-10327
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 14:00
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
pH: 6.8
Percent Moisture: 92.3%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0
72-54-8	4,4'-DDD	2.0	< 2.0
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	2.0	< 2.0 Y
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	67.0%
Tetrachlorometaxylene	NR

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: GPA-015D-B
SAMPLE

Lab Sample ID: FS37I
LIMS ID: 03-10328
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 14:36
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.4
Percent Moisture: 88.7%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	2.0	< 2.0
72-54-8	4,4'-DDD	2.0	< 2.0
50-29-3	4,4'-DDT	14	< 14 Y
118-74-1	Hexachlorobenzene	3.4	< 3.4 Y
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	NR
Tetrachlorometaxylene	71.8%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: GPA-015D-C
SAMPLE

Lab Sample ID: FS37J
LIMS ID: 03-10329
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 15:13
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 13.1 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
pH: 7.5
Percent Moisture: 37.2%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9
72-54-8	4,4'-DDD	1.9	< 1.9
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.96	< 0.96
87-68-3	Hexachlorobutadiene	0.96	< 0.96 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	109%
Tetrachlorometaxylene	58.2%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: GPA-015D-D
SAMPLE

Lab Sample ID: FS37K
LIMS ID: 03-10330
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 15:50
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 13.3 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.9
Percent Moisture: 19.8%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.94	< 0.94 U
87-68-3	Hexachlorobutadiene	0.94	< 0.94 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	50.0%
Tetrachlorometaxylene	53.5%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: GPA-045D-A
SAMPLE

Lab Sample ID: FS37L
LIMS ID: 03-10331
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 16:27
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.2
Percent Moisture: 90.2%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	5.9	< 5.9 Y
72-54-8	4,4'-DDD	2.0	< 2.0
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	1.5	< 1.5 Y
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	NR
Tetrachlorometaxylene	71.5%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

000070

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: GPA-045D-B
SAMPLE

Lab Sample ID: FS37M
LIMS ID: 03-10332
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 20:44
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.7
Percent Moisture: 83.4%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	5.2	< 5.2 Y
72-54-8	4,4'-DDD	2.0	< 2.0
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	0.98	< 0.98
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	132%
Tetrachlorometaxylene	58.8%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: GPA-045D-C
SAMPLE

Lab Sample ID: FS37N
LIMS ID: 03-10333
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 21:20
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 13.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.8
Percent Moisture: 22.7%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.8	< 1.8
72-54-8	4,4'-DDD	1.8	< 1.8 U
50-29-3	4,4'-DDT	1.8	< 1.8 U
118-74-1	Hexachlorobenzene	0.91	< 0.91
87-68-3	Hexachlorobutadiene	0.91	< 0.91 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	54.5%
Tetrachlorometaxylene	58.8%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

000072

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: GPA-045D-D
SAMPLE

Lab Sample ID: FS370
LIMS ID: 03-10334
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 21:57
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 13.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
pH: 8.3
Percent Moisture: 17.7%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.8	< 1.8 U
72-54-8	4,4'-DDD	1.8	< 1.8 U
50-29-3	4,4'-DDT	1.8	< 1.8 U
118-74-1	Hexachlorobenzene	0.91	< 0.91 U
87-68-3	Hexachlorobutadiene	0.91	< 0.91 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	53.5%
Tetrachlorometaxylene	55.8%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

000073

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: GPA-055D-A
SAMPLE

Lab Sample ID: FS37P
LIMS ID: 03-10335
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 22:34
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
pH: 7.5
Percent Moisture: 75.8%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	11	< 11 Y
72-54-8	4,4'-DDD	2.0	< 2.0 U
50-29-3	4,4'-DDT	2.0	< 2.0 U
118-74-1	Hexachlorobenzene	3.1	< 3.1 Y
87-68-3	Hexachlorobutadiene	0.98	< 0.98 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	NR
Tetrachlorometaxylene	88.2%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003
000074

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: GPA-055D-B
SAMPLE

Lab Sample ID: FS37Q
LIMS ID: 03-10336
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 23:10
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 13.3 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.6
Percent Moisture: 29.5%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	2.5	< 2.5 Y
118-74-1	Hexachlorobenzene	3.4	< 3.4 Y
87-68-3	Hexachlorobutadiene	0.94	< 0.94 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	67.0%
Tetrachlorometaxylene	53.2%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: GPA-055D-C
SAMPLE

Lab Sample ID: FS37R
LIMS ID: 03-10337
Matrix: Sediment
Data Release Authorized: JB
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/21/03 23:47
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 13.5 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.5
Percent Moisture: 19.3%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.8	< 1.8 U
72-54-8	4,4'-DDD	1.8	< 1.8 U
50-29-3	4,4'-DDT	1.8	< 1.8 U
118-74-1	Hexachlorobenzene	0.93	< 0.93 U
87-68-3	Hexachlorobutadiene	0.93	< 0.93 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	38.8%
Tetrachlorometaxylene	29.2%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

000078

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: GPA-055D-D
SAMPLE

Lab Sample ID: FS37S
LIMS ID: 03-10338
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/22/03 00:23
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 13.1 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.5
Percent Moisture: 16.1%

CAS Number	Analyte	RL	Result
72-55-9	4,4'-DDE	1.9	< 1.9 U
72-54-8	4,4'-DDD	1.9	< 1.9 U
50-29-3	4,4'-DDT	1.9	< 1.9 U
118-74-1	Hexachlorobenzene	0.96	< 0.96 U
87-68-3	Hexachlorobutadiene	0.96	< 0.96 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	43.8%
Tetrachlorometaxylene	37.8%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003
000077

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: GPA-02 4.0-6.5
SAMPLE

Lab Sample ID: FT03A
LIMS ID: 03-10747
Matrix: Sediment
Data Release Authorized:
Reported: 08/26/03

QC Report No: FT03-Anchor Environmental
Project: 020030-02
Georgia Pacific ASB
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/13/03
Date Analyzed: 08/22/03 18:04
Instrument/Analyst: ECD3/JBG
GPC Cleanup: NO
Sulfur Cleanup: YES
Florisil Cleanup: YES

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
pH: 7.8
Percent Moisture: 78.1%

CAS Number	Analyte	RL	Result	
72-55-9	4,4'-DDE	3.7	< 3.7 Y	J
72-54-8	4,4'-DDD	5.1	< 5.1 Y	↓
50-29-3	4,4'-DDT	3.1	< 3.1 Y	
118-74-1	Hexachlorobenzene	1.2	< 1.2 Y	
87-68-3	Hexachlorobutadiene	0.99	< 0.99 U	

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery	
Decachlorobiphenyl	NR
Tetrachlorometaxylene	40.2%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-035D-B
SAMPLE

Lab Sample ID: FS37E
LIMS ID: 03-10324
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/12/03 19:55
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.1
Percent Moisture: 87.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	270	< 270 Y
11097-69-1	Aroclor 1254	330	< 330 Y
11096-82-5	Aroclor 1260	360	< 360 Y
11104-28-2	Aroclor 1221	40	< 40 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	60.5%
Tetrachlorometaxylene	103%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-035D-C
SAMPLE

Lab Sample ID: FS37F
LIMS ID: 03-10325
Matrix: Sediment
Data Release Authorized: JMB
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/12/03 20:23
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 13.4 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.6
Percent Moisture: 29.5%

CAS Number	Analyte	RL	Result	
12674-11-2	Aroclor 1016	19	< 19 U	J
53469-21-9	Aroclor 1242	19	< 19 U	
12672-29-6	Aroclor 1248	110	< 110 Y	
11097-69-1	Aroclor 1254	39	< 39 Y	
11096-82-5	Aroclor 1260	70	< 70 Y	
11104-28-2	Aroclor 1221	37	< 37 U	
11141-16-5	Aroclor 1232	19	< 19 U	

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	37.0%
Tetrachlorometaxylene	42.5%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-035D-D
SAMPLE

Lab Sample ID: FS37G
LIMS ID: 03-10326
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB 020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/12/03 20:51
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 13.2 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
pH: 7.7
Percent Moisture: 18.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	38	< 38 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	49.0%
Tetrachlorometaxylene	39.5%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-015D-A
SAMPLE

Lab Sample ID: FS37H
LIMS ID: 03-10327
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/12/03 21:19
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 6.8
Percent Moisture: 92.3%

CAS Number	Analyte	RL	Result	
12674-11-2	Aroclor 1016	20	< 20 U	J
53469-21-9	Aroclor 1242	20	< 20 U	
12672-29-6	Aroclor 1248	79	< 79 Y	
11097-69-1	Aroclor 1254	53	< 53 Y	
11096-82-5	Aroclor 1260	79	< 79 Y	
11104-28-2	Aroclor 1221	40	< 40 U	
11141-16-5	Aroclor 1232	20	< 20 U	

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	19.0%
Tetrachlorometaxylene	25.2%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-015D-B
SAMPLE

Lab Sample ID: FS37I
LIMS ID: 03-10328
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/13/03 18:50
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00

pH: 7.4
Percent Moisture: 88.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	99	< 99 U
53469-21-9	Aroclor 1242	99	< 99 U
12672-29-6	Aroclor 1248	1,300	< 1,300 Y
11097-69-1	Aroclor 1254	1,000	< 1,000 Y
11096-82-5	Aroclor 1260	710	< 710 Y
11104-28-2	Aroclor 1221	200	< 200 U
11141-16-5	Aroclor 1232	99	< 99 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	NR
Tetrachlorometaxylene	70.0%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

000094

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-015D-C
SAMPLE

Lab Sample ID: FS37J
LIMS ID: 03-10329
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/12/03 22:15
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 13.1 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.5
Percent Moisture: 37.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	120	< 120 Y
11097-69-1	Aroclor 1254	44	< 44 Y
11096-82-5	Aroclor 1260	160	< 160 Y
11104-28-2	Aroclor 1221	38	< 38 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	51.5%
Tetrachlorometaxylene	49.2%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003
000095

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-015D-D
SAMPLE

Lab Sample ID: FS37K
LIMS ID: 03-10330
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/12/03 22:43
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 13.3 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.9
Percent Moisture: 19.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	38	< 38 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	62.0%
Tetrachlorometaxylene	56.0%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

000096

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-045D-A
SAMPLE

Lab Sample ID: FS37L
LIMS ID: 03-10331
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/12/03 23:11
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.2
Percent Moisture: 90.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	330	< 330 Y
11097-69-1	Aroclor 1254	130	< 130 Y
11096-82-5	Aroclor 1260	370	< 370 Y
11104-28-2	Aroclor 1221	40	< 40 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	62.8%
Tetrachlorometaxylene	71.0%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

000097

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-045D-B
SAMPLE

Lab Sample ID: FS37M
LIMS ID: 03-10332
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/13/03 01:31
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.7
Percent Moisture: 83.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	320	< 320 Y
11097-69-1	Aroclor 1254	160	< 160 Y
11096-82-5	Aroclor 1260	330	< 330 Y
11104-28-2	Aroclor 1221	39	< 39 U
11141-16-5	Aroclor 1232	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	66.0%
Tetrachlorometaxylene	65.0%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-045D-C
SAMPLE

Lab Sample ID: FS37N
LIMS ID: 03-10333
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/13/03 01:59
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 13.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.8
Percent Moisture: 22.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	Aroclor 1248	53	< 53 Y
11097-69-1	Aroclor 1254	20	< 20 Y
11096-82-5	Aroclor 1260	56	< 56 Y
11104-28-2	Aroclor 1221	36	< 36 U
11141-16-5	Aroclor 1232	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	55.2%
Tetrachlorometaxylene	48.0%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-045D-D
SAMPLE

Lab Sample ID: FS370
LIMS ID: 03-10334
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/13/03 02:27
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 13.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 8.3
Percent Moisture: 17.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	Aroclor 1248	18	< 18 U
11097-69-1	Aroclor 1254	18	< 18 U
11096-82-5	Aroclor 1260	18	< 18 U
11104-28-2	Aroclor 1221	36	< 36 U
11141-16-5	Aroclor 1232	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	64.2%
Tetrachlorometaxylene	53.5%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-055D-A
SAMPLE

Lab Sample ID: FS37P
LIMS ID: 03-10335
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/13/03 02:55
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.5
Percent Moisture: 75.8%

CAS Number	Analyte	RL	Result	
12674-11-2	Aroclor 1016	20	< 20 U	J
53469-21-9	Aroclor 1242	20	< 20 U	
12672-29-6	Aroclor 1248	280	< 280 Y	
11097-69-1	Aroclor 1254	100	< 100 Y	
11096-82-5	Aroclor 1260	94	< 94 Y	
11104-28-2	Aroclor 1221	39	< 39 U	
11141-16-5	Aroclor 1232	20	< 20 U	

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	44.0%
Tetrachlorometaxylene	NR

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

000101

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: GPA-055D-B
SAMPLE

Lab Sample ID: FS37Q
LIMS ID: 03-10336
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/13/03 03:23
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 13.3 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.6
Percent Moisture: 29.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	73	< 73 Y
11097-69-1	Aroclor 1254	33	< 33 Y
11096-82-5	Aroclor 1260	71	< 71 Y
11104-28-2	Aroclor 1221	38	< 38 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	57.0%
Tetrachlorometaxylene	56.0%

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003
000102

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-055D-C
SAMPLE

Lab Sample ID: FS37R
LIMS ID: 03-10337
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/13/03 03:51
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 13.5 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.5
Percent Moisture: 19.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	18	< 18 U
53469-21-9	Aroclor 1242	18	< 18 U
12672-29-6	Aroclor 1248	18	< 18 U
11097-69-1	Aroclor 1254	18	< 18 U
11096-82-5	Aroclor 1260	18	< 18 U
11104-28-2	Aroclor 1221	37	< 37 U
11141-16-5	Aroclor 1232	18	< 18 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	38.5%
Tetrachlorometaxylene	34.0%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-055D-D
SAMPLE

Lab Sample ID: FS37S
LIMS ID: 03-10338
Matrix: Sediment
Data Release Authorized:
Reported: 08/25/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Date Extracted: 08/07/03
Date Analyzed: 08/13/03 04:19
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 13.1 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00

pH: 7.5
Percent Moisture: 16.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	19	< 19 U
53469-21-9	Aroclor 1242	19	< 19 U
12672-29-6	Aroclor 1248	19	< 19 U
11097-69-1	Aroclor 1254	19	< 19 U
11096-82-5	Aroclor 1260	19	< 19 U
11104-28-2	Aroclor 1221	38	< 38 U
11141-16-5	Aroclor 1232	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	53.0%
Tetrachlorometaxylene	47.2%

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: GPA-02 4.0-6.5
SAMPLE

Lab Sample ID: FT03A
LIMS ID: 03-10747
Matrix: Sediment
Data Release Authorized:
Reported: 08/22/03

QC Report No: FT03-Anchor Environmental
Project: 020030-02
Georgia Pacific ASB
Date Sampled: 07/28/03
Date Received: 07/31/03

Date Extracted: 08/13/03
Date Analyzed: 08/20/03 12:30
Instrument/Analyst: ECD1/YZ
GPC Cleanup: NO
Sulfur Cleanup: YES
Acid Cleanup: YES

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00

pH: 7.8
Percent Moisture: 78.1%

CAS Number	Analyte	RL	Result	
12674-11-2	Aroclor 1016	20	< 20 U	J
53469-21-9	Aroclor 1242	20	< 20 U	
12672-29-6	Aroclor 1248	260	< 260 Y	
11097-69-1	Aroclor 1254	120	< 120 Y	
11096-82-5	Aroclor 1260	270	< 270 Y	
11104-28-2	Aroclor 1221	40	< 40 U	
11141-16-5	Aroclor 1232	20	< 20 U	

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	NR
Tetrachlorometaxylene	29.2%

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

000021

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GPA-025D-A
SAMPLE

Lab Sample ID: FS37A
LIMS ID: 03-10320
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/25/03
Date Received: 07/31/03

Percent Total Solids: 14.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	30	30	U J
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	30	30	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	1	**13**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	1	**69**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	10	**20**	
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.3	**2.6**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	7	**27**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	2	2	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	4	**438**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GPA-025D-B
SAMPLE

Lab Sample ID: FS37B
LIMS ID: 03-10321
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/25/03
Date Received: 07/31/03

Percent Total Solids: 22.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	20	20	U
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	20	20	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	0.8	**8.5**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	0.8	**87.5**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	8	**54**	
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.2	**6.0**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	4	**45**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	1	1	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	3	**474**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GPA-025D-D
SAMPLE

Lab Sample ID: FS37C
LIMS ID: 03-10322
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Percent Total Solids: 84.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	6	6	U
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	6	6	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	0.2	**0.3**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	0.2	**8.9**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	2	**3**	
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.05	**0.13**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	1	**14**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	0.3	0.3	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	0.7	**22.8**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

000115

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GPA-035D-A
SAMPLE

Lab Sample ID: FS37D
LIMS ID: 03-10323
Matrix: Sediment
Data Release Authorized: JK
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Percent Total Solids: 9.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	50	50	U J
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	50	50	U
3050B	08/05/03	6010B	08/07/03	7440-43-9	Cadmium	2	21	
3050B	08/05/03	6010B	08/07/03	7440-50-8	Copper	2	75	
3050B	08/05/03	6010B	08/07/03	7439-92-1	Lead	20	20	
CLP	08/05/03	7471A	08/05/03	7439-97-6	Mercury	0.5	1.9	
3050B	08/05/03	6010B	08/07/03	7440-02-0	Nickel	10	40	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	3	3	U
3050B	08/05/03	6010B	08/07/03	7440-66-6	Zinc	6	544	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003
000116

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GPA-035D-B
SAMPLE

Lab Sample ID: FS37E
LIMS ID: 03-10324
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Percent Total Solids: 13.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	40	40	U J
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	40	40	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	1	**9**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	1	**70**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	10	**40**	
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.4	**5.3**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	7	**25**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	2	2	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	4	**422**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

000117

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GPA-035D-C
SAMPLE

Lab Sample ID: FS37F
LIMS ID: 03-10325
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Percent Total Solids: 70.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	7	7	UJ
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	7	7	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	0.3	**0.9**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	0.3	**15.8**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	3	**6**	
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.06	**0.48**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	1	**18**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	0.4	0.4	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	0.8	**109**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

000118

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GPA-035D-D
SAMPLE

Lab Sample ID: FS37G
LIMS ID: 03-10326
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/28/03
Date Received: 07/31/03

Percent Total Solids: 83.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	6	6	U J
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	6	6	U
3050B	08/05/03	6010B	08/07/03	7440-43-9	Cadmium	0.2	0.2	U
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	0.2	**10.3**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	2	**3**	
CLP	08/05/03	7471A	08/05/03	7439-97-6	Mercury	0.05	0.05	U
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	1	**24**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	0.3	0.3	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	0.7	**32.4**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

000119

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GPA-015D-A
SAMPLE

Lab Sample ID: FS37H
LIMS ID: 03-10327
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Percent Total Solids: 6.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	80	80	U J
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	80	80	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	3	**18**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	3	**75**	
3050B	08/05/03	6010B	08/07/03	7439-92-1	Lead	30	30	U
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.7	**1.1**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	20	**30**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	5	5	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	9	**616**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

000120

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: GPA-015D-B
SAMPLE

Lab Sample ID: FS37I
LIMS ID: 03-10328
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Percent Total Solids: 11.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	40	40	UJ
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	40	40	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	2	**18**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	2	**91**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	20	**40**	
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.4	**7.0**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	8	**41**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	2	2	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	5	**667**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003
000121

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GPA-015D-C
SAMPLE

Lab Sample ID: FS37J
LIMS ID: 03-10329
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Percent Total Solids: 62.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	8	8	U J
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	8	8	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	0.3	**1.3**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	0.3	**22.6**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	3	**8**	
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.06	**0.60**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	2	**27**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	0.5	0.5	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	0.9	**77.8**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003
000122

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: GPA-015D-D
SAMPLE

Lab Sample ID: FS37K
LIMS ID: 03-10330
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Percent Total Solids: 79.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	6	6	U J
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	6	6	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	0.2	**0.4**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	0.2	**14.0**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	2	**3**	
CLP	08/05/03	7471A	08/05/03	7439-97-6	Mercury	0.06	0.06	U
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	1	**20**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	0.4	0.4	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	0.7	**29.1**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

000123

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: GPA-045D-A
SAMPLE

Lab Sample ID: FS37L
LIMS ID: 03-10331
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Percent Total Solids: 10.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	50	50	U J
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	50	50	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	2	**9**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	2	**82**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	20	**50**	
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.4	**7.7**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	9	**28**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	3	3	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	5	**501**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: GPA-045D-B
SAMPLE

Lab Sample ID: FS37M
LIMS ID: 03-10332
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Percent Total Solids: 16.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	30	30	U J
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	30	30	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	1	**11**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	1	**104**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	10	**40**	
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.3	**5.1**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	6	**39**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	2	2	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	3	**659**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
FO
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GPA-045D-C
SAMPLE

Lab Sample ID: FS37N
LIMS ID: 03-10333
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Percent Total Solids: 76.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	6	6	U
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	6	6	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	0.3	**0.7**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	0.3	**12.7**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	3	**5**	
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.06	**0.33**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	1	**15**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	0.4	0.4	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	0.8	**36.8**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

000126

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: GPA-045D-D
SAMPLE

Lab Sample ID: FS37O
LIMS ID: 03-10334
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/29/03
Date Received: 07/31/03

Percent Total Solids: 81.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	6	6	U
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	6	6	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	0.2	**0.3**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	0.2	**11.3**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	2	**3**	
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.04	**0.04**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	1	**21**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	0.4	0.4	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	0.7	**27.6**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

000127

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: GPA-055D-A
SAMPLE

Lab Sample ID: FS37P
LIMS ID: 03-10335
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Percent Total Solids: 24.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	20	20	U J
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	20	20	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	0.8	**3.5**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	0.8	**29.6**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	8	**12**	
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.2	**0.4**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	4	**14**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	1	1	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	2	**179**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003
000128

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: GPA-055D-B
SAMPLE

Lab Sample ID: FS37Q
LIMS ID: 03-10336
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Percent Total Solids: 68.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	7	7	UJ
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	7	7	U
3050B	08/05/03	6010B	08/07/03	7440-43-9	Cadmium	0.3	2.1	
3050B	08/05/03	6010B	08/07/03	7440-50-8	Copper	0.3	25.7	
3050B	08/05/03	6010B	08/07/03	7439-92-1	Lead	3	30	
CLP	08/05/03	7471A	08/05/03	7439-97-6	Mercury	0.06	0.68	
3050B	08/05/03	6010B	08/07/03	7440-02-0	Nickel	1	28	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	0.4	0.4	U
3050B	08/05/03	6010B	08/07/03	7440-66-6	Zinc	0.8	82.1	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003
000129

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: GPA-055D-C
SAMPLE

Lab Sample ID: FS37R
LIMS ID: 03-10337
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Percent Total Solids: 79.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	6	6	UJ
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	6	6	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	0.2	**0.5**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	0.2	**11.1**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	2	**3**	
CLP	08/05/03	7471A	08/05/03	**7439-97-6**	**Mercury**	0.04	**0.05**	
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	1	**19**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	0.4	0.4	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	0.7	**28.0**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
FD
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: GPA-055D-D
SAMPLE

Lab Sample ID: FS37S
LIMS ID: 03-10338
Matrix: Sediment
Data Release Authorized:
Reported: 08/07/03

QC Report No: FS37-Anchor Environmental
Project: Georgia Pacific ASB
020030
Date Sampled: 07/30/03
Date Received: 07/31/03

Percent Total Solids: 80.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/05/03	6010B	08/07/03	7440-36-0	Antimony	6	6	U
3050B	08/05/03	6010B	08/07/03	7440-38-2	Arsenic	6	6	U
3050B	08/05/03	6010B	08/07/03	**7440-43-9**	**Cadmium**	0.2	**0.3**	
3050B	08/05/03	6010B	08/07/03	**7440-50-8**	**Copper**	0.2	**13.5**	
3050B	08/05/03	6010B	08/07/03	**7439-92-1**	**Lead**	2	**3**	
CLP	08/05/03	7471A	08/05/03	7439-97-6	Mercury	0.06	0.06	U
3050B	08/05/03	6010B	08/07/03	**7440-02-0**	**Nickel**	1	**23**	
3050B	08/05/03	6010B	08/07/03	7440-22-4	Silver	0.3	0.3	U
3050B	08/05/03	6010B	08/07/03	**7440-66-6**	**Zinc**	0.7	**30.6**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: GPA-02 4.0-6.5
SAMPLE

Lab Sample ID: FT03A
LIMS ID: 03-10747
Matrix: Sediment
Data Release Authorized:
Reported: 08/15/03

QC Report No: FT03-Anchor Environmental
Project: 020030-02
Georgia Pacific ASB
Date Sampled: 07/28/03
Date Received: 07/31/03

Percent Total Solids: 21.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	08/12/03	6010B	08/14/03	7440-36-0	Antimony	20	20	U
3050B	08/12/03	6010B	08/14/03	7440-38-2	Arsenic	20	20	U
3050B	08/12/03	6010B	08/14/03	**7440-43-9**	**Cadmium**	0.9	**14.5**	
3050B	08/12/03	6010B	08/14/03	**7440-50-8**	**Copper**	0.9	**122**	
3050B	08/12/03	6010B	08/14/03	**7439-92-1**	**Lead**	9	**206**	
CLP	08/12/03	7471A	08/14/03	**7439-97-6**	**Mercury**	0.6	**20.2**	
3050B	08/12/03	6010B	08/14/03	**7440-02-0**	**Nickel**	4	**84**	
3050B	08/12/03	6010B	08/14/03	7440-22-4	Silver	1	1	U
3050B	08/12/03	6010B	08/14/03	**7440-66-6**	**Zinc**	3	**3,500**	

U-Analyte undetected at given RL
RL-Reporting Limit

VALIDATED
PSEP LEVEL 4 (Full)
Quality by Design
October 8, 2003

SAMPLE DATA

TRIANGLE LABORATORIES, INC.
LAB CONTROL SPIKE RECOVERY ANALYSIS AND COMPARISON

Project: 60851
Matrix: SAND
Method: 8290

Isomer	W145402 ID: TLI Blank Sample (pg/g)	W145409 ID: TLI LCS With Spike (pg/g)	Percent Recovery	W145410 ID: TLI LCSD Spike Dup (pg/g)	Percent Recovery	Relative Percent Difference
2378-TCDD	ND	37.6	94.0	37.7	94.4	0.42
12378-PeCDD	ND	183	91.5	185	92.4	0.98
123478-HxCDD	ND	200	100	193	96.3	3.77
123678-HxCDD	ND	206	103	210	105	1.92
123789-HxCDD	ND	216	108	215	108	0.0
1234678-HpCDD	ND	206	103	202	101	1.96
OCDD	ND	426	107	419	105	1.89
2378-TCDF	ND	40.4	101	41.0	103	1.96
12378-PeCDF	ND	181	90.3	174	86.9	3.84
23478-PeCDF	ND	200	99.8	187	93.3	6.73
123478-HxCDF	ND	204	102	199	99.4	2.58
123678-HxCDF	ND	211	106	206	103	2.87
234678-HxCDF	ND	219	109	219	109	0.0
123789-HxCDF	ND	239	119	234	117	1.69
1234678-HpCDF	ND	216	108	219	110	1.83
1234789-HpCDF	ND	231	116	230	115	0.87
OCDF	ND	406	102	387	96.6	5.44

ND: Not Detected
NA: Not Applicable
[..]: EMPC Value

MILES 4.22.16
GRY_PSUM v1.11

Processed By: _____ Date: 08/15/03

Percent Recovery QC Limits: 70 to 130 percent.
Relative Percent Difference QC Limits: +/- 20 percent.

Nominal Spike Levels:
- TCDD/TCDF..: 0.4 ng
- PeCDD/PeCDF: 2.0 ng
- HxCDD/HxCDF: 2.0 ng
- HpCDD/HpCDF: 2.0 ng
- OCDD/OCDF..: 4.0 ng

Data File	W145402	W146010		W146006	W145409
Sample ID	TLI Blank	GPA-SD-CMP.1		CleanUp Blk	TLI LCS
Units	pg/g	pg/g		pg/g	pg/g
Extraction Date	08/08/2003	08/08/2003		08/09/2003	08/08/2003
Analysis Date	08/14/2003	08/15/2003		08/15/2003	08/14/2003
Instrument	W	W		W	W
Matrix	SAND	SEDIMENT		SAND	SAND
Extraction Type					
Analytes					
2378-TCDD	(0.2)	14.4		(0.1)	37.6
12378-PeCDD	(0.3)	72.8		(0.2)	183
123478-HxCDD	(0.3)	377		(0.2)	200
123678-HxCDD	(0.3)	329		(0.1)	206
123789-HxCDD	(0.3)	309		(0.1)	216
1234678-HpCDD	(0.5)	1930		(0.2)	206
OCDD	(0.7)	1580		(0.4)	426
2378-TCDF	(0.2)	364		(0.1)	40.4
12378-PeCDF	(0.2)	{22.0}	X	(0.09)	181
23478-PeCDF	(0.2)	29.3		(0.1)	200
123478-HxCDF	(0.2)	26.2		(0.09)	204
123678-HxCDF	(0.2)	{9.6}		(0.08)	211
234678-HxCDF	(0.2)	{10.9}	X	(0.09)	219
123789-HxCDF	(0.3)	(0.7)		(0.1)	239
1234678-HpCDF	(0.3)	27.0		(0.1)	216
1234789-HpCDF	(0.4)	{3.2}	J	(0.2)	231
OCDF	(0.6)	35.2		(0.3)	406
TOTAL TCDD	(0.2)	20500	E	(0.1)	
TOTAL PeCDD	(0.3)	19630	E	(0.2)	
TOTAL HxCDD	(0.3)	24760	E	(0.1)	
TOTAL HpCDD	(0.5)	3100		(0.2)	
TOTAL TCDF	(0.2)	1370		(0.1)	
TOTAL PeCDF	(0.2)	221	X	(0.10)	
TOTAL HxCDF	(0.2)	130		(0.09)	
TOTAL HpCDF	(0.3)	68.2		(0.1)	
Other Standards Percent Recovery Summary (% Rec)					
37Cl-TCDD	69.1	56.7		75.6	80.2
Other Standards Percent Recovery Summary (% Rec)					
13C12-PeCDF 234	88.9	56.9		74.4	104
13C12-HxCDF 478	73.7	67.5		101	86.5
13C12-HxCDD 478	83.8	59.9		95.6	99.3
13C12-HpCDF 789	92.8	45.7		98.7	116
Other Standards Percent Recovery Summary (% Rec)					
13C12-HxCDF 789	85.2	58.8		98.8	101
13C12-HxCDF 234	78.2	59.3		93.2	92.2
Internal Standards Percent Recovery Summary (% Rec)					
13C12-2378-TCDF	72.9	54.9		75.6	84.9
13C12-2378-TCDD	79.7	62.0		80.6	93.8

Data File	W145402	W146010	W146006	W145409
Sample ID	TLI Blank	GPA-SD-CMP.1	CleanUp Blk	TLI LCS
Units	pg/g	pg/g	pg/g	pg/g
Extraction Date	08/08/2003	08/08/2003	08/09/2003	08/08/2003
Analysis Date	08/14/2003	08/15/2003	08/15/2003	08/14/2003
Instrument	W	W	W	W
Matrix	SAND	SEDIMENT	SAND	SAND
Extraction Type				
Internal Standards Percent Recovery Summary (% Rec)				
13C12-PeCDF 123	84.3	59.4	80.3	97.9
13C12-PeCDD 123	98.8	57.2	69.5	116
13C12-HxCDF 678	76.5	64.6	99.0	88.7
13C12-HxCDD 678	88.1	60.8	93.0	98.0
13C12-HpCDF 678	80.4	51.5	91.4	97.0
13C12-HpCDD 678	102	55.2	105	121
13C12-OCDD	94.1	33.2 V	93.0	115

Data File	W145410
Sample ID	TLI LCSD
Units	pg/g
Extraction Date	08/08/2003
Analysis Date	08/14/2003
Instrument	W
Matrix	SAND
Extraction Type	

Analytes	
2378-TCDD	37.7
12378-PeCDD	185
123478-HxCDD	193
123678-HxCDD	210
123789-HxCDD	215
1234678-HpCDD	202
OCDD	419
2378-TCDF	41.0
12378-PeCDF	174
23478-PeCDF	187
123478-HxCDF	199
123678-HxCDF	206
234678-HxCDF	219
123789-HxCDF	234
1234678-HpCDF	219
1234789-HpCDF	230
OCDF	387

Other Standards	Percent Recovery Summary (% Rec)
37C1-TCDD	76.0

Other Standards	Percent Recovery Summary (% Rec)
13C12-PeCDF 234	97.1
13C12-HxCDF 478	79.2
13C12-HxCDD 478	91.9
13C12-HpCDF 789	104

Other Standards	Percent Recovery Summary (% Rec)
13C12-HxCDF 789	91.1
13C12-HxCDF 234	85.1

Internal Standards	Percent Recovery Summary (% Rec)
13C12-2378-TCDF	76.9
13C12-2378-TCDD	85.4
13C12-PeCDF 123	95.2
13C12-PeCDD 123	106
13C12-HxCDF 678	81.1
13C12-HxCDD 678	90.5
13C12-HpCDF 678	87.5
13C12-HpCDD 678	111
13C12-OCDD	105

{Estimated Maximum Possible Concentration}, (Detection Limit).

Data File	P032525
Sample ID	GPA-SD-CMP.1
Units	pg/g
Extraction Date	08/08/2003
Analysis Date	08/15/2003
Instrument	P
Matrix	SEDIMENT
Extraction Type	

Analytes	
2378-TCDF	320

Internal Standards Percent Recovery Summary (% Rec)

13C12-2378-TCDF	62.2

Triangle Laboratories, Inc.®
2445 S. Alston Ave. • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

ANCHOR
ENVIRONMENTAL, L.L.C.

Appendix D

Data Validation

Quality By Design

Laboratory Quality Assurance Consulting

29 Shipman Street
Suite 101
Hilo, Hawaii 96720

Phone: (808) 969-9424
Fax: (808) 969-9094
e-mail: qbdhilo@gte.net

EPA Level 2
DATA VALIDATION REPORT

Project Name: Georgia Pacific ASB
Project No. 200300-02
Type of Samples: Filters and Sediments
Dates of Sampling: July 28 – 30, 2003

Prepared for

Anchor Environmental, L.L.C.
1423 Third Avenue, Suite 300
Seattle, Washington 98103

SDGs No. FS37 and FT03
QBD Job No. 1141

Reviewed and approved,

Thomas S. Davis, Principal — 10/10/03 Date

Contents

Tables

Attachments

A. Abbreviations and Acronyms

Acronym/ Abbreviation	Definition
%D	percent difference
%R	percent recovery
µg/l	micrograms per liter
µg/kg	micrograms per kilogram
AA	atomic absorption
BFB	bromofluorobenzene
BNA	base/neutral/acid compounds
BS	blank spike
BSD	blank spike duplicate
CCB	continuing calibration blank
CCC	calibration check compound
CCS	continuing calibration standard
CCV	continuing calibration verification
CF	calibration factor
CLP	Contract Laboratory Program
COC	chain of custody record
CRA	contract required standard at the CRDL for graphite furnace AA method
CRDL	contract required detection limit
CRI	contract required standard at the CRDL for ICP method
CRQL	contract required quantitation limit
CV	coefficient of variation
CVAA	cold vapor atomic absorption
4,4'-DDD	4,4'-dechlorodiphenyldichloroethane
4,4'-DDE	4,4'-dichlorodiphenyldichloroethylene
4,4'-DDT	4,4'-dichlorodiphenyltrichloroethane
DFTPP	decafluorotriphenylphosphine
DHG	dissolved hydrogen gas
DRO	diesel range organics
DQO	data quality objective
EB	equipment blank
EICP	extracted ion current profile
EPA	U.S. Environmental Protection Agency
ER	equipment rinsate
FB	field blank

Acronym/ Abbreviation	Definition
GC/ECD	gas chromatography/electron capture detector
GC/ELCD	gas chromatography/electrolytic conductivity detector (Hall detector)
GC/FID	gas chromatography/flame ionization detector
GC/PID	gas chromatography/photoionization detector
GC/MS	gas chromatography/mass spectrometry
GFAA	graphite furnace atomic absorption
GLP	good laboratory practices
GRO	gasoline range organics
GPC	gel permeation chromatography
HPLC	high-performance liquid chromatography
HRGC	high resolution gas chromatography
HRMS	high resolution mass spectrometry
ICB	initial calibration blank
ICP	inductively coupled plasma
ICS	interference check sample
ICV	initial calibration verification
IDL	instrument detection limit
IR	infrared spectroscopy
IS	internal standards
LCS	laboratory control standard
LCSD	laboratory control standard duplicate
MDL	method detection limit
mg/kg	milligrams per kilogram
mg/l	milligrams per liter
MS	matrix spike
MSA	method of standard addition
MSD	matrix spike duplicate
m/z	mass to charge ratio
NIST	National Institute of Standards and Technology
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PE	performance evaluation
PEM	performance evaluation mixture
PPB	parts per billion
PPM	parts per million
PPT	parts per trillion
PNA	polynuclear aromatic hydrocarbon

Acronym/ Abbreviation	Definition
PQL	practical quantitation limit
QA	quality assurance
QAPP	quality assurance project plan
QC	quality control
RL	reporting limit
RF	response factor
RIC	reconstructed ion chromatograph
RPD	relative percent difference
RRF	relative response factor
RRT	relative retention time
RSD	relative standard deviation
RT	retention time
SDG	sample delivery group
SOP	standard operating procedure
SOW	statement of work
SVOC	semivolatile organic compound
SPCC	system performance check compound
SRM	standard reference material
TB	trip blank
TIC	tentatively identified compound
TPH	total petroleum hydrocarbons
TPH-G	total petroleum hydrocarbons - gasoline
TPH-D	total petroleum hydrocarbons - diesel
UV/VIS	ultraviolet/visible
VOA	volatile organic analysis

B. Introduction

Laboratory Sciences, Inc., d.b.a. *Quality by Design* (QBD), has completed an EPA Level 2 Data Validation on the submitted data packages.

The reporting format and criteria for recommending data qualifying flags for this data set are described in the EPA *"Functional Guidelines for Evaluating Organics Analyses,"* as revised, 1999; and the *"Functional Guidelines for Evaluating Inorganics Analyses,"* as revised, 1994; or using criteria listed in the method referenced. Data may be qualified for any of the following reasons:

1. By the laboratory prior to receipt by the reviewer
2. Because of laboratory deviation from the designated method
3. Because the data may not meet the criteria listed in the reference above
4. By the professional judgment of the reviewer

This data validation report consists of several sections, each of which are formatted to follow *Functional Guidelines*, but which also include subsections discussing QBD contacts with the laboratory, other comments, and a summary table of data qualifiers.

The data set consists of two data package of 2,364 pages from Analytical Resources, Inc. in Seattle, Washington, and contains data for the samples shown in Table 1. The data reviewers and senior reviewers are shown in Table 2.

Each data set includes an analytical data package for each sample, copies of the completed COC forms, and a QC data package. The analytical data package includes analytical results, blank sample results, both laboratory and client sample identifications, appropriate dates and times, method reporting limits, method references, surrogate recoveries as appropriate, the laboratory's name and address, and the signature of the person releasing the data. The custody forms include the receipt of the sample and the laboratory's internal tracking. The QC data package includes a tabular list of the laboratory's sample identification, spiking concentrations, recoveries, percentage calculations, and acceptance windows. Raw data were provided which includes chromatograms, instrument print outs, injection logs, and digestion/preparation logs.

Table 1. Sample Identification and Analysis

Sample Identification	Laboratory Identification	Method 8270C	Method 8081A	Methods 6010B/7471A	Wet Chemistry
GPA-025D-A	FS37A	X	X	X	Not Validated
GPA-025D-B	FS37B	X	X	X	Not Validated
GPA-025D-D	FS37C	X	X	X	Not Validated
GPA-035D-A	FS37D	X	X	X	Not Validated
GPA-035D-B	FS37E	X	X	X	Not Validated
GPA-035D-C	FS37F	X	X	X	Not Validated
GPA-035D-D	FS37G	X	X	X	Not Validated
GPA-035D-A	FS37H	X	X	X	Not Validated
GPA-035D-B	FS37I	X	X	X	Not Validated
GPA-035D-C	FS37J	X	X	X	Not Validated
GPA-035D-D	FS37K	X	X	X	Not Validated
GPA-045D-A	FS37L	X	X	X	Not Validated
GPA-045D-B	FS37M	X	X	X	Not Validated
GPA-045D-C	FS37N	X	X	X	Not Validated
GPA-045D-D	FS37O	X	X	X	Not Validated
GPA-055D-A	FS37P	X	X	X	Not Validated
GPA-055D-B	FS37Q	X	X	X	Not Validated
GPA-055D-C	FS37R	X	X	X	Not Validated
GPA-055D-D	FS37S	X	X	X	Not Validated
GPA-PCEWB		Not Validated	Not Validated	Not Validated	Not Validated
GPA-SSEWB		Not Validated	Not Validated	Not Validated	Not Validated
GPA-FBFWB		Not Validated	Not Validated	Not Validated	Not Validated
GPA-04 33.5-35.5	FT03A	X	X	X	Not Validated
GPA-02 4.0-6.5		Not Validated	Not Validated	Not Validated	Not Validated
GPA-04 6.5-8.5		Not Validated	Not Validated	Not Validated	Not Validated
GPA-04 22.5-24.0		Not Validated	Not Validated	Not Validated	Not Validated

Key:

Method 8270C	=	SVOCs by GC/MS
Method 8081A	=	Chlorinated pesticides by GC
Method 8082	=	Polychlorinated biphenyls by GC
Method 6010B	=	Metals by ICP
Wet Chemistry	=	Grain size, Total Organic Carbon, ammonia, and sulfide conventional wet chemistry methods

Table 2. Data Package, Reviewer, and Senior Reviewer

Analysis	Number of Pages	SDG Number	Reviewer	Senior Reviewer
8270C	1,518	All	Thomas Davis	Lorraine L. Davis
8081	265	All	Thomas Davis	Lorraine L. Davis
8082	248	All	Thomas Davis	Lorraine L. Davis
6010B/7471A	193	All	Thomas Davis	Lorraine L. Davis
Wet Chemistry	132	All	Thomas Davis	Lorraine L. Davis

C. Laboratory Report and Supporting Documentation

The laboratory report and supporting documentation were reviewed to determine that the data package supported the level of validation requested. The data package was checked for pagination, appropriate signatures and approvals, an adequate case narrative, and possible subcontracting. The supporting data was checked for completeness and to determine that the information necessary for validation was present. The laboratory documentation was acceptable.

D. Chain-of-Custody

The COC documentation associated with this SDG was reviewed to determine that all samples listed on the COC form were reported in the laboratory deliverables, that a date and time of sampling was provided, and that the sample custody trail was complete. Sample condition upon receipt was reviewed to determine that the samples were not compromised during shipping. All custody and shipping documentation was reviewed to determine if GLP were employed when errors occurred. All data reviewed were acceptable, except as noted below.

Discussion: The COC contained several corrections that were obliterated and written over. GLP stipulates that all corrections be made using a single line strike-through and dated and initialed by the person making the correction.

E. Review of Semivolatile Organic Analyses by GC/MS

EPA Method 8270C

1. Timeliness and a Check for Errors

The laboratory data packages were reviewed and compared against the COC and supporting documentation to determine that samples were properly preserved and analyzed within the technical holding times, and that no deviations from proper handling and identification occurred. All data reviewed were acceptable.

2. GC/MS Tuning

The DFTPP tunes for all initial and continuing calibrations associated with sample analysis were reviewed. All samples were reviewed to determine that they were associated with an acceptable tune and were analyzed within the appropriate tune time period. All data reviewed were acceptable.

3. Initial and Continuing Calibration

All initial and continuing calibration quality control criteria were reviewed to determine that no TCL analytes had initial calibration percent RSDs or continuing calibration percent differences greater than allowed by the method. All RF, SPCC, and CCC criteria were reviewed for method acceptance. All data reviewed were acceptable, except as noted below.

Table 3. SVOC Data Qualifiers Due to Continuing Calibrations

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-045D-A	Butylbenzlphthalate	Continuing calibration	%D=23.9	%D<20	2,800 J

Discussion: The laboratory report listed initial calibrations for eleven analytes that had percent RSD results that were out of the criteria of less than 15 percent, but eight of these analytes were not reported in the samples. The remaining four analytes (benzoic acid in two different initial calibrations, benzyl alcohol, and n-nitroso-diphenylamine at were out of criteria at 22.1, 30.5, 21.1, and 46.9 percent. No data qualifier flags are recommended because the associated sample results were non-detect.

The continuing calibrations that were analyzed on August 20, 21, 22, and 27 had several analytes that had percent differences greater than the acceptance criteria of

less than 20 percent. Except for butylbenzlphthalate in Sample GPA-045D-A, all of these calibration exceedences were associated with sample results that were not-detected, sample results that were diluted and subsequently flagged "R" elsewhere in this report, or sample results that have been reported from another day's analysis. This positive result on Sample GPA-045D-A has been flagged "J" to indicate an estimated value.

4. Blanks and Checks for Contamination

The frequency of analysis and the results for instrument and method blank analyses were reviewed. Equipment and field blanks were also evaluated if identified in the group of samples. Either no analytes were detected or, if detected, levels were below the reporting limit, except as noted below.

Table 4. SVOC Data Qualifiers Due to Blank Contamination

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-D	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	240 U
GPA-035D-C	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	160 U
GPA-035D-D	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	74 U
GPA-015D-C	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	130 U
GPA-015D-D	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	240 U
GPA-045D-C	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	160 U
GPA-045D-D	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	94 U
GPA-055D-A	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	580 U
GPA-055D-B	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	170 U
GPA-055D-C	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	250 U
GPA-055D-D	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	110 U

Discussion: Bis (2-ethylhexyl) phthalate was detected in two of the method blanks associated with all samples. Because this compound is a common laboratory contaminant, data qualifier flags are not used for sample results of less than ten times (10X) the highest associated blank level. Instead, if the sample result was less than the

blank concentration, and the sample result was less than the reporting limit, then the sample result has been raised to the reporting limit. If the sample result was greater than 10X the blank concentration or was non-detect, no data qualifier flags are recommended.

5. Surrogate Recovery

Surrogate spikes were added to all samples, QC checks, and blanks as required by the referenced method. All data reviewed were acceptable, except as noted below.

Discussion: A single surrogate, p-terphenyl-d14, was out of the criteria of 36 to 136 percent at 152 percent in the base/neutral fraction of Sample GPA-015D-B. Another single surrogate, 2,4,6-tribromophenol, was out of the criteria of 20 to 139 percent in the acid fraction of Sample GPA-045D-C. *Functional Guidelines* states that "data are not qualified . . . unless two or more semivolatile surrogates, within the same fraction . . . are out of specification". No data qualifier flags are recommended because the other surrogates were in criteria.

6. Precision and Accuracy

Results for precision (RPD) and accuracy (percent recovery) were reviewed for spikes and duplicate spikes (MS/MSDs, BS/BSDs and/or LCS/LCSDs) to determine that the checks were analyzed at the frequency required by the referenced method and the results met the requirements of the project. All data reviewed were acceptable.

7. Second Source Calibration Checks

The frequency of analysis and percent recoveries of the second source calibration verifications were reviewed. All data reviewed were acceptable.

8. Internal Standards

Internal standard response and retention times were reviewed. All data reviewed were acceptable, except as noted below.

Table 5. SVOC Data Qualifiers Due to Blank Contamination

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-015D-B	Indeno(1,2,3-cd)pyrene	Internal Standard	%R=17.5	%R=50-200	98 UR
GPA-015D-B	Dibenzo(a,h)anthracene	Internal Standard	%R=17.5	%R=50-200	98 UR
GPA-015D-B	Benzo(g,h,i)perylene	Internal Standard	%R=17.5	%R=50-200	240 J

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-045D-A	Indeno(1,2,3-cd)pyrene	Internal Standard	%R=17.5	%R=50-200	97 UR
GPA-045D-A	Dibenzo(a,h)anthracene	Internal Standard	%R=17.5	%R=50-200	97 UR
GPA-045D-A	Benzo(g,h,i)perylene	Internal Standard	%R=17.5	%R=50-200	230 J
GPA-045D-B	Indeno(1,2,3-cd)pyrene	Internal Standard	%R=17.5	%R=50-200	310 UR
GPA-045D-B	Dibenzo(a,h)anthracene	Internal Standard	%R=17.5	%R=50-200	310 UR
GPA-045D-B	Benzo(g,h,i)perylene	Internal Standard	%R=17.5	%R=50-200	1900 J
GPA-055D-A	Indeno(1,2,3-cd)pyrene	Internal Standard	%R=17.5	%R=50-200	94 UR
GPA-055D-A	Dibenzo(a,h)anthracene	Internal Standard	%R=17.5	%R=50-200	94 UR
GPA-055D-A	Benzo(g,h,i)perylene	Internal Standard	%R=17.5	%R=50-200	94 UR

Discussion: The internal standard responses in Samples GPA-015D-B, GPA-045D-A, GPA-045D-B, and GPA-055D-A for perylene-d_{12} were out of the criteria of 50 to 200 percent at 17.5, 21.3, 11.1, and 22.3 percent, respectively. Since the responses were less than 25 percent of the associated continuing calibration standard response, the associated positive results have been flagged "J" to indicate an estimated value, and the non-detect results have been flagged "R" to indicate unusable.

The retention times in Sample GPA-045D-B for chrysene-d_{12} and perylene-d_{12} shifted out of the retention time acceptance window for internal standards. After reviewing the chromatogram, QBD concurs that there was a significant hydrocarbon interference and that the analytes were identified and quantitated properly.

9. Target Compound Identification

Retention times and mass spectra were reviewed for the identification of target compounds. All data reviewed were acceptable.

10. Compound Quantitation and Reported Detection Limits

Quantitation was reviewed to determine that calculations were performed in accordance with the referenced method, including the use of appropriate internal standards or external standardization. Data were reviewed against method requirements to determine that results were reported correctly, that no results exceeded the highest calibration standard, and that dilutions were performed and calculated appropriately. Reporting limits were reviewed to determine that the limits were correctly adjusted for dilution and extraction amounts. All data reviewed were acceptable, except as noted below.

Table 6. SVOC Data Qualifiers Due to Dilutions and Reanalysis

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-A	2-Methylphenol	More technically sound data available	Over calibration Range	NA	80,000 R
GPA-025D-A	Naphthalene	More technically sound data available	Over calibration Range	NA	8,400 R
GPA-025D-A DL	Phenol	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	4-Methylphenol	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	29,000 UR
GPA-025D-A DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Fluorene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	n-Nitrosodiphenylamine	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	2,900 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-A DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	14,000 UR
GPA-025D-A DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Anthracene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Pyrene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	bis(2-Ethylhexyl) phthalate	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Chrysene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Indeno(1,2,3-cd)pyrene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Dibenz(a,h)anthracene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-B	Phenol	More technically sound data available	NA	NA	1,200 R
GPA-025D-B	1,3-Dichlorobenzene	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	1,4-Dichlorobenzene	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Benzyl alcohol	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	1,2-Dichlorobenzene	More technically sound data available	NA	NA	1,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-B	2-Methylphenol	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	4-Methylphenol	More technically sound data available	NA	NA	47,000 R
GPA-025D-B	2,4-Dimethylphenol	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Benzoic acid	More technically sound data available	NA	NA	10,000 UR
GPA-025D-B	1,2,4-Trichlorobenzene	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Naphthalene	More technically sound data available	NA	NA	14,000 R
GPA-025D-B	Hexachlorobutadiene	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	2-Methylnaphthalene	More technically sound data available	NA	NA	2,800 R
GPA-025D-B	Dimethylphthalate	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Acenaphthylene	More technically sound data available	NA	NA	5,900 R
GPA-025D-B	Acenaphthene	More technically sound data available	NA	NA	2,200 R
GPA-025D-B	Diethylphthalate	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Fluorene	More technically sound data available	NA	NA	1,200 R
GPA-025D-B	n-Nitrosodiphenylamine	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Hexachlorobenzene	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Pentachlorophenol	More technically sound data available	NA	NA	5,200 UR
GPA-025D-B	Phenanthrene	More technically sound data available	NA	NA	30,000 R
GPA-025D-B	Anthracene	More technically sound data available	NA	NA	3,500 R
GPA-025D-B	di-n-Butylphthalate	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Fluoranthene	More technically sound data available	NA	NA	32,000 R
GPA-025D-B	Pyrene	More technically sound data available	NA	NA	32,000 R
GPA-025D-B	Butylbenzylphthalate	More technically sound data available	NA	NA	1,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-B	Benzo(a)anthracene	More technically sound data available	NA	NA	2,600 R
GPA-025D-B	bis(2-Ethylhexyl) phthalate	More technically sound data available	NA	NA	1,800 R
GPA-025D-B	Chrysene	More technically sound data available	NA	NA	4,700 R
GPA-025D-B	Di-n-octylphthalate	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Benzo(b)fluoranthene	More technically sound data available	NA	NA	3,800 R
GPA-025D-B	Benzo(k)fluoranthene	More technically sound data available	NA	NA	5,300 R
GPA-025D-B	Benzo(a)pyrene	More technically sound data available	NA	NA	4,200 R
GPA-025D-B	Indeno(1,2,3-cd)pyrene	More technically sound data available	NA	NA	NV R
GPA-025D-B	Dibenz(a,h)anthracene	More technically sound data available	NA	NA	NV R
GPA-025D-B	Benzo(g,h,i)perylene	More technically sound data available	NA	NA	NV R
GPA-035D-A	4-Methylphenol	More technically sound data available	Over calibration Range	NA	53,000 R
GPA-035D-A DL	Phenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	20,000 UR
GPA-035D-A DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Naphthalene	More technically sound data available	Excessive dilution	NA	7,600 R
GPA-035D-A DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	2,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-035D-A DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Fluorene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	n-Nitrosodiphenylamine	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	9,800 UR
GPA-035D-A DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	bis(2-Ethylhexyl) phthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Chrysene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-035D-A DL	Indeno(1,2,3-cd)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Dibenz(a,h)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B	4-Methylphenol	More technically sound data available	Over calibration Range	NA	32,000 UR
GPA-035D-B DL	Phenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	20,000 UR
GPA-035D-B DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Naphthalene	More technically sound data available	Excessive dilution	NA	9,800 UR
GPA-035D-B DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Fluorene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	n-Nitrosodiphenylamine	More technically sound data available	Excessive dilution	NA	2,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-035D-B DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	9,900 UR
GPA-035D-B DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	3,100 R
GPA-035D-B DL	Anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 R
GPA-035D-B DL	Pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	bis(2-Ethylhexyl) phthalate	More technically sound data available	Excessive dilution	NA	3,200 R
GPA-035D-B DL	Chrysene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Indeno(1,2,3-cd)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Dibenz(a,h)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A	4-Methylphenol	More technically sound data available	Over calibration Range	NA	43,000 R
GPA-015D-A	bis(2-Ethylhexyl) phthalate	More technically sound data available	Over calibration Range	NA	23,000 R
GPA-015D-A DL	Phenol	More technically sound data available	Excessive dilution	NA	2,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-015D-A DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	20,000 UR
GPA-015D-A DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Naphthalene	More technically sound data available	Excessive dilution	NA	12,000 UR
GPA-015D-A DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Fluorene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	n-Nitrosodiphenylamine	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	9,900 UR
GPA-015D-A DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	3,600 R
GPA-015D-A DL	Anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-015D-A DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	2,200 R
GPA-015D-A DL	Pyrene	More technically sound data available	Excessive dilution	NA	2,300 R
GPA-015D-A DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Chrysene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B	4-Methylphenol	More technically sound data available	Over calibration Range	NA	30,000 R
GPA-015D-B DL	Phenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	20,000 UR
GPA-015D-B DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Naphthalene	More technically sound data available	Excessive dilution	NA	7,600 R
GPA-015D-B DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	2,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-015D-B DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Fluorene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	n-Nitrosodiphenylamine	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	9,900 UR
GPA-015D-B DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	3,000 R
GPA-015D-B DL	Anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	2,100 R
GPA-015D-B DL	Pyrene	More technically sound data available	Excessive dilution	NA	2,300 R
GPA-015D-B DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	bis(2-Ethylhexyl) phthalate	More technically sound data available	Excessive dilution	NA	2,000 R
GPA-015D-B DL	Chrysene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-015D-B DL	Indeno(1,2,3-cd)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Dibenz(a,h)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-045D-A	4-Methylphenol	More technically sound data available	Over calibration Range	NA	20,000 R
GPA-045D-A DL	Phenol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	19,000 UR
GPA-045D-A DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Naphthalene	More technically sound data available	Excessive dilution	NA	5,800 R
GPA-045D-A DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Fluorene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	n-Nitrosodiphenylamine	More technically sound data available	Excessive dilution	NA	1,900 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-045D-A DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	9,700 UR
GPA-045D-A DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	2,800 R
GPA-045D-A DL	Anthracene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 R
GPA-045D-A DL	Pyrene	More technically sound data available	Excessive dilution	NA	2,200 R
GPA-045D-A DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	2,300 R
GPA-045D-A DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	bis(2-Ethylhexyl) phthalate	More technically sound data available	Excessive dilution	NA	3,100 R
GPA-045D-A DL	Chrysene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-B	Butylbenzylphthalate	More technically sound data available	Over calibration Range	NA	160,000 R
GPA-045D-B	bis(2-Ethylhexyl) phthalate	More technically sound data available	Over calibration Range	NA	300,000 R
GPA-045D-B	Di-n-octylphthalate	More technically sound data available	Over calibration Range	NA	39,000 R
GPA-045D-B DL	Phenol	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	31,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-045D-B DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	4-Methylphenol	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	310,000 UR
GPA-045D-B DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Naphthalene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Fluorene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	n-Nitrosodiphenylamine	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	160,000 UR
GPA-045D-B DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Anthracene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	31,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-045D-B DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Pyrene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Chrysene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Indeno(1,2,3-cd)pyrene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Dibenz(a,h)anthracene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-055D-A	4-Methylphenol	More technically sound data available	Over calibration Range	NA	29,000 R
GPA-055D-A DL	Phenol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	19,000 UR
GPA-055D-A DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Naphthalene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	1,900 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-055D-A DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Fluorene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	n-Nitrosodiphenylamine	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	9,400 UR
GPA-055D-A DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Anthracene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Pyrene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	bis(2-Ethylhexyl) phthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Chrysene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	1,900 UR

Discussion: Several samples were diluted and/or re-analyzed due to high levels of analytes. In these instances, the laboratory reported results for the original analysis and for the re-analysis. The results have been condensed to one result per analyte per sample. Therefore, those results that should not be used because more technically sound data are available have been flagged "R" to indicate that the results are unusable.

The laboratory noted that the filament shut-off during the analysis of Sample GPA-025B-B and that the final three analytes were lost. The sample was reanalyzed within the holding time and both sets of results were reported. The results have been condensed to one result per analyte per sample, and, since all other QC measurements are equivalent, the later analysis was chosen for use because it contained a complete set of analytes. Those results that should not be used are available have been flagged "R".

Sample GPA-02 4.0-6.5 was analyzed at a dilution and did not obtain routine reporting limits. After a review of the chromatogram, QBD concurs that the RL was the lowest that could be reasonably attained.

11. Tentatively Identified Compounds

No TICs were reported.

12. System Performance

The performance of the analytical system was reviewed for significant problems such as baseline shifts, loss of resolution, DDT/endrin breakdown, or PCP/benzidine tailing. All data reviewed were acceptable.

13. Field Duplicates

No field duplicates were identified with this group of samples.

14. Laboratory Contact

There was no verbal or written communication with the laboratory.

15. Other Comments

None.

16. Data Use and Overall Assessment

The analytes qualified with an "R" are unusable. All other data, as qualified, are acceptable for use. The analyses were generally within the requirements of the referenced method and no discrepancies were observed between raw data and reported data results. All data flags are summarized at the end of this report.

F. Review of Pesticides Analyses by GC

EPA Methods 8081A

1. Timeliness and a Check for Errors

The laboratory data packages were reviewed and compared against the COC and supporting documentation to determine that samples were properly preserved and analyzed within the technical holding times, and that no deviations from proper handling and identification occurred. All data reviewed were acceptable.

2. Initial and Continuing Calibration

All initial and continuing calibration quality control criteria were reviewed to determine that no TCL analytes had initial calibration percent RSDs, continuing calibration percent differences, or DDT/Endrin breakdown checks were greater than allowed by the method. All data reviewed were acceptable, except as noted below.

Discussion: Several CCVs for 4,4'-DDD and 4,4'-DDE were out of the criteria of %D less than 15 percent on the primary column. No data qualifier flags are recommended because the CCVs on the confirmatory column were acceptable and all sample results were not detected.

3. Blanks and Checks for Contamination

The frequency of analysis and the results for instrument and method blank analyses were reviewed. Equipment and field blanks were also evaluated if identified in the group of samples. Either no analytes were detected or, if detected, levels were below the reporting limit.

4. Surrogate Recovery

Surrogate spikes were added to all samples, QC checks, and blanks as required by the referenced method. All data reviewed were acceptable, except as noted below.

Table 7. Pesticide Data Qualifiers Due to Surrogate Deviations

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-B	4,4'-DDE	TCMX DCBP	NR %R=45.8	%R=50-140	5.0 UJ
GPA-025D-B	4,4'-DDD	TCMX DCBP	NR %R=45.8	%R=50-140	2.0 UJ

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-B	4,4'-DDT	TCMX DCBP	NR %R=45.8	%R=50-140	3.9 UJ
GPA-025D-B	Hexachlorobenzene	TCMX DCBP	NR %R=45.8	%R=50-140	5.4 UJ
GPA-025D-B	Hexachlorobutadiene	TCMX DCBP	NR %R=45.8	%R=50-140	0.98 UJ
GPA-025D-D	4,4'-DDE	TCMX DCBP	%R=43.5 %R=39.5	%R=50-140	1.9 UJ
GPA-025D-D	4,4'-DDD	TCMX DCBP	%R=43.5 %R=39.5	%R=50-140	1.9 UJ
GPA-025D-D	4,4'-DDT	TCMX DCBP	%R=43.5 %R=39.5	%R=50-140	1.9 UJ
GPA-025D-D	Hexachlorobenzene	TCMX DCBP	%R=43.5 %R=39.5	%R=50-140	0.93 UJ
GPA-025D-D	Hexachlorobutadiene	TCMX DCBP	%R=43.5 %R=39.5	%R=50-140	0.93 UJ
GPA-035D-A	4,4'-DDE	TCMX DCBP	%R=23.0 %R=NR	%R=50-140	2.0 UJ
GPA-035D-A	4,4'-DDD	TCMX DCBP	%R=23.0 %R=NR	%R=50-140	2.0 UJ
GPA-035D-A	4,4'-DDT	TCMX DCBP	%R=23.0 %R=NR	%R=50-140	2.0 UJ
GPA-035D-A	Hexachlorobenzene	TCMX DCBP	%R=23.0 %R=NR	%R=50-140	0.99 UJ
GPA-035D-A	Hexachlorobutadiene	TCMX DCBP	%R=23.0 %R=NR	%R=50-140	0.99 UJ
GPA-035D-D	4,4'-DDE	TCMX DCBP	%R=40.8 %R=37.2	%R=50-140	1.9 UJ
GPA-035D-D	4,4'-DDD	TCMX DCBP	%R=40.8 %R=37.2	%R=50-140	1.9 UJ
GPA-035D-D	4,4'-DDT	TCMX DCBP	%R=40.8 %R=37.2	%R=50-140	1.9 UJ
GPA-035D-D	Hexachlorobenzene	TCMX DCBP	%R=40.8 %R=37.2	%R=50-140	0.94 UJ
GPA-035D-D	Hexachlorobutadiene	TCMX DCBP	%R=40.8 %R=37.2	%R=50-140	0.94 UJ
GPA-055D-C	4,4'-DDE	TCMX DCBP	%R=38.8 %R=29.2	%R=50-140	1.8 UJ

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-055D-C	4,4'-DDD	TCMX DCBP	%R=38.8 %R=29.2	%R=50-140	1.8 UJ
GPA-055D-C	4,4'-DDT	TCMX DCBP	%R=38.8 %R=29.2	%R=50-140	1.8 UJ
GPA-055D-C	Hexachlorobenzene	TCMX DCBP	%R=38.8 %R=29.2	%R=50-140	0.93 UJ
GPA-055D-C	Hexachlorobutadiene	TCMX DCBP	%R=38.8 %R=29.2	%R=50-140	0.93 UJ
GPA-055D-D	4,4'-DDE	TCMX DCBP	%R=43.8 %R=37.8	%R=50-140	1.9 UJ
GPA-055D-D	4,4'-DDD	TCMX DCBP	%R=43.8 %R=37.8	%R=50-140	1.9 UJ
GPA-055D-D	4,4'-DDT	TCMX DCBP	%R=43.8 %R=37.8	%R=50-140	1.9 UJ
GPA-055D-D	Hexachlorobenzene	TCMX DCBP	%R=43.8 %R=37.8	%R=50-140	0.96 UJ
GPA-055D-D	Hexachlorobutadiene	TCMX DCBP	%R=43.8 %R=37.8	%R=50-140	0.96 UJ
GPA-2 4.0-6.5	4,4'-DDE	TCMX DCBP	%R=NR %R=40.2	%R=50-140	3.7 UJ
GPA-2 4.0-6.5	4,4'-DDD	TCMX DCBP	%R=NR %R=40.2	%R=50-140	5.1 UJ
GPA-2 4.0-6.5	4,4'-DDT	TCMX DCBP	%R=NR %R=40.2	%R=50-140	3.1 UJ
GPA-2 4.0-6.5	Hexachlorobenzene	TCMX DCBP	%R=NR %R=40.2	%R=50-140	1.2 UJ
GPA-2 4.0-6.5	Hexachlorobutadiene	TCMX DCBP	%R=NR %R=40.2	%R=50-140	0.99 UJ

Key: NR = Not Reported by Laboratory

Discussion: The surrogate percent recoveries for DCBP and TCMX in the SRM and DCBP in the matrix spike were out of the criteria of 50 to 140 percent at 47.8, 41.5, and 148 percent, respectively. No data qualifier flags are recommended because surrogates were evaluated separately in the samples.

A single surrogate was out of criteria in Samples GPA-025D-A and GPA-035D-C. Also, the laboratory did not report one of the two surrogates in Samples GPA-035D-B, GPA-015D-A, GPA-015D-B, and GPA 045D-A because of matrix interferences. No data qualifier flags are recommended. because the referenced

method states that matrix interferences are expected and therefore only one surrogate needs to be acceptable.

Surrogate percent recoveries were out of the criteria of 50 to 140 percent, ranging from 29.2 to 43.8 percent, in Samples GPA-025D-D, GPA-035D-D, GPA-055D-C, and GPA-055D-D. Also, in Sample GPA-025D-B, the surrogate DCBP was not reported by the laboratory because of matrix interference and the surrogate TCMX was out of criteria at 45.8 percent. In Sample GPA-035D-A, DCBP was out of criteria at 23.0 percent and TCMX was not reported. Since the recoveries indicated a low bias, the associated positive results have been flagged "J" to indicate an estimated value, and the non-detect results have been flagged "UJ" to indicate an estimated reporting limit.

5. Precision and Accuracy

Results for precision (RPD) and accuracy (percent recovery) were reviewed for spikes and duplicate spikes (MS/MSDs, BS/BSDs and/or LCS/LCSDs) to determine that the checks were analyzed at the frequency required by the referenced method and the results met the requirements of the project. All data reviewed were acceptable, except as noted below.

Table 8. Pesticide Data Qualifiers Due to MS/MSD Deviations

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-A	4,4'-DDE	MS/MSD	%R=24.9, 26.5	%R=50-140	3.2 UJ
GPA-025D-A	4,4'-DDD	TCMX DCBP	NR %R=45.8	%R=50-140	2.0 UJ
GPA-025D-A	4,4'-DDT	TCMX DCBP	NR %R=45.8	%R=50-140	2.0 UJ
GPA-025D-A	Hexachlorobenzene	TCMX DCBP	NR %R=45.8	%R=50-140	1.0 UJ
GPA-025D-A	Hexachlorobutadiene	TCMX DCBP	NR %R=45.8	%R=50-140	0.99 UJ

Discussion: The percent recovery for 4,4'-DDT was out of criteria of 50 to 140 percent at 24.9 and 26.5 percent in the MS/MSD pair associated with all samples. Since the recoveries indicated a low bias, and the results of the associated LCS were acceptable, only the associated results in the sample spiked, GPA-025D-A, which were non-detect, have been flagged. Because only 4,4'-DDT was spiked into the sample and there are no other target compounds that were spiked that could be used to evaluate the other analytes, all target compounds in the sample have been flagged "UJ" to indicate an estimated reporting limit.

6. Second Source Calibration Checks

The frequency of analysis and percent recoveries of the second source calibration verifications were reviewed. All data reviewed were acceptable.

7. Target Compound Identification

Retention times were reviewed for the identification of target compounds. All data reviewed were acceptable.

8. Compound Quantitation and Reported Detection Limits

Quantitation was reviewed to determine that calculations were performed in accordance with the referenced method, including the use of external standardization. Data were reviewed against method requirements to determine that results were reported correctly, that no results exceeded the highest calibration standard, and that dilutions were performed and calculated appropriately. Reporting limits were reviewed to determine that the limits were correctly adjusted for dilution and extraction amounts. All data reviewed were acceptable.

9. System Performance

The performance of the analytical system was reviewed for significant problems such as baseline shifts, loss of resolution, peak tailing, or DDT/Endrin breakdown for the initial calibration and all dates of analyses. All data reviewed were acceptable.

10. Field Duplicates

No field duplicates were identified with this group of samples.

11. Laboratory Contact

There was no verbal or written communication with the laboratory.

12. Other Comments

None.

13. Data Use and Overall Assessment

The data, as qualified, are acceptable for use. The analyses were generally within the requirements of the referenced method and no discrepancies were observed between raw data and reported data results.

G. Review of Polychlorinated Biphenyl (PCB) Analyses by GC

EPA Method 8082

1. Timeliness and a Check for Errors

The laboratory data packages were reviewed and compared against the COC and supporting documentation to determine that samples were properly preserved and analyzed within the technical holding times, and that no deviations from proper handling and identification occurred. All data reviewed were acceptable.

2. Initial and Continuing Calibration

All initial and continuing calibration quality control criteria were reviewed to determine that no TCL analytes had initial calibration percent RSDs or continuing calibration percent differences greater than allowed by the method. All data reviewed were acceptable, except as noted below.

Discussion: One of the combined Aroclor 1016/1260 CCVs was out of the criteria of a %D less than 15 percent on the primary column. No data qualifier flags are recommended because the CCV on the confirmatory column was acceptable and all associated sample results were not detected.

3. Blanks and Checks for Contamination

The frequency of analysis and the results for instrument and method blank analyses were reviewed. Equipment and field blanks were also evaluated if identified in the group of samples. Either no analytes were detected or, if detected, levels were below the reporting limit.

4. Surrogate Recovery

Surrogate spikes were added to all samples, QC checks, and blanks as required by the referenced method. All data reviewed were acceptable, except as noted below.

Table 9. PCB Data Qualifiers Due to Surrogate Deviations

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-2 4.0-6.5	Aroclor 1016	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	20 UJ
GPA-2 4.0-6.5	Aroclor 1242	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	20 UJ
GPA-2 4.0-6.5	Aroclor 1248	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	260 UJ

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-2 4.0-6.5	Aroclor 1254	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	120 UJ
GPA-2 4.0-6.5	Aroclor 1260	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	270 UJ
GPA-2 4.0-6.5	Aroclor 1221	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	40 UJ
GPA-2 4.0-6.5	Aroclor 1232	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	20 UJ
GPA-025D-D	Aroclor 1016	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	19 UJ
GPA-025D-D	Aroclor 1242	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	19 UJ
GPA-025D-D	Aroclor 1248	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	19 UJ
GPA-025D-D	Aroclor 1254	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	19 UJ
GPA-025D-D	Aroclor 1260	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	19 UJ
GPA-025D-D	Aroclor 1221	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	37 UJ
GPA-025D-D	Aroclor 1232	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	19 UJ
GPA-035D-C	Aroclor 1016	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	19 UJ
GPA-035D-C	Aroclor 1242	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	19 UJ
GPA-035D-C	Aroclor 1248	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	110 UJ
GPA-035D-C	Aroclor 1254	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	39 UJ
GPA-035D-C	Aroclor 1260	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	70 UJ
GPA-035D-C	Aroclor 1221	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	37 UJ
GPA-035D-C	Aroclor 1232	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	19 UJ
GPA-035D-D	Aroclor 1016	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	19 UJ

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-035D-D	Aroclor 1242	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	19 UJ
GPA-035D-D	Aroclor 1248	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	19 UJ
GPA-035D-D	Aroclor 1254	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	19 UJ
GPA-035D-D	Aroclor 1260	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	19 UJ
GPA-035D-D	Aroclor 1221	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	38 UJ
GPA-035D-D	Aroclor 1232	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	19 UJ
GPA-015D-A	Aroclor 1016	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	20 UJ
GPA-015D-A	Aroclor 1242	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	20 UJ
GPA-015D-A	Aroclor 1248	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	79 UJ
GPA-015D-A	Aroclor 1254	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	53 UJ
GPA-015D-A	Aroclor 1260	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	79 UJ
GPA-015D-A	Aroclor 1221	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	40 UJ
GPA-015D-A	Aroclor 1232	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	20 UJ
GPA-055D-A	Aroclor 1016	TCMX DBCP	%R=NR %R=44.0	%R=50-140	20 UJ
GPA-055D-A	Aroclor 1242	TCMX DBCP	%R=NR %R=44.0	%R=50-140	20 UJ
GPA-055D-A	Aroclor 1248	TCMX DBCP	%R=NR %R=44.0	%R=50-140	280 UJ
GPA-055D-A	Aroclor 1254	TCMX DBCP	%R=NR %R=44.0	%R=50-140	100 UJ
GPA-055D-A	Aroclor 1260	TCMX DBCP	%R=NR %R=44.0	%R=50-140	94 UJ
GPA-055D-A	Aroclor 1221	TCMX DBCP	%R=NR %R=44.0	%R=50-140	39 UJ

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-055D-A	Aroclor 1232	TCMX DBCP	%R=NR %R=44.0	%R=50-140	20 UJ
GPA-055D-C	Aroclor 1016	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	18 UJ
GPA-055D-C	Aroclor 1242	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	18 UJ
GPA-055D-C	Aroclor 1248	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	18 UJ
GPA-055D-C	Aroclor 1254	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	18 UJ
GPA-055D-C	Aroclor 1260	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	18 UJ
GPA-055D-C	Aroclor 1221	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	37 UJ
GPA-055D-C	Aroclor 1232	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	18 UJ

Key: NR = Not Reported by Laboratory

Discussion: The percent recoveries were out of the criteria of 50 to 140 percent at 80.0 percent for the surrogate TCMX in the MS, and DBCP was not reported by the laboratory because of matrix interferences. The surrogate DCBP was 44.2 percent in the MSD. No data qualifier flags are recommended because surrogates were evaluated separately in the samples.

A single surrogate was out of criteria in Samples GPA-025D-B and GPA-015D-C. Also, the laboratory did not report one of the two surrogates in Samples GPA-025D-A, GPA-035D-A, GPA-015D-B, and GPA 055D-D because of matrix interferences. No data qualifier flags are recommended. because the referenced method states that matrix interferences are expected and therefore only one surrogate needs to be acceptable.

Surrogate percent recoveries were out of the criteria of 50 to 140 percent, ranging from 19.0 to 49.0 percent, in Samples GPA-025D-D, GPA0035D-C, GPA035D-D, GPA-015D-A, and GPA 055D-C. In Sample GPA-055D-A, DCBP was out of criteria at 44.0 percent and TCMX was not reported. Since the recoveries indicated a low bias, the associated positive results have been flagged "J" to indicate an estimated value, and the non-detect results have been flagged "UJ" to indicate an estimated reporting limit.

5. Precision and Accuracy

Results for precision (RPD) and accuracy (percent recovery) were reviewed for spikes and duplicate spikes (MS/MSDs, BS/BSDs and/or LCS/LCSDs) to determine that the checks were analyzed at the frequency required by the referenced method and the results met the requirements of the project. All data reviewed were acceptable, except as noted below.

Discussion: The sample that was spiked for the MS/MSD, GPA-025D-B, was analyzed at a five-fold dilution and the laboratory did not report the result for the spike. Accuracy was demonstrated through the use of the LCS and the SRM, but there was no demonstration for precision. However, since all field samples were not-detected for PCBs, no data qualifier flags are recommended.

6. Second Source Calibration Checks

The frequency of analysis and percent recoveries of the second source calibration verifications were reviewed. All data reviewed were acceptable.

7. Target Compound Identification

Retention times were reviewed for the identification of target compounds. All data reviewed were acceptable.

8. Compound Quantitation and Reported Detection Limits

Quantitation was reviewed to determine that calculations were performed in accordance with the referenced method, including the use of external standardization. Data were reviewed against method requirements to determine that results were reported correctly, and that dilutions were performed and calculated appropriately. Reporting limits were reviewed to determine that the limits were correctly adjusted for dilution and extraction amounts. All data reviewed were acceptable.

9. System Performance

The performance of the analytical system was reviewed for significant problems such as baseline shifts, loss of resolution, peak tailing, or DDT/Endrin breakdown for the initial calibration and all dates of analyses. All data reviewed were acceptable.

10. Field Duplicates

No field duplicates were identified with this group of samples.

11. Laboratory Contact

There was no verbal or written communication with the laboratory.

12. Other Comments

None.

13. Data Use and Overall Assessment

The data, as qualified, are acceptable for use. The analyses were generally within the requirements of the referenced method and no discrepancies were observed between raw data and reported data results.

Quality by Design

H. Review of Metals Analyses by ICP and AA

EPA Methods 6010B and 7471A

1. Timeliness and a Check for Errors

The laboratory data packages were reviewed and compared against the COC and supporting documentation to determine that samples were properly preserved and analyzed within the technical holding times, and that no deviations from proper handling and identification occurred. All data reviewed were acceptable.

2. Initial and Continuing Calibration

All initial and continuing calibration quality control criteria were reviewed to determine that the proper number of standards were used and the correlation coefficient criteria was met. All data reviewed were acceptable.

3. Blanks and Checks for Contamination

The frequency of analysis and the results for instrument and method blank analyses were reviewed. Equipment and field blanks were also evaluated if identified in the group of samples. Either no analytes were detected or, if detected, levels were below the reporting limit, except as noted below.

Discussion: Mercury was detected in the ICB at a level less than the reporting limit. All bracketed samples were either not-detected or had hits that were greater than five-times the blank contamination, so no data qualifier flags are recommended.

4. ICP Interference Check Standard

An ICS was analyzed at a frequency required by the referenced method and was within acceptable criteria.

5. Precision and Accuracy

Results for precision (RPD) and accuracy (percent recovery) were reviewed for spikes and duplicate spikes (MS/MSDs, BS/BSDs and/or LCS/LCSDs) to determine that the checks were analyzed at the frequency required by the referenced method and the results met the requirements of the project. All data reviewed were acceptable, except as noted below.

Table 10. Metals Data Qualifiers Due to MS Deviations

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-02 4.0-6.5	Antimony	MS	%R=65.9	%R=75-125	20 U
GPA-025D-A	Antimony	MS	%R=65.9	%R=75-125	30 UJ
GPA-025D-B	Antimony	MS	%R=65.9	%R=75-125	20 UJ
GPA-025D-D	Antimony	MS	%R=65.9	%R=75-125	6 UJ
GPA-035D-A	Antimony	MS	%R=65.9	%R=75-125	50 UJ
GPA-035D-B	Antimony	MS	%R=65.9	%R=75-125	40 UJ
GPA-035D-C	Antimony	MS	%R=65.9	%R=75-125	7 UJ
GPA-035D-D	Antimony	MS	%R=65.9	%R=75-125	6 UJ
GPA-015D-A	Antimony	MS	%R=65.9	%R=75-125	80 UJ
GPA-015D-B	Antimony	MS	%R=65.9	%R=75-125	40 UJ
GPA-015D-C	Antimony	MS	%R=65.9	%R=75-125	8 UJ
GPA-015D-D	Antimony	MS	%R=65.9	%R=75-125	6 UJ
GPA-045D-A	Antimony	MS	%R=65.9	%R=75-125	50 UJ
GPA-045D-B	Antimony	MS	%R=65.9	%R=75-125	30 UJ
GPA-045D-C	Antimony	MS	%R=65.9	%R=75-125	6 UJ
GPA-045D-D	Antimony	MS	%R=65.9	%R=75-125	6 UJ
GPA-055D-A	Antimony	MS	%R=65.9	%R=75-125	20 UJ
GPA-055D-B	Antimony	MS	%R=65.9	%R=75-125	7 UJ
GPA-055D-C	Antimony	MS	%R=65.9	%R=75-125	6 UJ
GPA-055D-D	Antimony	MS	%R=65.9	%R=75-125	6 UJ

Discussion: The laboratory did not analyze a MS/MSD pair for this analysis, instead analyzing a MS, LCS, and SRM as measurements of accuracy, and a sample/sample duplicate as a measurement of precision. Unless otherwise noted, all data were acceptable.

The percent recovery for antimony was out of the criteria of 75 to 125 percent at 65.9 percent in the MS associated with all samples. Since the recovery indicated a low bias, and the laboratory noted in the case narrative that antimony recoveries are typically low and that this result was typical of all antimony analyses, the associated results, which were non-detect, have been flagged "UJ" to indicate an estimated reporting limit.

6. Second Source Calibration Checks

The frequency of analysis and percent recoveries of the second source calibration verifications were reviewed. All data reviewed were acceptable.

Quality by Design

7. Sample Duplicates

Sample duplicates were analyzed as required by the referenced method and all RPDs were acceptable.

8. Special Requirements for Mercury by CVAA

All special criteria for CVAA analysis were performed at a frequency required by the referenced method and were within acceptable criteria.

9. ICP Serial Dilution

No serial dilution was performed on samples as a matrix interference check. No data qualifier flags are recommended because EPA 6010B lists this QC check as a recommendation and not as a requirement.

10. Compound Quantitation and Reported Detection Limits

Quantitation was reviewed to determine that calculations were performed in accordance with the referenced method, including the use of external standardization. Data were reviewed against method requirements to determine that results were reported correctly, that no results exceeded the highest calibration standard, and that dilutions were performed and calculated appropriately. Reporting limits were reviewed to determine that the limits were correctly adjusted for dilution and digestion amounts. All data reviewed were acceptable.

11. Field Duplicates

No field duplicates were identified with this group of samples.

12. Laboratory Contact

There was no verbal or written communication with the laboratory.

13. Other Comments

None.

14. Data Use and Overall Assessment

The data, as qualified, are acceptable for use. The analyses were generally within the requirements of the referenced method and no discrepancies were observed between raw data and reported data results.

Quality by Design

I. Review of Conventional Wet Chemistry Analyses

Plumb, 1981; EPA Methods 160.3, 350.1, 376.2; Grain Size

1. Timeliness and a Check for Errors

The laboratory data packages were reviewed and compared against the COC and supporting documentation to determine that samples were properly preserved and analyzed within the technical holding times, and that no deviations from proper handling and identification occurred. All data reviewed were acceptable.

2. Initial and Continuing Calibration

All initial and continuing calibration quality control criteria were reviewed to determine that the proper number of standards were used and the correlation coefficient criteria was met. All data reviewed were acceptable.

3. Blanks and Checks for Contamination

The frequency of analysis and the results for instrument and method blank analyses were reviewed. Equipment and field blanks were also evaluated if identified in the group of samples. Either no analytes were detected or, if detected, levels were below the reporting limit.

4. Precision and Accuracy

Results for precision (RPD) and accuracy (percent recovery) were reviewed for spikes and duplicate spikes (MS/MSDs, BS/BSDs and/or LCS/LCSDs) to determine that the checks were analyzed at the frequency required by the referenced method and the results met the requirements of the project. All data reviewed were acceptable, except as noted below.

Discussion: The percent recovery for ammonia was out of the criteria in the MS associated with all samples due to high concentrations of analytes in the original sample. Since all other measurements of accuracy (e.g., the LCS, the SRM, and the calibration verifications) were acceptable, no data qualifier flags are recommended.

One of the two matrix spikes for sulfide was 68.0 percent, and the other was 81.8 percent. No acceptance criteria for sulfide was provide to QBD, and it is the reviewer's professional opinion that these are acceptable accuracy measurements for this analyte.

5. Second Source Calibration Checks

The frequency of analysis and percent recoveries of the second source calibration verifications were reviewed. All data reviewed were acceptable.

6. Sample Duplicates

Sample duplicates were analyzed as required by the referenced method and all RPDs were within laboratory or method criteria.

7. Compound Quantitation and Reported Detection Limits

Quantitation was reviewed to determine that calculations were performed in accordance with the referenced method, including the use of external standardization. Data were reviewed against method requirements to determine that results were reported correctly, that no results exceeded the highest calibration standard, and that dilutions were performed and calculated appropriately. Reporting limits were reviewed to determine that the limits were correctly adjusted for dilution, and digestion or distillation amounts. All data reviewed were acceptable.

8. Field Duplicates

No field duplicates were identified with this group of samples.

9. Laboratory Contact

There was no verbal or written communication with the laboratory.

10. Other Comments

None.

11. Data Use and Overall Assessment

The data are acceptable for use. The analyses were generally within the requirements of the referenced method and no discrepancies were observed between raw data and reported data results.

Attachment 1 Data Qualifier Flag Definitions

Organics

U = The analyte was analyzed for but not detected above the numerical quantitation limit.

J = The analyte was analyzed for and was positively identified, but the associated numerical value is an estimated quantity. [1]

UJ = The analyte was analyzed for but was not detected above the reporting level, but the reporting level is an estimated level.

R = The data are unusable for all purposes. The analyte was analyzed for, but the target analyte might not be present.

N = The analysis indicates presumptive evidence of the presence of the analyte.

NJ = The analysis indicates presumptive evidence of the presence of the analyte, but the numerical value is an estimated quantity.

Inorganics

U = The analyte was analyzed for but not detected above the numerical quantitation limit. The numerical value may be either a detection limit or a quantitation limit.

J = The analyte was analyzed for and was positively identified, but the associated numerical value is an estimated quantity.[1]

UJ = The analyte was analyzed for but was not detected above the reporting level, but the reporting level is an estimated level.

R = The data are unusable for all purposes. The analyte was analyzed for, but the target analyte might not be present.

[1] EPA Region X describes the data as able to be seriously considered for decision making and usable for many purposes.

Quality by Design

Attachment 2 Summary Table of Data Qualifier Flags

Anchor Environmental, L.L.C.

Project Name: Georgia Pacific ASB
Project No. 200300-02
Type of Samples: Sediments and Filters
Dates of Sampling: July 28 – 30, 2003

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
SVOC Data Qualifier Flags					
GPA-015D-A	4-Methylphenol	More technically sound data available	Over calibration Range	NA	43,000 R
GPA-015D-A	bis(2-Ethylhexyl) phthalate	More technically sound data available	Over calibration Range	NA	23,000 R
GPA-015D-A DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	2,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-015D-A DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	20,000 UR
GPA-015D-A DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Chrysene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Dibenz(a,h)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	2,200 R
GPA-015D-A DL	Fluorene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Indeno(1,2,3-cd)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Naphthalene	More technically sound data available	Excessive dilution	NA	12,000 UR
GPA-015D-A DL	n-Nitrosodiphenyl amine	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	9,900 UR
GPA-015D-A DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	3,600 R
GPA-015D-A DL	Phenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-A DL	Pyrene	More technically sound data available	Excessive dilution	NA	2,300 R
GPA-015D-B	4-Methylphenol	More technically sound data available	Over calibration Range	NA	30,000 R

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-015D-B	Benzo(g,h,i)perylene	Internal Standard	%R=17.5	%R=50-200	240 J
GPA-015D-B	Dibenzo(a,h) anthracene	Internal Standard	%R=17.5	%R=50-200	98 UR
GPA-015D-B	Indeno(1,2,3-cd)pyrene	Internal Standard	%R=17.5	%R=50-200	98 UR
GPA-015D-B DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	20,000 UR
GPA-015D-B DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	bis(2-Ethylhexyl) phthalate	More technically sound data available	Excessive dilution	NA	2,000 R
GPA-015D-B DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Chrysene	More technically sound data available	Excessive dilution	NA	2,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-015D-B DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	2,100 R
GPA-015D-B DL	Fluorene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Naphthalene	More technically sound data available	Excessive dilution	NA	7,600 R
GPA-015D-B DL	n-Nitrosodiphenyl amine	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	9,900 UR
GPA-015D-B DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	3,000 R
GPA-015D-B DL	Phenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-015D-B DL	Pyrene	More technically sound data available	Excessive dilution	NA	2,300 R
GPA-015D-C	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	130 U
GPA-015D-D	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	240 U
GPA-025D-A	2-Methylphenol	More technically sound data available	Over calibration Range	NA	80,000 R
GPA-025D-A	Naphthalene	More technically sound data available	Over calibration Range	NA	8,400 R
GPA-025D-A DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,900 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-A DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	4-Methylphenol	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Anthracene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	29,000 UR
GPA-025D-A DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	bis(2-Ethylhexyl) phthalate	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Chrysene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Dibenz(a,h)anthracene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	2,900 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-A DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Fluorene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Indeno(1,2,3-cd)pyrene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	n-Nitrosodiphenyl amine	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	14,000 UR
GPA-025D-A DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Phenol	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-A DL	Pyrene	More technically sound data available	Excessive dilution	NA	2,900 UR
GPA-025D-B	1,2,4-Trichlorobenzene	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	1,2-Dichlorobenzene	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	1,3-Dichlorobenzene	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	1,4-Dichlorobenzene	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	2,4-Dimethylphenol	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	2-Methylnaphthalene	More technically sound data available	NA	NA	2,800 R
GPA-025D-B	2-Methylphenol	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	4-Methylphenol	More technically sound data available	NA	NA	47,000 R
GPA-025D-B	Acenaphthene	More technically sound data available	NA	NA	2,200 R
GPA-025D-B	Acenaphthylene	More technically sound data available	NA	NA	5,900 R
GPA-025D-B	Anthracene	More technically sound data available	NA	NA	3,500 R
GPA-025D-B	Benzo(a)anthracene	More technically sound data available	NA	NA	2,600 R

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-B	Benzo(a)pyrene	More technically sound data available	NA	NA	4,200 R
GPA-025D-B	Benzo(b)fluoranthene	More technically sound data available	NA	NA	3,800 R
GPA-025D-B	Benzo(g,h,i)perylene	More technically sound data available	NA	NA	NV R
GPA-025D-B	Benzo(k)fluoranthene	More technically sound data available	NA	NA	5,300 R
GPA-025D-B	Benzoic acid	More technically sound data available	NA	NA	10,000 UR
GPA-025D-B	Benzyl alcohol	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	bis(2-Ethylhexyl) phthalate	More technically sound data available	NA	NA	1,800 R
GPA-025D-B	Butylbenzylphthalate	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Chrysene	More technically sound data available	NA	NA	4,700 R
GPA-025D-B	Dibenz(a,h)anthracene	More technically sound data available	NA	NA	NV R
GPA-025D-B	Diethylphthalate	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Dimethylphthalate	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	di-n-Butylphthalate	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Di-n-octylphthalate	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Fluoranthene	More technically sound data available	NA	NA	32,000 R
GPA-025D-B	Fluorene	More technically sound data available	NA	NA	1,200 R
GPA-025D-B	Hexachlorobenzene	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Hexachlorobutadiene	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Indeno(1,2,3-cd)pyrene	More technically sound data available	NA	NA	NV R
GPA-025D-B	Naphthalene	More technically sound data available	NA	NA	14,000 R
GPA-025D-B	n-Nitrosodiphenyl amine	More technically sound data available	NA	NA	1,000 UR
GPA-025D-B	Pentachlorophenol	More technically sound data available	NA	NA	5,200 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-B	Phenanthrene	More technically sound data available	NA	NA	30,000 R
GPA-025D-B	Phenol	More technically sound data available	NA	NA	1,200 R
GPA-025D-B	Pyrene	More technically sound data available	NA	NA	32,000 R
GPA-025D-D	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	240 U
GPA-035D-A	4-Methylphenol	More technically sound data available	Over calibration Range	NA	53,000 R
GPA-035D-A DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	20,000 UR
GPA-035D-A DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	2,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-035D-A DL	bis(2-Ethylhexyl) phthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Chrysene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Dibenz(a,h)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Fluorene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Indeno(1,2,3-cd)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Naphthalene	More technically sound data available	Excessive dilution	NA	7,600 R
GPA-035D-A DL	n-Nitrosodiphenyl amine	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	9,800 UR
GPA-035D-A DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Phenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-A DL	Pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B	4-Methylphenol	More technically sound data available	Over calibration Range	NA	32,000 UR
GPA-035D-B DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-035D-B DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	20,000 UR
GPA-035D-B DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	bis(2-Ethylhexyl) phthalate	More technically sound data available	Excessive dilution	NA	3,200 R
GPA-035D-B DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Chrysene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Dibenz(a,h)anthracene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-035D-B DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 R
GPA-035D-B DL	Fluorene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Indeno(1,2,3-cd)pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Naphthalene	More technically sound data available	Excessive dilution	NA	9,800 UR
GPA-035D-B DL	n-Nitrosodiphenyl amine	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	9,900 UR
GPA-035D-B DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	3,100 R
GPA-035D-B DL	Phenol	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-B DL	Pyrene	More technically sound data available	Excessive dilution	NA	2,000 UR
GPA-035D-C	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	160 U
GPA-035D-D	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	74 U
GPA-045D-A	4-Methylphenol	More technically sound data available	Over calibration Range	NA	20,000 R
GPA-045D-A	Benzo(g,h,i)perylene	Internal Standard	%R=17.5	%R=50-200	230 J
GPA-045D-A	Butylbenzlphthalate	Continuing calibration	%D=23.9	%D<20	2,800 J
GPA-045D-A	Dibenzo(a,h) anthracene	Internal Standard	%R=17.5	%R=50-200	97 UR
GPA-045D-A	Indeno(1,2,3-cd)pyrene	Internal Standard	%R=17.5	%R=50-200	97 UR
GPA-045D-A DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-045D-A DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Anthracene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	19,000 UR
GPA-045D-A DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	bis(2-Ethylhexyl) phthalate	More technically sound data available	Excessive dilution	NA	3,100 R
GPA-045D-A DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	2,300 R
GPA-045D-A DL	Chrysene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	2,000 R
GPA-045D-A DL	Fluorene	More technically sound data available	Excessive dilution	NA	1,900 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-045D-A DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Naphthalene	More technically sound data available	Excessive dilution	NA	5,800 R
GPA-045D-A DL	n-Nitrosodiphenyl amine	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	9,700 UR
GPA-045D-A DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	2,800 R
GPA-045D-A DL	Phenol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-045D-A DL	Pyrene	More technically sound data available	Excessive dilution	NA	2,200 R
GPA-045D-B	Benzo(g,h,i)perylene	Internal Standard	%R=17.5	%R=50-200	1900 J
GPA-045D-B	bis(2-Ethylhexyl) phthalate	More technically sound data available	Over calibration Range	NA	300,000 R
GPA-045D-B	Butylbenzylphthalate	More technically sound data available	Over calibration Range	NA	160,000 R
GPA-045D-B	Dibenzo(a,h) anthracene	Internal Standard	%R=17.5	%R=50-200	310 UR
GPA-045D-B	Di-n-octylphthalate	More technically sound data available	Over calibration Range	NA	39,000 R
GPA-045D-B	Indeno(1,2,3-cd)pyrene	Internal Standard	%R=17.5	%R=50-200	310 UR
GPA-045D-B DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	4-Methylphenol	More technically sound data available	Excessive dilution	NA	31,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-045D-B DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Anthracene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	310,000 UR
GPA-045D-B DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Chrysene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Dibenz(a,h)anthracene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Fluorene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Indeno(1,2,3-cd)pyrene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Naphthalene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	n-Nitrosodiphenyl amine	More technically sound data available	Excessive dilution	NA	31,000 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-045D-B DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	160,000 UR
GPA-045D-B DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Phenol	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-B DL	Pyrene	More technically sound data available	Excessive dilution	NA	31,000 UR
GPA-045D-C	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	160 U
GPA-045D-D	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	94 U
GPA-055D-A	4-Methylphenol	More technically sound data available	Over calibration Range	NA	29,000 R
GPA-055D-A	Benzo(g,h,i)perylene	Internal Standard	%R=17.5	%R=50-200	94 UR
GPA-055D-A	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	580 U
GPA-055D-A	Dibenzo(a,h) anthracene	Internal Standard	%R=17.5	%R=50-200	94 UR
GPA-055D-A	Indeno(1,2,3-cd)pyrene	Internal Standard	%R=17.5	%R=50-200	94 UR
GPA-055D-A DL	1,2,4-Trichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	1,2-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	1,3-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	1,4-Dichlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	2,4-Dimethylphenol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	2-Methylnaphthalene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	2-Methylphenol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Acenaphthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Acenaphthylene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Anthracene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Benzo(a)anthracene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Benzo(a)pyrene	More technically sound data available	Excessive dilution	NA	1,900 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-055D-A DL	Benzo(b)fluoranthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Benzo(g,h,i)perylene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Benzo(k)fluoranthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Benzoic acid	More technically sound data available	Excessive dilution	NA	19,000 UR
GPA-055D-A DL	Benzyl alcohol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	bis(2-Ethylhexyl) phthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Butylbenzylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Chrysene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Dibenz(a,h)anthracene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Diethylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Dimethylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	di-n-Butylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Di-n-octylphthalate	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Fluoranthene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Fluorene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Hexachlorobenzene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Hexachlorobutadiene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Indeno(1,2,3-cd)pyrene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Naphthalene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	n-Nitrosodiphenyl amine	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Pentachlorophenol	More technically sound data available	Excessive dilution	NA	9,400 UR
GPA-055D-A DL	Phenanthrene	More technically sound data available	Excessive dilution	NA	1,900 UR

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-055D-A DL	Phenol	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-A DL	Pyrene	More technically sound data available	Excessive dilution	NA	1,900 UR
GPA-055D-B	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	170 U
GPA-055D-C	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	250 U
GPA-055D-D	Bis (2-ethylhexyl) phthalate	Method blank	MB=75, 110	MD<RL	110 U
Pesticide Data Qualifier Flags					
GPA-025D-A	4,4'-DDE	MS/MSD	%R=24.9, 26.5	%R=50-140	3.2 UJ
GPA-025D-A	4,4'-DDD	TCMX DCBP	NR %R=45.8	%R=50-140	2.0 UJ
GPA-025D-A	4,4'-DDT	TCMX DCBP	NR %R=45.8	%R=50-140	2.0 UJ
GPA-025D-A	Hexachlorobenzene	TCMX DCBP	NR %R=45.8	%R=50-140	1.0 UJ
GPA-025D-A	Hexachlorobutadiene	TCMX DCBP	NR %R=45.8	%R=50-140	0.99 UJ
GPA-025D-B	4,4'-DDE	TCMX DCBP	NR %R=45.8	%R=50-140	5.0 UJ
GPA-025D-B	4,4'-DDD	TCMX DCBP	NR %R=45.8	%R=50-140	2.0 UJ
GPA-025D-B	4,4'-DDT	TCMX DCBP	NR %R=45.8	%R=50-140	3.9 UJ
GPA-025D-B	Hexachlorobenzene	TCMX DCBP	NR %R=45.8	%R=50-140	5.4 UJ
GPA-025D-B	Hexachlorobutadiene	TCMX DCBP	NR %R=45.8	%R=50-140	0.98 UJ
GPA-025D-D	4,4'-DDE	TCMX DCBP	%R=43.5 %R=39.5	%R=50-140	1.9 UJ
GPA-025D-D	4,4'-DDD	TCMX DCBP	%R=43.5 %R=39.5	%R=50-140	1.9 UJ
GPA-025D-D	4,4'-DDT	TCMX DCBP	%R=43.5 %R=39.5	%R=50-140	1.9 UJ
GPA-025D-D	Hexachlorobenzene	TCMX DCBP	%R=43.5 %R=39.5	%R=50-140	0.93 UJ

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-D	Hexachlorobutadiene	TCMX DCBP	%R=43.5 %R=39.5	%R=50-140	0.93 UJ
GPA-035D-A	4,4'-DDE	TCMX DCBP	%R=23.0 %R=NR	%R=50-140	2.0 UJ
GPA-035D-A	4,4'-DDD	TCMX DCBP	%R=23.0 %R=NR	%R=50-140	2.0 UJ
GPA-035D-A	4,4'-DDT	TCMX DCBP	%R=23.0 %R=NR	%R=50-140	2.0 UJ
GPA-035D-A	Hexachlorobenzene	TCMX DCBP	%R=23.0 %R=NR	%R=50-140	0.99 UJ
GPA-035D-A	Hexachlorobutadiene	TCMX DCBP	%R=23.0 %R=NR	%R=50-140	0.99 UJ
GPA-035D-D	4,4'-DDE	TCMX DCBP	%R=40.8 %R=37.2	%R=50-140	1.9 UJ
GPA-035D-D	4,4'-DDD	TCMX DCBP	%R=40.8 %R=37.2	%R=50-140	1.9 UJ
GPA-035D-D	4,4'-DDT	TCMX DCBP	%R=40.8 %R=37.2	%R=50-140	1.9 UJ
GPA-035D-D	Hexachlorobenzene	TCMX DCBP	%R=40.8 %R=37.2	%R=50-140	0.94 UJ
GPA-035D-D	Hexachlorobutadiene	TCMX DCBP	%R=40.8 %R=37.2	%R=50-140	0.94 UJ
GPA-055D-C	4,4'-DDE	TCMX DCBP	%R=38.8 %R=29.2	%R=50-140	1.8 UJ
GPA-055D-C	4,4'-DDD	TCMX DCBP	%R=38.8 %R=29.2	%R=50-140	1.8 UJ
GPA-055D-C	4,4'-DDT	TCMX DCBP	%R=38.8 %R=29.2	%R=50-140	1.8 UJ
GPA-055D-C	Hexachlorobenzene	TCMX DCBP	%R=38.8 %R=29.2	%R=50-140	0.93 UJ
GPA-055D-C	Hexachlorobutadiene	TCMX DCBP	%R=38.8 %R=29.2	%R=50-140	0.93 UJ
GPA-055D-D	4,4'-DDE	TCMX DCBP	%R=43.8 %R=37.8	%R=50-140	1.9 UJ
GPA-055D-D	4,4'-DDD	TCMX DCBP	%R=43.8 %R=37.8	%R=50-140	1.9 UJ
GPA-055D-D	4,4'-DDT	TCMX DCBP	%R=43.8 %R=37.8	%R=50-140	1.9 UJ

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-055D-D	Hexachlorobenzene	TCMX DCBP	%R=43.8 %R=37.8	%R=50-140	0.96 UJ
GPA-055D-D	Hexachlorobutadiene	TCMX DCBP	%R=43.8 %R=37.8	%R=50-140	0.96 UJ
GPA-02 4.0-6.5	4,4'-DDE	TCMX DCBP	%R=NR %R=40.2	%R=50-140	3.7 UJ
GPA-02 4.0-6.5	4,4'-DDD	TCMX DCBP	%R=NR %R=40.2	%R=50-140	5.1 UJ
GPA-02 4.0-6.5	4,4'-DDT	TCMX DCBP	%R=NR %R=40.2	%R=50-140	3.1 UJ
GPA-02 4.0-6.5	Hexachlorobenzene	TCMX DCBP	%R=NR %R=40.2	%R=50-140	1.2 UJ
GPA-02 4.0-6.5	Hexachlorobutadiene	TCMX DCBP	%R=NR %R=40.2	%R=50-140	0.99 UJ
PCB Data Qualifier Flags					
GPA-015D-A	Aroclor 1016	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	20 UJ
GPA-015D-A	Aroclor 1242	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	20 UJ
GPA-015D-A	Aroclor 1248	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	79 UJ
GPA-015D-A	Aroclor 1254	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	53 UJ
GPA-015D-A	Aroclor 1260	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	79 UJ
GPA-015D-A	Aroclor 1221	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	40 UJ
GPA-015D-A	Aroclor 1232	TCMX DBCP	%R=25.2 %R=19.0	%R=50-140	20 UJ
GPA-025D-D	Aroclor 1016	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	19 UJ
GPA-025D-D	Aroclor 1242	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	19 UJ
GPA-025D-D	Aroclor 1248	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	19 UJ
GPA-025D-D	Aroclor 1254	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	19 UJ

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-025D-D	Aroclor 1260	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	19 UJ
GPA-025D-D	Aroclor 1221	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	37 UJ
GPA-025D-D	Aroclor 1232	TCMX DBCP	%R=36.8 %R=46.0	%R=50-140	19 UJ
GPA-035D-C	Aroclor 1016	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	19 UJ
GPA-035D-C	Aroclor 1242	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	19 UJ
GPA-035D-C	Aroclor 1248	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	110 UJ
GPA-035D-C	Aroclor 1254	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	39 UJ
GPA-035D-C	Aroclor 1260	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	70 UJ
GPA-035D-C	Aroclor 1221	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	37 UJ
GPA-035D-C	Aroclor 1232	TCMX DBCP	%R=42.5 %R=37.0	%R=50-140	19 UJ
GPA-035D-D	Aroclor 1016	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	19 UJ
GPA-035D-D	Aroclor 1242	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	19 UJ
GPA-035D-D	Aroclor 1248	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	19 UJ
GPA-035D-D	Aroclor 1254	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	19 UJ
GPA-035D-D	Aroclor 1260	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	19 UJ
GPA-035D-D	Aroclor 1221	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	38 UJ
GPA-035D-D	Aroclor 1232	TCMX DBCP	%R=39.5 %R=49.0	%R=50-140	19 UJ
GPA-055D-A	Aroclor 1016	TCMX DBCP	%R=NR %R=44.0	%R=50-140	20 UJ
GPA-055D-A	Aroclor 1242	TCMX DBCP	%R=NR %R=44.0	%R=50-140	20 UJ

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
GPA-055D-A	Aroclor 1248	TCMX DBCP	%R=NR %R=44.0	%R=50-140	280 UJ
GPA-055D-A	Aroclor 1254	TCMX DBCP	%R=NR %R=44.0	%R=50-140	100 UJ
GPA-055D-A	Aroclor 1260	TCMX DBCP	%R=NR %R=44.0	%R=50-140	94 UJ
GPA-055D-A	Aroclor 1221	TCMX DBCP	%R=NR %R=44.0	%R=50-140	39 UJ
GPA-055D-A	Aroclor 1232	TCMX DBCP	%R=NR %R=44.0	%R=50-140	20 UJ
GPA-055D-C	Aroclor 1016	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	18 UJ
GPA-055D-C	Aroclor 1242	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	18 UJ
GPA-055D-C	Aroclor 1248	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	18 UJ
GPA-055D-C	Aroclor 1254	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	18 UJ
GPA-055D-C	Aroclor 1260	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	18 UJ
GPA-055D-C	Aroclor 1221	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	37 UJ
GPA-055D-C	Aroclor 1232	TCMX DBCP	%R=34.0 %R=38.5	%R=50-140	18 UJ
GPA-02 4.0-6.5	Aroclor 1016	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	20 UJ
GPA-2 4.0-6.5	Aroclor 1242	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	20 UJ
GPA-02 4.0-6.5	Aroclor 1248	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	260 UJ
GPA-02 4.0-6.5	Aroclor 1254	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	120 UJ
GPA-02 4.0-6.5	Aroclor 1260	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	270 UJ
GPA-02 4.0-6.5	Aroclor 1221	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	40 UJ
GPA-02 4.0-6.5	Aroclor 1232	TCMX DBCP	%R=29.2 %R=NR	%R=50-140	20 UJ

Sample ID	Target Compound Affected	Type of Deviation	Anomaly	Criteria	Flag
Metals Data Qualifier Flags					
GPA-015D-A	Antimony	MS	%R=65.9	%R=75-125	80 UJ
GPA-015D-B	Antimony	MS	%R=65.9	%R=75-125	40 UJ
GPA-015D-C	Antimony	MS	%R=65.9	%R=75-125	8 UJ
GPA-015D-D	Antimony	MS	%R=65.9	%R=75-125	6 UJ
GPA-025D-A	Antimony	MS	%R=65.9	%R=75-125	30 UJ
GPA-025D-B	Antimony	MS	%R=65.9	%R=75-125	20 UJ
GPA-025D-D	Antimony	MS	%R=65.9	%R=75-125	6 UJ
GPA-035D-A	Antimony	MS	%R=65.9	%R=75-125	50 UJ
GPA-035D-B	Antimony	MS	%R=65.9	%R=75-125	40 UJ
GPA-035D-C	Antimony	MS	%R=65.9	%R=75-125	7 UJ
GPA-035D-D	Antimony	MS	%R=65.9	%R=75-125	6 UJ
GPA-045D-A	Antimony	MS	%R=65.9	%R=75-125	50 UJ
GPA-045D-B	Antimony	MS	%R=65.9	%R=75-125	30 UJ
GPA-045D-C	Antimony	MS	%R=65.9	%R=75-125	6 UJ
GPA-045D-D	Antimony	MS	%R=65.9	%R=75-125	6 UJ
GPA-055D-A	Antimony	MS	%R=65.9	%R=75-125	20 UJ
GPA-055D-B	Antimony	MS	%R=65.9	%R=75-125	7 UJ
GPA-055D-C	Antimony	MS	%R=65.9	%R=75-125	6 UJ
GPA-055D-D	Antimony	MS	%R=65.9	%R=75-125	6 UJ
GPA-02 4.0-6.5	Antimony	MS	%R=65.9	%R=75-125	20 U
Conventional West Chemistry Data Qualifier Flags					
No flags were assigned					

Attachment 3 Reviewed and/or Revised Laboratory Forms

CASE NARRATIVE

Analysis of Samples for the Presence of

Polychlorinated Dibenzo-*p*-Dioxins and Dibenzofurans by

High-Resolution Chromatography / High-Resolution Mass Spectrometry

Method 8290 Rev. 0 (9/94)

Date:	August 18, 2003
Client ID:	Anchor Environmental
P.O. Number:	020030-02
TLI Project Number:	60851

Rev. 11/19/97
WWW.TriangleLabs.com

Overview

The sample and associated QC samples were extracted and analyzed according to procedures described in EPA Method 8290 Rev. 0 (9/94). Any particular difficulties encountered during the sample handling by Triangle Laboratories will be discussed in the QC Remarks section below. This report contains results from only the 8290 dioxin/furan analysis of the sediment sample.

Quality Control Samples

A laboratory method blank, identified as the TLI Blank, was prepared along with the sample.

Laboratory control spike (LCS) and laboratory control spike duplicate (LCSD) samples are extracted and analyzed along with each batch of samples. A report summarizing the analyte recoveries and relative percent differences for these samples is included in the data package.

A clean-up blank was processed along with the sample to prove that contamination was not introduced during the cleanup procedures. The results of this clean-up blank are included with the data package.

Quality Control Remarks

This release of this particular set of Anchor Environmental analytical data by Triangle Laboratories was authorized by the Quality Control Chemist who has reviewed each sample data package following a series of inspections/reviews. When applicable, general deviations from acceptable QC requirements are identified below and comments are made on the effect of these deviations upon the validity and reliability of the results. Specific QC issues associated with this particular project are:

Sample receipt: Six sediment samples were received from Anchor Environmental at 3.0°C in good condition on August 01, 2003 and stored in a refrigerator at 4°C.

Sample Preparation Laboratory: All the samples were composited into one sample prior to extraction.

Mass Spectrometry: None

Data Review: None

Other Comments: No 2,3,7,8-substituted target analytes were detected in the method blank above the target detection limit (TDL).

Method 8290 contains separate criteria for beginning and ending continuing calibrations. When the ending calibration meets criteria established for the beginning calibration, the average response factor from the initial calibration is used. When the ending calibration only meets the less stringent criteria specified for an ending calibration, the average of the response factor from the beginning and ending calibration is used for analyte and internal standard calculations. Affected samples are identified by the listing of both the beginning and ending calibration filename on the sample report.

The analytical data presented in this report are consistent with the guidelines of EPA Method 8290 Rev. 0 (9/94). Any exceptions have been discussed in the QC Remarks section of this case narrative with emphasis on their effect on the data. Should Anchor Environmental have any questions or comments regarding this data package, please feel free to contact one of our Project Scientists at (919) 544-5729.

For Triangle Laboratories, Inc.,

Released by,

Amy MacKenzie

Report Preparation Chemist

The total number of pages in the data package is : 487 .

Method 8290 Sample Calculations:

Analyte Concentration

The concentration or amount of any analyte is calculated using the following expression.

$$C_{(\sigma)} = \frac{A_\sigma * Q_\beta}{A_\beta * RRF_{(\sigma)} * W}$$

Where:

$C_{(\sigma)}$	=	concentration or amount of a given analyte
A_σ	=	integrated current for the characteristic ions of the analyte
A_β	=	integrated current of the characteristic ions of the corresponding internal standard
Q_β	=	amount of internal standard added to the sample before extraction
$RRF_{(\sigma)}$	=	mean analyte relative response factor from the initial calibration
W	=	sample weight or volume

Detection Limits

The detection limit reported for a target analyte that is not detected or presents an analyte response that is less than 2.5 times the background level is calculated by using the following expression. The area of the analyte is replaced by the noise level measured in a region of the chromatogram clear of genuine GC signals. The detection limits represent the maximum possible concentration of a target analyte that could be present without being detected.

$$DL_{(\sigma)} = \frac{2.5 * H * Q_\beta}{H_\beta * RRF_{(\sigma)} * W}$$

Where:

$DL_{(\sigma)}$	=	estimated detection limit for a target analyte
2.5	=	minimum response required for a GC signal
H	=	sum heights of the noise
H_β	=	sum of peak heights of the characteristic ions of the corresponding internal standard
Q_β	=	amount of internal standard added to the sample before extraction
$RRF_{(\sigma)}$	=	mean analyte relative response factor from the initial calibration
W	=	sample weight or volume

Data Flags

In order to assist with data interpretation, data qualifier flags are used on the final reports. Please note that all data qualifier flags are subjective and are applied as consistently as possible. Each flag has been reviewed by two independent Chemists and the impact of the data qualifier flag on the quality of the data discussed above. The most commonly used flags are:

A **'B'** flag is used to indicate that an analyte has been detected in the laboratory method blank as well as in an associated field sample. The 'B' flag is used only when the concentration of analyte found in the sample is less than 20 times that found in the associated blank. This flag denotes possible contribution of background laboratory contamination to the concentration or amount of that analyte detected in the field sample.

An **'E'** flag is used to indicate a concentration based on an analyte to internal standard ratio which exceeds the range of the calibration curve. Values which are outside the calibration curve are estimates only.

An **'I'** flag is used to indicate labeled standards have been interfered with on the GC column by coeluting, interferent peaks. The interference may have caused the standard's area to be overestimated. All quantitations relative to this standard, therefore, may be underestimated.

A **'J'** flag is used to indicate a concentration based on an analyte to internal standard ratio which is below the calibration curve. Values which are outside the calibration curve are estimates only.

A **'PR'** flag is used to indicate that a GC peak is poorly resolved. This resolution problem may be seen as two closely eluting peaks without a reasonable valley between the peak tops, overly broad peaks, or peaks whose shapes vary greatly from a normal distribution. The concentrations or amounts reported for such peaks are most likely overestimated.

A **'Q'** flag is used to indicate the presence of QC ion instabilities caused by quantitative interferences.

An **'RO'** flag is used to indicate that a labeled standard has an ion abundance ratio that is outside of the acceptable QC limits, most likely due to a coeluting interference. This may have caused the percent recovery of the standard to be overestimated. All quantitations versus this standard, therefore, may be underestimated.

An **'S'** flag indicates that the response of a specific PCDD/PCDF isomer has exceeded the normal dynamic range of the mass spectrometer detection system. The corresponding signal is saturated and the reported analyte concentration is a 'minimum estimate'. When the 'S' qualifier is used in the reporting of 'totals', there is saturation of one (not

necessarily from a specific isomer) or more saturated signals for a given class of compounds. Results for saturated analytes are reported as greater than the upper calibration limit.

A **'U'** flag is used to indicate that a specific isomer cannot be resolved from a large, co-eluting interferent GC peak. The specific isomer is reported as not detected as a valid concentration cannot be determined. The calculated detection limit, therefore, should be considered an underestimated value.

A **'V'** flag is used to indicate that, although the percent recovery of a labeled standard may be below a specific QC limit, the signal-to-noise ratio of the peak is greater than ten-to-one. The standard is considered reliably quantifiable. All quantitations derived from the standard are considered valid as well.

An **'X'** flag is used to indicate that a polychlorodibenzofuran (PCDF) peak has eluted at the same time as the associated diphenyl ether (DPE) and that the DPE peak intensity is at least ten percent of the total PCDF peak intensity. Total PCDF values are flagged 'X' if the total DPE contribution to the total PCDF value is greater than ten percent. All PCDF peaks that are significantly influenced by the presence of DPE peaks are either reported as "estimated maximum possible concentration (EMPC) values without regard to the isotopic abundance ratio, or are included in the detection limit value depending on the analytical method.

ACCREDITED IN ACCORDANCE WITH nelac
FL-E87769 NJ-NC851

Triangle Laboratories, Inc.

TRIANGLE LABORATORIES, INC.

LIST OF CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Primary NELAP Certificate: **Florida Department of Health, #E87769; SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 613, 2,3,7,8-TCDD AND Method 1613, PCDD/PCDF & totals; **RCRA**, Methods 8280/8290, PCDD/PCDF & totals; **CAA**, TO-9A, all dioxins/furans AND TO-13A, semi-volatiles. Expires June 30, 2004.

Primary NELAP Certificate: **State of New Jersey, Department of Environmental Protection.** ID #NC851. **CAA**, Methods 0023A and MM5 (Sampling Train). **Secondary NELAP Certificate**: **SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 1613, PCDD/PCDF & totals; **RCRA**, Method 8290, PCDD/PCDF & totals. Expires June 30, 2003.

State of Alabama, Department of Environmental Management. Laboratory ID # 40950. 2,3,7,8 TCDD (Dioxin) in drinking water. Expires 31 July 2004.

State of Alaska, Department of Environmental Conservation. Certificate number NC140-03. 2,3,7,8- TCDD (Dioxin) in drinking water. Expires December 21, 2003.

State of Arizona, Department of Health Services. Certificate #AZ0423. Drinking Water for Dioxin, Dioxins in Waste Water and Solid or Hazardous Waste. Expires May 25, 2004.

State of Arkansas, Department of Environmental Quality. Pulp/paper, soil, water, and Hazardous Waste for Dioxin/Furans. Expires 11 February 2004.

Secondary NELAP Certificate: **State of California, Department of Health Services, Certificate No. 03213CA. SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 1613, PCDD/PCDF & totals; **Hazardous Waste**, Methods 8280/8290, PCDD/PCDF & totals. Expires 28 February 2004.

State of Colorado, Department of Public Health and Environment. SDWA, Dioxin by EPA 1613. Expires April 30, 2004.

State of Connecticut, Department of Health Services. Registration # PH-0117. **SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 1613, PCDD/PCDF & totals; **RCRA**, Methods 8280/8290, PCDD/PCDF & totals. Expires September 30, 2003.

2445 S. Alston Ave. - Durham, NC 27713 - (919) 544-5729 - FAX (919) 544-5491
www.trianglelabs.com

Delaware Health and Social Services. Dioxin Certification waived for out-of-state laboratories; accept home-state Certifications.

Primary NELAP Certificates: **Florida Department of Health, #E87769; SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 613, 2,3,7,8-TCDD AND Method 1613, PCDD/PCDF & totals; **RCRA**, Methods 8280/8290, PCDD/PCDF & totals; **CAA**, TO-9A, all dioxins/furans AND TO-13A, semi-volatiles. Expires June 30, 2004.

Georgia Department of Environmental Quality. **SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 613, 2,3,7,8-TCDD AND Method 1613, PCDD/PCDF & totals; **RCRA**, Methods 8280/8290, PCDD/PCDF & totals; **CAA**, TO-9A, all dioxins/furans AND TO-13A, semi-volatiles; reciprocity based on **FL-DOH NELAP Certificate**. Certificate # 953, expires June 30, 2004.

Hawaii Department of Health. Certified for Dioxin under the Safe Drinking Water Act. "Accepted" status for regulatory purposes. Expires June 30, 2004.

Idaho Department of Health and Welfare. Dioxin in drinking water, EPA Method 1613. Expires December 31, 2003.

Secondary NELAP Certificate: **Illinois Environmental Protection Agency.** Accreditation Number #200007, Certificate #000666; **Drinking Water**, Method 1613, 2,3,7,8-TCDD; **Wastewater, Organic**, Methods 1613 and 613; **Hazardous and Solid Waste, Organic**, Methods 8280A and 8290. Expires 30 September 2003.

Indiana Department of Health. Dioxin in drinking water, EPA method 1613. Lab ID # C-NC-01. Expires July 31, 2003.

Secondary NELAP Certificate: **State of Kansas, Department of Health and Environment**. Cert. # E-10215. **SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 1613, PCDD/PCDF; **RCRA**, Methods 8280/8290, PCDD/PCDF & totals. Expires 31 January 2004.

Commonwealth of Kentucky, Department for Environmental Protection. Lab ID #90060. 2,3,7,8 TCDD (Dioxin) in drinking water. Expires December 31, 2003.

Secondary NELAP Certificate: **State of Louisiana Department of Environmental Quality.** Certificate # 01979. **CAA**, TO-9A and TO-13A; **CWA**, Method 1613 PCDDs/PCDFs; **RCRA**, Methods 8280A & 8290 PCDDs/PCDFs; **Misc**. Methods 1613, 8280A & 8290. Expires 30 June 2004.

Secondary NELAP Certificate: **State of Louisiana Department of Health & Hospitals.** Dioxin (2,3,7,8-TCDD) in Drinking Water. Certificate # LA030007. Expires December 31, 2003.

Maine Department of Human Services. Certification #: NC140. **SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 1613, PCDD/PCDF. Expires May 30, 2004.

Maryland Department of Health and Mental Hygiene. Certification # 235, SOC 2 (Dioxin). Expires September 30, 2003.

Commonwealth of Massachusetts, Department of Environmental Protection, does not require Certification for Drinking Water Dioxin/Furan analysis.

State of Michigan, Department of Environmental Quality. 2,3,7,8 TCDD by Method 1613. Expires 31 July 2003.

Minnesota Department of Health. The certification program in MN does not include dioxins/furans for CWA, SDWA of RCRA. See **U.S. EPA Region V.**

Mississippi State Department of Health. Dioxin in drinking water. No expiration date.

Montana Department of Health and Environmental Services. CERT0019. Dioxin in drinking water. Expires December 31, 2003.

State of Nebraska Department of Health. Reciprocal certification through the North Carolina Department of Health and Human services and Florida DOH NELAP Certification. **SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 613, 2,3,7,8-TCDD AND Method 1613, PCDD/PCDF & totals; **RCRA**, Methods 8280/8290, PCDD/PCDF & totals; **CAA**, TO-9A, all dioxins/furans AND TO-13A, semi-volatiles. Expires July 31, 2004.

State of Nevada, Department of Conservation and Natural Resources. Lab Certificate No. NC-00140-2003-66, expires July 31, 2003. **CWA**, Method 1613, PCDD/PCDF & totals, expires July 31, 2003.

State of Nevada, Department of Human Resources. Lab Certificate No. NC-00140-2003-66, expires July 31, 2003. **SDWA,** Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water, expires July 31, 2003.

Primary NELAP Certificate: **State of New Jersey, Department of Environmental Protection.** ID #NC851. **CAA**, Methods 0023A and MM5 (Sampling Train). **Secondary NELAP Certificate**: **SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 1613, PCDD/PCDF & totals; **RCRA**, Method 8290, PCDD/PCDF & totals. Expires June 30, 2003.

State of New Mexico, Environment Department. Safe Drinking Water Act; 2,3,7,8-TCDD by Method 1613. Expires 30 June 2003.

Secondary NELAP Certificate: **New York State Department of Health, LAB ID #11026.** Potable Water, 2,3,7,8-TCDD, EPA 1613, Serial # 19927; Non-Potable Water, 2,3,7,8-TCDD, EPA 1613, Serial # 19928. Expires 1 April, 2004.

State of North Carolina, Department of Health and Human Services. Certificate # 37751. Dioxin in drinking water. Expires July 31, 2004.

North Dakota State Department of Health and Consolidated Laboratories. Certificate # R-076. Dioxins/Furans in drinking water, non-potable water, solid and hazardous wastes; reciprocal recognition of FL-DOH NELAP Accreditation and Scope. Expires June 30, 2004.

Ohio EPA. Ohio does not offer out-of-state lab certifications; certification by EPA Region 5 is honored.

Oklahoma Department of Environmental Quality. Laboratory #9951. 2,3,7,8 TCDD (Dioxin). Expires August 31, 2004.

Secondary NELAP Certificate: **Oregon Environmental Laboratory Accreditation Program.** Certificate No:-279313938. **SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 1613, PCDD/PCDF & totals; **RCRA**, Methods 8280/8290, PCDD/PCDF & totals; **CAA**, TO-9A, all dioxins/furans AND TO-13A, semi-volatiles. Expires January 31, 2004.

Secondary NELAP Certificate: **Commonwealth of Pennsylvania, Department of Environmental Protection.** Environmental Laboratory Registration # 68-1484. Lab ID No. 68-1975. **SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water. Expires March 31, 2004.

State of South Carolina, Department of Health and Environmental Control. Certificate number #99040001 (Other parameters). Dioxin/Furans by method 1613B - Safe Drinking Water Act; 2,3,7,8-TCDD for Drinking Water, and Organic extractables for Solid and Hazardous Waste. Reciprocal certification with New York. Expires June 03, 2001. Certificate # 99040002 Solid Hazardous Waste- Dioxins/Furans by 8280A and 8290. Expires August 31, 2001. **Renewal pending.*

State of Tennessee. Department of Environment and Conservation. ID #02992. Dioxin in Drinking water. Expires February 20, 2005.

Texas Natural Resource Conservation Commission. Certification Number: TX264-2002A. **SDWA:** Chemistry, Dioxin (2378-TCDD), EPA 1613. Expires January 31, 2004.

U.S. Army Corps of Engineers. Validated to perform EPA SW-846, Method 8290, water and solids. Validation expires May 2, 2004.

Department of the Navy, Naval Facilities Engineering Service Center (NFESC). Letter of Acceptance for analysis of water and solids by Methods 8280 and 8290.
Expires June 30, 2003.

U.S. EPA Region V. 2,3,7,8 TCDD (Dioxin) in drinking water by method 1613B.
Expires February 03, 2006. [Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin]

U.S. EPA Region VIII, for the State of Wyoming. EPA Method 1613 for Dioxin in drinking water. Expires 20 October 2003.

Secondary NELAP Certificate: **State of Utah, Department of Health.** ID # TRIA, Account # 9195445729 **SDWA**, Method 1613, 2,3,7,8-TCDD for Dioxin in Drinking Water; **CWA**, Method 1613, PCDD/PCDF & totals; **RCRA**, Methods 8280/8290, PCDD/PCDF & totals. Expires June 30, 2003.

Commonwealth of Virginia, Department of General Services, Division of Consolidated Laboratory Services. ID # 00341. 2,3,7,8-TCDD (Dioxin) in drinking water, EPA Method 1613B. Expires June 30, 2004.

State of Washington, Department of Ecology. Lab Accreditation Number C067. Scope of Accreditation applies to Dioxins (PCDDs/PCDFs) by EPA methods 1613, 8280, and 8290 in potable and non-potable water. Expires September 11, 2003.

State of West Virginia, Department of Health. Certificate No. 9923(C). 2,3,7,8-TCDD (Dioxin) in drinking water, SOC III. Expires December 31, 2003.

State of West Virginia, Department of Environmental Protection. Certificate No. 327. Dioxins/Furans, Methods 8280A/8290/1613B. Expires December 31, 2003.

State of Wisconsin, Department of Natural Resources. Laboratory ID Number 999869530. Certified for 2,3,7,8-TCDD (Dioxin) in drinking water and for PCDD/PCDF. Expires August 31, 2003.

State of Wyoming, see **U.S. EPA Region VIII** above.

PHARMACEUTICAL

Drug Enforcement Agency (DEA). Registration number RT0195835. Controlled substance registration for schedules 1,2,3,3N,4,5. Expires November 30, 2003.

N.C. Department of Human Resources. Registration number NC-PT 0000 0031. North Carolina controlled substances registration for schedules 1, 2, 2N, 3, 3N, 4, 5, 6. Expires October 31, 2003.

Food & Drug Administration (FDA) Registration. ID #'s 001500 1053481(ATL). Annual registration of drug establishment. Current for 2003.

OTHER

Clinical Laboratory Improvement Amendments (CLIA) Registration. ID # 34D0705123. Department of Health & Human Services, Health Care Financing Administration. Certificate for the Acceptance of Human Specimens for the purposes of performing laboratory examinations or procedures - Chemistry, Toxicology, HCFA. Expires May 30, 2005.

U.S. Department of Agriculture Soil Permit. Permit No. S-56724. Under the authority of the Federal Plant Pest Act, permission is granted to receive foreign soil samples for use in laboratory analysis. Expires March 31, 2007.

U.S. EPA Large Quantity Hazardous Waste Generator. EPA ID #NCR000137232. Permit indicates that the laboratory is a large generator of hazardous waste. No expiration date.

U.S. Fish and Wildlife Permit. Number LE027890-1. Authorization to import/export wildlife and/or wildlife products. Expires April 30, 2004.