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Beazer

BEAZER EAST, INC. C/O THREE RIVERS MANAGEMENT, INC.
ONE OXFORD CENTRE, SUITE 3000, PITTSBURGH, PA 15219-6401

June 3, 2010

Ms. Carolyn Bury
U.S. Environmental Protection Agency, Region V
77 West Jackson Boulevard
Mail Code DE-9J
Chicago, IL 60604-3590

Re: Former Koppers Wood-Treating Site – Carbondale, Illinois
March 2010 Investigation Analytical Data Submittal

Dear Ms. Bury:

In accordance with a scope of work that was approved by the USEPA on March 24, 2010 and finalized on March 25, 2010, Beazer conducted sampling in Evaluation Areas (EAs) 1, 2, 3, 4, 5 and 6 at the Former Koppers Wood-Treating Site in Carbondale, Illinois between March 29 and 31, 2010. The purpose of this letter is to transmit the validated analytical data associated with the March 2010 sampling to the USEPA. The following are attached to this letter:

- Attachment 1 – Validated Analytical Data Summary Table
- Attachment 2 – Sample Location Maps
- Attachment 3 – Data Validation Reports
- Attachment 4 – Validated Laboratory Data Sheets

Please feel contact me at 412-208-8867 if you have any questions or comments regarding this submittal.

Sincerely,

Michael Slenska, P.E.
Environmental Manager

Enclosure

cc: James Moore, IEPA
Allen Debus, USEPA
Jeffrey Holden, ARCADIS
Paul Anderson, ARCADIS
David Bessingpas, ARCADIS

Writer's Direct Dial: 412/208-8867

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Attachment 1

Validated Analytical Data
Summary Table

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TABLE 1 - VALIDATED ANALTICAL DATA SUMMARY TABLE

FORMER KOPPERS WOOD-TREATING SITE - CARBONDALE, ILLINOIS

Sample ID:		Current		Proposed		A1-35	A1-36	A1-37	A1-38	A1-39
Depth Interval (in.):		USEPA PRGs		USEPA PRGs		0 - 6	0 - 6	0 - 6	0 - 6	0 - 6
Date Collected:	Units	R	C/I	R	C/I	03/30/10	03/30/10	03/30/10	03/30/10	03/30/10
PCDDs/PCDFs										
1,2,3,4,6,7,8-HpCDD	ug/kg	--	--	--	--	0.375	0.341	10.6 [15.4 EJ]	0.225	2.51
1,2,3,4,6,7,8-HpCDF	ug/kg	--	--	--	--	0.0423	0.0798	3.29 [5.4 EJ]	0.0231	0.402
1,2,3,4,7,8,9-HpCDF	ug/kg	--	--	--	--	0.00198 J	0.00644	0.347 [0.558]	0.00201 J	0.0285
1,2,3,4,7,8-HxCDD	ug/kg	--	--	--	--	0.00518	0.00188 J	0.0471 J [0.0668]	0.00232 J	0.0326
1,2,3,4,7,8-HxCDF	ug/kg	--	--	--	--	0.00257 J	0.00243 J	0.0933 [0.137]	0.00197 J	0.0162
1,2,3,6,7,8-HxCDD	ug/kg	--	--	--	--	0.0113	0.0107	0.351 [0.542]	0.00594	0.0749
1,2,3,6,7,8-HxCDF	ug/kg	--	--	--	--	0.00118 J	0.000971 UX	0.0394 J [0.0364]	0.000606 J	0.00729
1,2,3,7,8,9-HxCDD	ug/kg	--	--	--	--	0.00834	0.00379 J	0.0669 [0.114]	0.00357 J	0.0519
1,2,3,7,8,9-HxCDF	ug/kg	--	--	--	--	0.00149 U	0.00087 U	0.0152 U [0.0231]	0.000757 U	0.00324 J
1,2,3,7,8-PeCDD	ug/kg	--	--	--	--	0.00146 UX	0.000697 UX	0.0127 J [0.0165]	0.00135 J	0.0128
1,2,3,7,8-PeCDF	ug/kg	--	--	--	--	0.000705 UX	0.000948 U	0.00544 U [0.00287 J]	0.00066 U	0.00116 J
2,3,4,6,7,8-HxCDF	ug/kg	--	--	--	--	0.00168 UX	0.00191 J	0.0969 [0.128]	0.0013 J	0.0127
2,3,4,7,8-PeCDF	ug/kg	--	--	--	--	0.00169 J	0.000844 U	0.00611 UX [0.0101]	0.0012 J	0.0045 J
2,3,7,8-TCDD	ug/kg	--	--	--	--	0.000607 U	0.000593 J	0.00212 UX [0.00191]	0.000672 J	0.00134 UX
2,3,7,8-TCDF	ug/kg	--	--	--	--	0.000831 UX	0.000367 U	0.00252 U [0.00144]	0.000332 U	0.000646 J
37Cl-2,3,7,8-TCDD	ug/kg	--	--	--	--	0.13	0.138	1.68 [0.142]	0.138	0.135
OCDD	ug/kg	--	--	--	--	12.5 EJ	8.83 EJ	86 [146 EJ]	5.45	30.8 EJ
OCDF	ug/kg	--	--	--	--	0.167	0.56	27.2 [41.3 EJ]	0.111	1.96
Total HpCDD	ug/kg	--	--	--	--	0.843	0.659	20.5 [27.1 J]	0.514	4.38
Total HpCDF	ug/kg	--	--	--	--	0.163	0.466	29.5 [52.2 J]	0.122	1.78
Total HxCDD	ug/kg	--	--	--	--	0.124	0.0654	2.04 [2.87]	0.115	0.468
Total HxCDF	ug/kg	--	--	--	--	0.0491	0.0821	4.97 [7.89 PJ]	0.036	0.361
Total PeCDD	ug/kg	--	--	--	--	0.0208	0.0107	0.0506 [0.123]	0.0144	0.0648
Total PeCDF	ug/kg	--	--	--	--	0.0119	0.004	0.178 [0.172 PJ]	0.00603	0.0407
Total TCDD	ug/kg	--	--	--	--	0.0103	0.00267	0.0339 [0.0598]	0.00788	0.0114
Total TCDF	ug/kg	--	--	--	--	0.0031	0.00076	0.0236 [0.0675]	0.0038	0.0118
2,3,7,8-TCDD TEQ	ug/kg	1	5-20	0.072	0.95	0.0114	0.00975	0.258 [0.396]	0.00812	0.0734
SVOCs										
Pentachlorophenol	mg/kg	--	--	--	--	0.048 U	0.022 J	8 DJ	0.033 J	0.26
Acenaphthene	mg/kg	--	--	--	--	0.003 J	0.0042 J	0.28 DJ	0.019 J	0.3
Acenaphthylene	mg/kg	--	--	--	--	0.019	0.023	6.4 DJ	0.33	0.13
Anthracene	mg/kg	--	--	--	--	0.02	0.034	9.6 DJ	0.42	0.2
Benzo(a)anthracene	mg/kg	--	--	--	--	0.032	0.046	31 DJ	1.3	1
Benzo(a)pyrene	mg/kg	--	--	--	--	0.04	0.045	17 DJ	1.1	0.29
Benzo(b)fluoranthene	mg/kg	--	--	--	--	0.073	0.13	52 DJY	2.9 JY	0.51 JY
Benzo(ghi)perylene	mg/kg	--	--	--	--	0.036	0.048	14 DJ	0.83	0.11
Benzo(k)fluoranthene	mg/kg	--	--	--	--	0.037	0.057	46 DJY	2.7 JY	0.46 JY
Chrysene	mg/kg	--	--	--	--	0.056	0.074	37 DJ	1.9	1.5
Dibenzo(a,h)anthracene	mg/kg	--	--	--	--	0.0094 J	0.018	5.2 DJ	0.24	0.12
Fluoranthene	mg/kg	--	--	--	--	0.047	0.056	85 DJ	1.8	1.5
Fluorene	mg/kg	--	--	--	--	0.0097 U	0.003 J	0.59 DJ	0.031	0.04 U
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	--	--	0.032	0.053	14 DJ	0.8	0.077
Naphthalene	mg/kg	--	--	--	--	0.0077 J	0.0072 J	0.84 DJ	0.044	0.19
Phenanthrene	mg/kg	--	--	--	--	0.029	0.027	12 DJ	0.22	3.7
Pyrene	mg/kg	--	--	--	--	0.04	0.053	58 DJ	1.8	0.78
Total PAHs	mg/kg	--	--	--	--	0.481 J	0.678 J	343 DJ	13.7 J	10.4
Metals										
Arsenic	mg/kg	--	--	--	--	10.5	13.5	9	9.3	5.2
Chromium	mg/kg	--	--	--	--	15.5 J	19.4 J	15.3 J	15.8 J	11.9 J
Copper	mg/kg	--	--	--	--	18.4	21.3	17.6	19	12.5
Miscellaneous										
Total Organic Carbon	mg/kg	--	--	--	--	NA	NA	NA	NA	NA

See notes on Page 12.

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TABLE 1 - VALIDATED ANALTICAL DATA SUMMARY TABLE

FORMER KOPPERS WOOD-TREATING SITE - CARBONDALE, ILLINOIS

Sample ID:		Current		Proposed		A1-40	A1-41	A1-42	A1-43	A1-44
Depth Interval (in.):		USEPA PRGs		USEPA PRGs		0 - 6	0 - 6	0 - 6	0 - 6	0 - 6
Date Collected:	Units	R	C/I	R	C/I	03/30/10	03/30/10	03/30/10	03/30/10	03/30/10
PCDDs/PCDFs										
1,2,3,4,6,7,8-HpCDD	ug/kg	--	--	--	--	0.207	2.14	0.16	0.0791	0.67
1,2,3,4,6,7,8-HpCDF	ug/kg	--	--	--	--	0.0318	0.546	0.016	0.00572	0.13
1,2,3,4,7,8,9-HpCDF	ug/kg	--	--	--	--	0.00206 J	0.0225	0.000888 UX	0.000887 U	0.0148
1,2,3,4,7,8-HxCDD	ug/kg	--	--	--	--	0.00442 U	0.0347	0.00189 UX	0.00189 U	0.00646
1,2,3,4,7,8-HxCDF	ug/kg	--	--	--	--	0.00197 U	0.0138	0.0012 J	0.0008 U	0.0285
1,2,3,6,7,8-HxCDD	ug/kg	--	--	--	--	0.00509	0.0313	0.00418 J	0.00255 U	0.0242
1,2,3,6,7,8-HxCDF	ug/kg	--	--	--	--	0.00177 U	0.0171	0.00103 U	0.000404 U	0.00722
1,2,3,7,8,9-HxCDD	ug/kg	--	--	--	--	0.00475 U	0.073	0.00348 J	0.00189 U	0.0112
1,2,3,7,8,9-HxCDF	ug/kg	--	--	--	--	0.00138 U	0.00226 J	0.000783 U	0.000685 U	0.00774
1,2,3,7,8-PeCDD	ug/kg	--	--	--	--	0.0029 UX	0.0133	0.000882 UX	0.000664 U	0.00304 J
1,2,3,7,8-PeCDF	ug/kg	--	--	--	--	0.000547 U	0.00108 UX	0.00084 U	0.000637 U	0.00227 J
2,3,4,6,7,8-HxCDF	ug/kg	--	--	--	--	0.00188 U	0.027	0.00114 J	0.000498 U	0.0123
2,3,4,7,8-PeCDF	ug/kg	--	--	--	--	0.000633 J	0.00435 J	0.000778 UX	0.000619 U	0.0149
2,3,7,8-TCDD	ug/kg	--	--	--	--	0.00805	0.000742 J	0.000316 UX	0.000334 UX	0.00049 U
2,3,7,8-TCDF	ug/kg	--	--	--	--	0.000478 UX	0.000798 U	0.000622 U	0.00049 U	0.000589 J
37Cl-2,3,7,8-TCDD	ug/kg	--	--	--	--	0.139	0.132	0.139	0.125	0.133
OCDD	ug/kg	--	--	--	--	6.43	28.3 EJ	9.28 EJ	4	10.3 EJ
OCDF	ug/kg	--	--	--	--	0.168	1.14	0.0588	0.0217	0.596
Total HpCDD	ug/kg	--	--	--	--	0.521	3.97	0.378	0.238	1.68
Total HpCDF	ug/kg	--	--	--	--	0.149	1.5	0.0563	0.0227	0.666
Total HxCDD	ug/kg	--	--	--	--	0.117	0.563	0.0468	0.023	0.205
Total HxCDF	ug/kg	--	--	--	--	0.0301	0.521	0.0163	0.00445	0.255
Total PeCDD	ug/kg	--	--	--	--	0.0649	0.0614	0.00657	0.00234 UX	0.0307
Total PeCDF	ug/kg	--	--	--	--	0.00569	0.0926	0.0042	0.000446 UX	0.0806
Total TCDD	ug/kg	--	--	--	--	0.022	0.000742	0.0027	0.000334 UX	0.00479
Total TCDF	ug/kg	--	--	--	--	0.00398	0.012	0.00322	0.00049 U	0.00731
2,3,7,8-TCDD TEQ	ug/kg	1	5-20	0.072	0.95	0.0131	0.0712	0.00556	0.00205	0.0288
SVOCs										
Pentachlorophenol	mg/kg	--	--	--	--	0.023 J	0.79 UJ	0.093 U	0.2 U	0.021 J [0.04 J]
Acenaphthene	mg/kg	--	--	--	--	0.0098 J	0.9 DJ	0.019 U	0.0083 J	0.0097 J [0.0069 J]
Acenaphthylene	mg/kg	--	--	--	--	0.15	0.056 DJ	0.0039 J	0.016 J	0.062 [0.067]
Anthracene	mg/kg	--	--	--	--	0.15	1.8 DJ	0.0045 J	0.013 J	0.11 [0.087]
Benzo(a)anthracene	mg/kg	--	--	--	--	0.4	6.4 DJ	0.011 J	0.029 J	0.24 [0.17]
Benzo(a)pyrene	mg/kg	--	--	--	--	0.3	6.4 DJ	0.0096 J	0.027 J	0.17 [0.16]
Benzo(b)fluoranthene	mg/kg	--	--	--	--	0.56	7.5 DJ	0.019	0.071	0.31 [0.29]
Benzo(ghi)perylene	mg/kg	--	--	--	--	0.2	4.8 DJ	0.0079 J	0.028 J	0.12 [0.14]
Benzo(k)fluoranthene	mg/kg	--	--	--	--	0.56	4.9 DJ	0.0079 J	0.035 J	0.14 [0.18]
Chrysene	mg/kg	--	--	--	--	0.56	7.2 DJ	0.012 J	0.063	0.28 [0.24]
Dibenzo(a,h)anthracene	mg/kg	--	--	--	--	0.07	1.1 DJ	0.019 U	0.041 U	0.041 [0.046]
Fluoranthene	mg/kg	--	--	--	--	0.75	25 DJ	0.019	0.26	0.63 [0.39]
Fluorene	mg/kg	--	--	--	--	0.018 J	0.52 DJ	0.003 J	0.0097 J	0.0086 J [0.0086 J]
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	--	--	0.2	4.4 DJ	0.0089 J	0.026 J	0.12 [0.14]
Naphthalene	mg/kg	--	--	--	--	0.034	0.12 DJ	0.0025 J	0.041 U	0.12 [0.086]
Phenanthrene	mg/kg	--	--	--	--	0.094	12 DJ	0.015 J	0.21	0.48 [0.23]
Pyrene	mg/kg	--	--	--	--	0.6	13 DJ	0.013 J	0.12 J	0.38 [0.26]
Total PAHs	mg/kg	--	--	--	--	4.66 J	96.1 J	0.137 J	0.916 J	3.22 J [2.5 J]
Metals										
Arsenic	mg/kg	--	--	--	--	10.3	11.5	8.7	14.8	11.6 [14.1]
Chromium	mg/kg	--	--	--	--	17.8	19.6	17.1	21.9	18.6 [14.5]
Copper	mg/kg	--	--	--	--	40.1	17	17.9	20.9	12.5 [12.2]
Miscellaneous										
Total Organic Carbon	mg/kg	--	--	--	--	NA	NA	NA	8,960	24,300 [17,400]

See notes on Page 12.

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TABLE 1 - VALIDATED ANALTICAL DATA SUMMARY TABLE

FORMER KOPPERS WOOD-TREATING SITE - CARBONDALE, ILLINOIS

Sample ID:		Current		Proposed		A1-45	A1-46	A1-47	A1-48	A2-11	A2-12
Depth Interval (in.):		USEPA PRGs		USEPA PRGs		0 - 6	0 - 6	0 - 6	0 - 6	0 - 6	0 - 6
Date Collected:	Units	R	C/I	R	C/I	03/30/10	03/30/10	03/30/10	03/30/10	03/29/10	03/29/10
PCDDs/PCDFs											
1,2,3,4,6,7,8-HpCDD	ug/kg	--	--	--	--	0.0552	0.0836	0.226	6.13 EJ	111 D	148 EJ
1,2,3,4,6,7,8-HpCDF	ug/kg	--	--	--	--	0.00536	0.00981	0.067	0.98	12.1 EJ	24.7 EJ
1,2,3,4,7,8,9-HpCDF	ug/kg	--	--	--	--	0.000801 U	0.00128 U	0.00848	0.0878	0.968	2
1,2,3,4,7,8-HxCDD	ug/kg	--	--	--	--	0.00154 U	0.00396 U	0.00166 UX	0.0078	0.805	1.28
1,2,3,4,7,8-HxCDF	ug/kg	--	--	--	--	0.000751 J	0.00175 J	0.0325	0.222	0.675	1.27
1,2,3,6,7,8-HxCDD	ug/kg	--	--	--	--	0.00184 U	0.00381 U	0.00938	0.11 J	2.01	3.98
1,2,3,6,7,8-HxCDF	ug/kg	--	--	--	--	0.000554 U	0.000673 U	0.00726	0.0407	0.154	0.289 PJ
1,2,3,7,8,9-HxCDD	ug/kg	--	--	--	--	0.000943 J	0.00421 U	0.00339 U	0.0205	0.68	1.08
1,2,3,7,8,9-HxCDF	ug/kg	--	--	--	--	0.000892 U	0.00102 U	0.00932	0.0463	0.159	0.255
1,2,3,7,8-PeCDD	ug/kg	--	--	--	--	0.000967 U	0.000984 U	0.0012 U	0.00263 J	0.114	0.173
1,2,3,7,8-PeCDF	ug/kg	--	--	--	--	0.000719 U	0.00116 U	0.00218 J	0.0096 J	0.0378	0.0491
2,3,4,6,7,8-HxCDF	ug/kg	--	--	--	--	0.000719 U	0.00146 U	0.00982	0.0535	0.311	0.606
2,3,4,7,8-PeCDF	ug/kg	--	--	--	--	0.000676 U	0.0013 J	0.0286	0.0969 J	0.221	0.302
2,3,7,8-TCDD	ug/kg	--	--	--	--	0.000676 UX	0.00061 U	0.000425 U	0.000476 U	0.00963	0.00988
2,3,7,8-TCDF	ug/kg	--	--	--	--	0.000477 U	0.000488 U	0.000716 UX	0.00191	0.00919	0.00877
37Cl-2,3,7,8-TCDD	ug/kg	--	--	--	--	0.134	0.139	0.132	0.135	0.158	0.151
OCDD	ug/kg	--	--	--	--	7.63	4.37	4.97	89.1 EDJ	573 EDJ	627 EDJ
OCDF	ug/kg	--	--	--	--	0.0207	0.0356	0.263	5.62	61.3 EJ	119 EJ
Total HpCDD	ug/kg	--	--	--	--	0.123	0.185	0.472	12.3 J	279 D	355 J
Total HpCDF	ug/kg	--	--	--	--	0.0208	0.0346	0.324	5.98	73.1 J	141 J
Total HxCDD	ug/kg	--	--	--	--	0.0118	0.0182	0.0506	0.496 J	25.6	43.8
Total HxCDF	ug/kg	--	--	--	--	0.000751	0.013	0.202	1.56 J	17.2 PJ	33.2 PJ
Total PeCDD	ug/kg	--	--	--	--	0.00228	0.00126 U	0.00179	0.0141	2.82	3.35
Total PeCDF	ug/kg	--	--	--	--	0.000762	0.0013	0.1	0.422 J	1.46 PJ	2.18 PJ
Total TCDD	ug/kg	--	--	--	--	0.000676 UX	0.000792 U	0.000282 UX	0.00225	0.482	0.4
Total TCDF	ug/kg	--	--	--	--	0.000841	0.000639 UX	0.00859	0.0238	0.15 PJ	0.204 PJ
2,3,7,8-TCDD TEQ	ug/kg	1	5-20	0.072	0.95	0.00307	0.00282	0.0201	0.183	2.1	3.12
SVOCs											
Pentachlorophenol	mg/kg	--	--	--	--	0.046 U	0.11 U	0.022 J	0.13 U	3.1	14 DJ
Acenaphthene	mg/kg	--	--	--	--	0.0092 U	0.0022 J	0.0033 J	0.0071 J	0.093 J	0.35 DJ
Acenaphthylene	mg/kg	--	--	--	--	0.0028 J	0.015 J	0.036	0.018 J	1.6	8.9 DJ
Anthracene	mg/kg	--	--	--	--	0.0034 J	0.017 J	0.043	0.03	1.9	11 DJ
Benzo(a)anthracene	mg/kg	--	--	--	--	0.009 J	0.039	0.09 J	0.089	3.1	19 DJ
Benzo(a)pyrene	mg/kg	--	--	--	--	0.008 J	0.045 J	0.091 J	0.089	4.2	28 DJ
Benzo(b)fluoranthene	mg/kg	--	--	--	--	0.013	0.076 J	0.16 J	0.15	9.7 JY	47 DJ
Benzo(ghi)perylene	mg/kg	--	--	--	--	0.006 J	0.035 J	0.069 J	0.082	3.4	21 DJ
Benzo(k)fluoranthene	mg/kg	--	--	--	--	0.006 J	0.026 J	0.072 J	0.046	8.8 JY	22 DJ
Chrysene	mg/kg	--	--	--	--	0.015	0.055	0.12 J	0.11	4.3	28 DJ
Dibenzo(a,h)anthracene	mg/kg	--	--	--	--	0.0092 U	0.0082 J	0.023 J	0.021 J	1	6.8 DJ
Fluoranthene	mg/kg	--	--	--	--	0.023	0.073	0.16	0.2	4.1	14 DJ
Fluorene	mg/kg	--	--	--	--	0.0092 U	0.0034 J	0.0057 J	0.0058 J	0.11	0.37 DJ
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	--	--	0.0061 J	0.034 J	0.072 J	0.076	3.3	21 DJ
Naphthalene	mg/kg	--	--	--	--	0.008 J	0.01 J	0.049	0.02 J	0.18	0.91 DJ
Phenanthrene	mg/kg	--	--	--	--	0.0097	0.031	0.1	0.1	0.54	1.6 DJ
Pyrene	mg/kg	--	--	--	--	0.016	0.056	0.12 J	0.13	4.5	19 DJ
Total PAHs	mg/kg	--	--	--	--	0.126 J	0.526 J	1.21 J	1.17 J	42 J	249 J
Metals											
Arsenic	mg/kg	--	--	--	--	12	6.5	17.6	8.4	21.2	44.3
Chromium	mg/kg	--	--	--	--	20.7	20.1	18.8	18.5	48.9 J	118 J
Copper	mg/kg	--	--	--	--	23.4	18.6	22.8	23.8	26.8	32.6
Miscellaneous											
Total Organic Carbon	mg/kg	--	--	--	--	NA	23,600	13,700	9,500	21,700	20,800

See notes on Page 12.

US EPA ARCHIVE DOCUMENT

TABLE 1 - VALIDATED ANALTICAL DATA SUMMARY TABLE

FORMER KOPPERS WOOD-TREATING SITE - CARBONDALE, ILLINOIS

Sample ID:		Current		Proposed		A2-13	A2-14	A2-15	A2-16	A2-17
Depth Interval (in.):		USEPA PRGs		USEPA PRGs		0 - 6	0 - 6	0 - 6	0 - 6	0 - 6
Date Collected:	Units	R	C/I	R	C/I	03/29/10	03/29/10	03/29/10	03/29/10	03/29/10
PCDDs/PCDFs										
1,2,3,4,6,7,8-HpCDD	ug/kg	--	--	--	--	1 [2.57]	296 EJ	79.8 EDJ	252 EJ	181 EDJ
1,2,3,4,6,7,8-HpCDF	ug/kg	--	--	--	--	0.251 [0.611]	31.6	10.5 EJ	27.9	22.2
1,2,3,4,7,8,9-HpCDF	ug/kg	--	--	--	--	0.0164 [0.0395]	2.58	1.2	2.47	1.67
1,2,3,4,7,8-HxCDD	ug/kg	--	--	--	--	0.0132 [0.03]	1.43	0.152	1.09	0.718
1,2,3,4,7,8-HxCDF	ug/kg	--	--	--	--	0.00839 [0.0218]	0.871	0.733	1.73	0.961
1,2,3,6,7,8-HxCDD	ug/kg	--	--	--	--	0.029 [0.0726]	6.33	1.82	4.62	3.92
1,2,3,6,7,8-HxCDF	ug/kg	--	--	--	--	0.00332 J [0.00842]	0.241	0.136	0.352	0.242
1,2,3,7,8,9-HxCDD	ug/kg	--	--	--	--	0.0125 [0.0308]	2.3	0.355	1.17	1.04
1,2,3,7,8,9-HxCDF	ug/kg	--	--	--	--	0.00188 J [0.0048 J]	0.142	0.155	0.355	0.198
1,2,3,7,8-PeCDD	ug/kg	--	--	--	--	0.00363 J [0.00755]	0.237	0.0481	0.133	0.137
1,2,3,7,8-PeCDF	ug/kg	--	--	--	--	0.00085 UX [0.00292 J]	0.0256 J	0.0257	0.0624	0.0354 J
2,3,4,6,7,8-HxCDF	ug/kg	--	--	--	--	0.00683 [0.0161]	0.646	0.281	0.653	0.482
2,3,4,7,8-PeCDF	ug/kg	--	--	--	--	0.00287 J [0.00715]	0.104	0.153	0.332	0.203
2,3,7,8-TCDD	ug/kg	--	--	--	--	0.00048 J [0.000768 J]	0.016	0.0032	0.00664 U	0.00944 J
2,3,7,8-TCDF	ug/kg	--	--	--	--	0.00123 [0.00226]	0.00691 U	0.00564	0.00752 UX	0.01 U
37Cl-2,3,7,8-TCDD	ug/kg	--	--	--	--	0.139 [0.135]	1.48	0.141	1.64	1.63
OCDD	ug/kg	--	--	--	--	13.5 EJ [35.1 EJ]	4,850 EDJ	537 EDJ	3,270 EDJ	2,630 EDJ
OCDF	ug/kg	--	--	--	--	1.35 [3.19]	202 EJ	61.5 D	158 EJ	130 EJ
Total HpCDD	ug/kg	--	--	--	--	2.02 [5.64]	570 J	235 DJ	757 J	368 J
Total HpCDF	ug/kg	--	--	--	--	1.26 [3.37]	248	72.7 J	222	162
Total HxCDD	ug/kg	--	--	--	--	0.28 [0.778]	34.4	17.1	52.2	22.5
Total HxCDF	ug/kg	--	--	--	--	0.262 [0.729]	38.4 PJ	15.8 PJ	40.3 PJ	24.5 PJ
Total PeCDD	ug/kg	--	--	--	--	0.108 [0.207]	1.18	0.318	1.71	0.906
Total PeCDF	ug/kg	--	--	--	--	0.0315 [0.085]	1.26 PJ	0.983 PJ	2.21	1.45
Total TCDD	ug/kg	--	--	--	--	0.0926 [0.119]	0.118	0.035	0.139	0.122
Total TCDF	ug/kg	--	--	--	--	0.0233 [0.0478]	0.159	0.0758 PJ	0.167	0.0938
2,3,7,8-TCDD TEQ	ug/kg	1	5-20	0.072	0.95	0.0297 [0.0729]	6.3	1.56	5.08	3.84
SVOCs										
Pentachlorophenol	mg/kg	--	--	--	--	0.078 J [0.061 J]	71 DJ	21 DJ	27 DJ	40 DJ
Acenaphthene	mg/kg	--	--	--	--	0.0064 J [0.033]	0.26 DJ	0.96 DJ	0.69 DJ	0.47 DJ
Acenaphthylene	mg/kg	--	--	--	--	0.081 J [0.28 J]	6.1 DJ	17 DJ	15 DJ	7.8 DJ
Anthracene	mg/kg	--	--	--	--	0.091 [0.17 J]	8.4 DJ	24 DJ	27 DJ	12 DJ
Benzo(a)anthracene	mg/kg	--	--	--	--	0.14 J [0.44 J]	17 DJ	20 DJ	16 DJ	12 DJ
Benzo(a)pyrene	mg/kg	--	--	--	--	0.18 J [0.57 J]	16 DJ	39 DJ	28 DJ	15 DJ
Benzo(b)fluoranthene	mg/kg	--	--	--	--	0.4 JY [0.72]	38 DJ	91 DJY	79 DJY	41 DJY
Benzo(ghi)perylene	mg/kg	--	--	--	--	0.15 J [0.49 J]	12 DJ	34 DJ	29 DJ	15 DJ
Benzo(k)fluoranthene	mg/kg	--	--	--	--	0.37 JY [0.28]	18 DJ	83 DJY	72 DJY	37 DJY
Chrysene	mg/kg	--	--	--	--	0.22 [0.62]	24 DJ	27 DJ	23 DJ	16 DJ
Dibenzo(a,h)anthracene	mg/kg	--	--	--	--	0.044 [0.1]	4.9 DJ	13 DJ	8.7 DJ	4.8 DJ
Fluoranthene	mg/kg	--	--	--	--	0.26 J [1.4 J]	18 DJ	23 DJ	16 DJ	19 DJ
Fluorene	mg/kg	--	--	--	--	0.019 UJ [0.081 J]	0.39 DJ	1.4 DJ	1.2 DJ	0.61 DJ
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	--	--	0.13 J [0.4 J]	13 DJ	36 DJ	30 DJ	15 DJ
Naphthalene	mg/kg	--	--	--	--	0.02 J [0.16 J]	0.94 DJ	2.3 DJ	2 DJ	1.4 DJ
Phenanthrene	mg/kg	--	--	--	--	0.086 J [1.2 J]	2.9 DJ	4.1 DJ	3.1 DJ	2.8 DJ
Pyrene	mg/kg	--	--	--	--	0.23 J [1.1 J]	23 DJ	23 DJ	18 DJ	19 DJ
Total PAHs	mg/kg	--	--	--	--	2.04 J [8.04]	203 J	356	297	219 J
Metals										
Arsenic	mg/kg	--	--	--	--	12.1 [12.6]	14.8	63.8	44.4	25.2
Chromium	mg/kg	--	--	--	--	17.1 [19.2 J]	32.9 J	138 J	155 J	78.3 J
Copper	mg/kg	--	--	--	--	45.8 J [65]	19.9	36.8	41.3	27.2
Miscellaneous										
Total Organic Carbon	mg/kg	--	--	--	--	NA	NA	NA	NA	NA

See notes on Page 12.

US EPA ARCHIVE DOCUMENT

TABLE 1 - VALIDATED ANALTICAL DATA SUMMARY TABLE

FORMER KOPPERS WOOD-TREATING SITE - CARBONDALE, ILLINOIS

Sample ID:		Current		Proposed		A2-18	A2-19	A3-18	A3-19
Depth Interval (in.):		USEPA PRGs		USEPA PRGs		0 - 6	0 - 6	0 - 6	0 - 6
Date Collected:	Units	R	C/I	R	C/I	03/29/10	03/29/10	03/30/10	03/30/10
PCDDs/PCDFs									
1,2,3,4,6,7,8-HpCDD	ug/kg	--	--	--	--	37	262 EDJ	0.111	2
1,2,3,4,6,7,8-HpCDF	ug/kg	--	--	--	--	4.58	38.1 EJ	0.0134	0.435
1,2,3,4,7,8,9-HpCDF	ug/kg	--	--	--	--	0.44	3.21	0.00138 U	0.0386
1,2,3,4,7,8-HxCDD	ug/kg	--	--	--	--	0.182	2	0.00141 J	0.0199
1,2,3,4,7,8-HxCDF	ug/kg	--	--	--	--	0.994	1.56	0.000955 J	0.0361
1,2,3,6,7,8-HxCDD	ug/kg	--	--	--	--	0.89	6.97 EJ	0.00269 UX	0.0591
1,2,3,6,7,8-HxCDF	ug/kg	--	--	--	--	0.192	0.366	0.000821 U	0.0137
1,2,3,7,8,9-HxCDD	ug/kg	--	--	--	--	0.296	2.11	0.00363 U	0.0307
1,2,3,7,8,9-HxCDF	ug/kg	--	--	--	--	0.218	0.295	0.00134 U	0.0105
1,2,3,7,8-PeCDD	ug/kg	--	--	--	--	0.0483 UX	0.244	0.00123 U	0.00866
1,2,3,7,8-PeCDF	ug/kg	--	--	--	--	0.0502 J	0.0623	0.000851 U	0.00245 UX
2,3,4,6,7,8-HxCDF	ug/kg	--	--	--	--	0.278	0.929	0.000968 U	0.024
2,3,4,7,8-PeCDF	ug/kg	--	--	--	--	0.393	0.303	0.000863 J	0.0203
2,3,7,8-TCDD	ug/kg	--	--	--	--	0.00757 J	0.0136	0.000651 U	0.000854 UX
2,3,7,8-TCDF	ug/kg	--	--	--	--	0.00935 J	0.011	0.00046 U	0.00119
37Cl-2,3,7,8-TCDD	ug/kg	--	--	--	--	1.76	0.205	0.139	0.138
OCDD	ug/kg	--	--	--	--	583 EJ	709 EDJ	4.2	23.8 EJ
OCDF	ug/kg	--	--	--	--	25.1	186 EJ	0.0708	2.08
Total HpCDD	ug/kg	--	--	--	--	88	620 DJ	0.26	4.67
Total HpCDF	ug/kg	--	--	--	--	28.6	210 J	0.068	2.29
Total HxCDD	ug/kg	--	--	--	--	6.4	60.1 J	0.0173	0.52
Total HxCDF	ug/kg	--	--	--	--	8.29	50.3 PJ	0.0168	0.68
Total PeCDD	ug/kg	--	--	--	--	0.323	3.43	0.00111	0.0671
Total PeCDF	ug/kg	--	--	--	--	1.78	2.59 PJ	0.00193	0.144
Total TCDD	ug/kg	--	--	--	--	0.118	0.385	0.000872	0.0122
Total TCDF	ug/kg	--	--	--	--	0.0437	0.264 PJ	0.000365 UX	0.0276
2,3,7,8-TCDD TEQ	ug/kg	1	5-20	0.072	0.95	1.04	5.08	0.00302	0.0668
SVOCs									
Pentachlorophenol	mg/kg	--	--	--	--	2.3	22 DJ [20 DJ]	0.044 U	0.067 J
Acenaphthene	mg/kg	--	--	--	--	0.051	0.57 DJ [0.57 DJ]	0.0013 J	0.0078 J
Acenaphthylene	mg/kg	--	--	--	--	1.3	8.9 DJ [9.2 DJ]	0.0047 J	0.12
Anthracene	mg/kg	--	--	--	--	1.4	32 DJ [26 DJ]	0.0058 J	0.17
Benzo(a)anthracene	mg/kg	--	--	--	--	2.8	8 DJ [7.6 DJ]	0.011	0.16
Benzo(a)pyrene	mg/kg	--	--	--	--	3.2	17 DJ [17 DJ]	0.012	0.15 J
Benzo(b)fluoranthene	mg/kg	--	--	--	--	6	35 DJ [43 DJY]	0.022	0.29 J
Benzo(ghi)perylene	mg/kg	--	--	--	--	2.7	15 DJ [16 DJ]	0.014	0.18 J
Benzo(k)fluoranthene	mg/kg	--	--	--	--	2.6	13 DJ [39 DJY]	0.0074 J	0.1 J
Chrysene	mg/kg	--	--	--	--	4.4	21 DJ [17 DJ]	0.013	0.18
Dibenzo(a,h)anthracene	mg/kg	--	--	--	--	0.96	5.7 DJ [5.1 DJ]	0.0031 J	0.056 J
Fluoranthene	mg/kg	--	--	--	--	4.2	11 DJ [11 DJ]	0.022	0.21
Fluorene	mg/kg	--	--	--	--	0.081	3.1 DJ [1.5 DJ]	0.0016 J	0.013 J
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	--	--	2.7	16 DJ [16 DJ]	0.012	0.19 J
Naphthalene	mg/kg	--	--	--	--	0.1	1.2 DJ [1.1 DJ]	0.0016 J	0.0093 J
Phenanthrene	mg/kg	--	--	--	--	0.55	6 DJ [3 DJ]	0.0093	0.046
Pyrene	mg/kg	--	--	--	--	4.1	11 DJ [11 DJ]	0.016	0.19
Total PAHs	mg/kg	--	--	--	--	37.1	204 [185]	0.157 J	2.07 J
Metals									
Arsenic	mg/kg	--	--	--	--	13.8	50.4 [35.8]	6	14.2
Chromium	mg/kg	--	--	--	--	42.4 J	154 J [153 J]	18.1	22.5
Copper	mg/kg	--	--	--	--	34	39 [42.1]	17.4	22.9
Miscellaneous									
Total Organic Carbon	mg/kg	--	--	--	--	NA	31,600 [35,000]	5,470	16,400

See notes on Page 12.

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TABLE 1 - VALIDATED ANALTICAL DATA SUMMARY TABLE

FORMER KOPPERS WOOD-TREATING SITE - CARBONDALE, ILLINOIS

Sample ID:		Current		Proposed		A3-20	A3-21	A3-22	A3-23	A3-24	A4-1
Depth Interval (in.):		USEPA PRGs		USEPA PRGs		0 - 6	0 - 6	0 - 6	0 - 6	0 - 6	0 - 6
Date Collected:	Units	R	C/I	R	C/I	03/30/10	03/30/10	03/30/10	03/30/10	03/30/10	03/31/10
PCDDs/PCDFs											
1,2,3,4,6,7,8-HpCDD	ug/kg	--	--	--	--	4.15 EJ [4.43 EJ]	160 EDJ	105 EDJ	17.2 EJ	117 EDJ	0.248
1,2,3,4,6,7,8-HpCDF	ug/kg	--	--	--	--	0.815 [0.925]	40.6 EJ	23.7 EJ	4.51 EJ	26.8 EJ	0.0237
1,2,3,4,7,8,9-HpCDF	ug/kg	--	--	--	--	0.0607 [0.0672]	3.29	1.77	0.46	2.71	0.00237 J
1,2,3,4,7,8-HxCDD	ug/kg	--	--	--	--	0.0377 [0.0408]	1.36	0.78	0.165	1.16	0.00332 J
1,2,3,4,7,8-HxCDF	ug/kg	--	--	--	--	0.0465 [0.0542]	2.58	1.82	1.02	7.74 EJ	0.00201 J
1,2,3,6,7,8-HxCDD	ug/kg	--	--	--	--	0.118 [0.133]	4.96 EJ	2.58	0.536	3.88	0.00692
1,2,3,6,7,8-HxCDF	ug/kg	--	--	--	--	0.0223 [0.0233]	0.759	0.545	0.227	1.73	0.00174 J
1,2,3,7,8,9-HxCDD	ug/kg	--	--	--	--	0.0699 [0.0725]	2.23	1.37	0.258	2.05	0.0067
1,2,3,7,8,9-HxCDF	ug/kg	--	--	--	--	0.011 [0.0119]	0.441	0.322	0.26	1.65	0.00115 U
1,2,3,7,8-PeCDD	ug/kg	--	--	--	--	0.0144 [0.0162]	0.375	0.252	0.0576	0.429	0.00207 J
1,2,3,7,8-PeCDF	ug/kg	--	--	--	--	0.00377 J [0.00447 J]	0.0927	0.0681	0.056	0.302	0.000583 J
2,3,4,6,7,8-HxCDF	ug/kg	--	--	--	--	0.041 [0.0489]	1.36	0.92	0.365	2.32	0.00251 J
2,3,4,7,8-PeCDF	ug/kg	--	--	--	--	0.0256 [0.0306]	0.721	0.531	0.514	2.97	0.00339 J
2,3,7,8-TCDD	ug/kg	--	--	--	--	0.0018 UX [0.00243]	0.0329	0.0224	0.00498	0.0375	0.000651 J
2,3,7,8-TCDF	ug/kg	--	--	--	--	0.0019 [0.00264]	0.0162	0.0128	0.0131	0.0615	0.000756 J
37Cl-2,3,7,8-TCDD	ug/kg	--	--	--	--	0.133 [0.129]	0.155	0.145	0.134	0.135	0.139
OCDD	ug/kg	--	--	--	--	49.1 EJ [51.8 EJ]	570 EDJ	471 EDJ	137 EDJ	524 EDJ	10.6 EJ
OCDF	ug/kg	--	--	--	--	3.66 [3.95]	207 EJ	98.2 EJ	18.9 EJ	100 EJ	0.0764
Total HpCDD	ug/kg	--	--	--	--	8.51 J [8.98 J]	365 J	223 J	44.7 J	241 J	0.567
Total HpCDF	ug/kg	--	--	--	--	3.91 [4.2]	277 J	150 J	31.6 J	161 J	0.0959
Total HxCDD	ug/kg	--	--	--	--	0.884 [0.97]	47.3 J	21.9	6.31	28.1	0.0795
Total HxCDF	ug/kg	--	--	--	--	0.991 [1.13]	57.4 PJ	33.9	10.3	62.2 J	0.0477
Total PeCDD	ug/kg	--	--	--	--	0.108 [0.114]	2.73	1.48	0.566	2.08	0.0144
Total PeCDF	ug/kg	--	--	--	--	0.277 [0.309]	5.7 PJ	4.14	2.61	16.3 PJ	0.0288
Total TCDD	ug/kg	--	--	--	--	0.0251 [0.0285]	0.296	0.196	0.0657	0.311	0.00603
Total TCDF	ug/kg	--	--	--	--	0.0691 [0.0818]	0.394	0.276	0.194	0.76 PJ	0.0145
2,3,7,8-TCDD TEQ	ug/kg	1	5-20	0.072	0.95	0.123 [0.138]	4.27	2.75	0.771	5.08	0.0121
SVOCs											
Pentachlorophenol	mg/kg	--	--	--	--	0.037 J [0.053 J]	18 DJ	1.2 DJ	0.57	2.6 DJ	0.25 U
Acenaphthene	mg/kg	--	--	--	--	0.0081 J [0.0079 J]	0.86 DJ	0.12 DJ	0.047 J	0.42 DJ	0.02 J
Acenaphthylene	mg/kg	--	--	--	--	0.064 [0.07]	4.4 DJ	1.5 DJ	1.1	10 DJ	0.035 J
Anthracene	mg/kg	--	--	--	--	0.074 [0.082]	9.2 DJ	2.2 DJ	1.2	7.8 DJ	0.062
Benzo(a)anthracene	mg/kg	--	--	--	--	0.11 J [0.11 J]	9.4 DJ	1.3 DJ	1	17 DJ	0.24
Benzo(a)pyrene	mg/kg	--	--	--	--	0.12 J [0.13 J]	5.1 DJ	1.1 DJ	1.6	28 DJ	0.26
Benzo(b)fluoranthene	mg/kg	--	--	--	--	0.21 J [0.25 J]	21 DJ	2.7 DJ	4.1 JY	45 DJ	0.42
Benzo(ghi)perylene	mg/kg	--	--	--	--	0.15 J [0.18 J]	8.6 DJ	2.6 DJ	1.9	24 DJ	0.24
Benzo(k)fluoranthene	mg/kg	--	--	--	--	0.097 J [0.084 J]	6.1 DJ	1 DJ	3.6 JY	25 DJ	0.14
Chrysene	mg/kg	--	--	--	--	0.13 J [0.15 J]	11 DJ	1.5 DJ	1.8	19 DJ	0.31
Dibenzo(a,h)anthracene	mg/kg	--	--	--	--	0.035 J [0.035 J]	0.21 UJ	0.6 DJ	0.47	0.26 UJ	0.058
Fluoranthene	mg/kg	--	--	--	--	0.22 [0.23]	25 DJ	2.4 DJ	1.8	25 DJ	0.56
Fluorene	mg/kg	--	--	--	--	0.0097 J [0.011 J]	0.92 DJ	0.16 DJ	0.079	0.57 DJ	0.014 J
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	--	--	0.13 J [0.16 J]	10 DJ	2.4 DJ	2	26 DJ	0.24
Naphthalene	mg/kg	--	--	--	--	0.018 J [0.016 J]	3.8 DJ	0.11 DJ	0.12	0.7 DJ	0.05 U
Phenanthrene	mg/kg	--	--	--	--	0.074 [0.073]	15 DJ	0.61 DJ	0.57	3.2 DJ	0.19
Pyrene	mg/kg	--	--	--	--	0.15 J [0.16 J]	13 DJ	1.8 DJ	1.4	15 DJ	0.36
Total PAHs	mg/kg	--	--	--	--	1.6 J [1.75 J]	143	22.1 J	19.2 J	247	3.15 J
Metals											
Arsenic	mg/kg	--	--	--	--	11 [10.8]	43.2	9.9	14.1	19	8.3
Chromium	mg/kg	--	--	--	--	25.4 [23.6]	53.4	26.7	21.6	41.1	60.5
Copper	mg/kg	--	--	--	--	34.1 [32.4]	40	41.7	21.9	28	27.1
Miscellaneous											
Total Organic Carbon	mg/kg	--	--	--	--	28,200 [34,900]	41,000	64,700	26,200	45,800	15,400

See notes on Page 12.

US EPA ARCHIVE DOCUMENT

TABLE 1 - VALIDATED ANALTICAL DATA SUMMARY TABLE

FORMER KOPPERS WOOD-TREATING SITE - CARBONDALE, ILLINOIS

Sample ID:		Current		Proposed		A4-2	A4-3	A4-4	A4-5	A4-6	A4-7
Depth Interval (in.):		USEPA PRGs		USEPA PRGs		0 - 6	0 - 6	0 - 6	0 - 6	0 - 6	0 - 6
Date Collected:	Units	R	C/I	R	C/I	03/31/10	03/31/10	03/31/10	03/31/10	03/31/10	03/31/10
PCDDs/PCDFs											
1,2,3,4,6,7,8-HpCDD	ug/kg	--	--	--	--	0.352	0.209	0.755	0.215	1.35	0.106
1,2,3,4,6,7,8-HpCDF	ug/kg	--	--	--	--	0.0423	0.0196	0.132	0.0255	0.204	0.0118
1,2,3,4,7,8,9-HpCDF	ug/kg	--	--	--	--	0.00384 J	0.00157 J	0.0104	0.00205 J	0.0158	0.00122 J
1,2,3,4,7,8-HxCDD	ug/kg	--	--	--	--	0.00417 J	0.00232 J	0.0106	0.00344 J	0.0155	0.00143 J
1,2,3,4,7,8-HxCDF	ug/kg	--	--	--	--	0.00326 J	0.00129 J	0.00765	0.0044 J	0.0123	0.000767 J
1,2,3,6,7,8-HxCDD	ug/kg	--	--	--	--	0.0102	0.00506	0.0246	0.00768	0.0394	0.00287 J
1,2,3,6,7,8-HxCDF	ug/kg	--	--	--	--	0.00199 J	0.00054 UX	0.00601	0.00675	0.00814	0.000579 J
1,2,3,7,8,9-HxCDD	ug/kg	--	--	--	--	0.00702	0.00413 J	0.018	0.00617	0.0253	0.00253 J
1,2,3,7,8,9-HxCDF	ug/kg	--	--	--	--	0.000976 J	0.000399 U	0.00245 J	0.00289 J	0.00362 J	0.000546 U
1,2,3,7,8-PeCDD	ug/kg	--	--	--	--	0.00144 UX	0.000645 UX	0.00465 J	0.00232 J	0.00724	0.000623 J
1,2,3,7,8-PeCDF	ug/kg	--	--	--	--	0.000631 J	0.000581 U	0.00116 J	0.00157 J	0.00239 J	0.00066 U
2,3,4,6,7,8-HxCDF	ug/kg	--	--	--	--	0.00386 J	0.000993 J	0.00971	0.0195	0.0138	0.000912 J
2,3,4,7,8-PeCDF	ug/kg	--	--	--	--	0.00576	0.00101 UX	0.00987	0.0635	0.0129	0.000971 J
2,3,7,8-TCDD	ug/kg	--	--	--	--	0.000457 UX	0.000551 U	0.00146	0.00127 UX	0.00173	0.000247 U
2,3,7,8-TCDF	ug/kg	--	--	--	--	0.000624 UX	0.000387 J	0.00132	0.00265	0.00236	0.000271 U
37Cl-2,3,7,8-TCDD	ug/kg	--	--	--	--	0.147	0.137	0.135	0.138	0.15	0.142
OCDD	ug/kg	--	--	--	--	12.1 EJ	9.21 EJ	15.9 EJ	6.34	21.1 EJ	5.03
OCDF	ug/kg	--	--	--	--	0.186	0.0876	0.477	0.0574	0.759	0.0421
Total HpCDD	ug/kg	--	--	--	--	0.777	0.461	1.62	0.527	4.85	0.244
Total HpCDF	ug/kg	--	--	--	--	0.208	0.0831	0.519	0.0853	0.867	0.0444
Total HxCDD	ug/kg	--	--	--	--	0.0966	0.0462	0.221	0.119	0.548	0.0348
Total HxCDF	ug/kg	--	--	--	--	0.0809	0.0227	0.198 PJ	0.255	0.311 PJ	0.0171
Total PeCDD	ug/kg	--	--	--	--	0.0102	0.00417	0.0464	0.0375	0.0767	0.00403
Total PeCDF	ug/kg	--	--	--	--	0.0452	0.00603	0.0958 PJ	0.478 PJ	0.123 PJ	0.0073
Total TCDD	ug/kg	--	--	--	--	0.00734	0.00125	0.0142	0.0176	0.0262	0.000713 U
Total TCDF	ug/kg	--	--	--	--	0.0121	0.0014	0.041	0.144	0.0629 PJ	0.00225
2,3,7,8-TCDD TEQ	ug/kg	1	5-20	0.072	0.95	0.0126	0.00651	0.031	0.0311	0.0472	0.00453
SVOCs											
Pentachlorophenol	mg/kg	--	--	--	--	0.045 U	0.046 U	0.31 U	0.49 U	0.31 U	0.05 U
Acenaphthene	mg/kg	--	--	--	--	0.01	0.0093 U	0.022 J	0.24	0.054 J	0.008 J
Acenaphthylene	mg/kg	--	--	--	--	0.035	0.0032 J	0.045 J	0.58	0.29	0.011
Anthracene	mg/kg	--	--	--	--	0.036	0.0043 J	0.06 J	0.86	0.35	0.013
Benzo(a)anthracene	mg/kg	--	--	--	--	0.077	0.011	0.22	1.1	0.76	0.046
Benzo(a)pyrene	mg/kg	--	--	--	--	0.085	0.011	0.3	1.1	0.8	0.047
Benzo(b)fluoranthene	mg/kg	--	--	--	--	0.14	0.016	0.43	2 JY	1.6	0.1 JY
Benzo(ghi)perylene	mg/kg	--	--	--	--	0.092	0.012	0.33	1.4	0.77	0.039
Benzo(k)fluoranthene	mg/kg	--	--	--	--	0.036	0.0062 J	0.26	1.7 JY	0.5	0.088 JY
Chrysene	mg/kg	--	--	--	--	0.11	0.013	0.37	1.3	1.1	0.064
Dibenzo(a,h)anthracene	mg/kg	--	--	--	--	0.022	0.0021 J	0.068	0.19	0.22	0.008 J
Fluoranthene	mg/kg	--	--	--	--	0.22	0.02	0.56	3.2	1.4	0.087
Fluorene	mg/kg	--	--	--	--	0.0076 J	0.0093 U	0.025 J	0.23	0.062 U	0.0079 J
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	--	--	0.084	0.0093	0.28	1.1	0.8	0.037
Naphthalene	mg/kg	--	--	--	--	0.056	0.0093 U	0.063 U	0.56	0.19	0.016
Phenanthrene	mg/kg	--	--	--	--	0.15	0.015	0.17	2.5	0.74	0.051
Pyrene	mg/kg	--	--	--	--	0.12	0.012	0.37	1.8	0.89	0.069
Total PAHs	mg/kg	--	--	--	--	1.28 J	0.135 J	3.51 J	18.2	10.5 J	0.604 J
Metals											
Arsenic	mg/kg	--	--	--	--	10.5	11.9	7	11.4	13	9.3
Chromium	mg/kg	--	--	--	--	21	20.6	20.6	23.9	28.2	18
Copper	mg/kg	--	--	--	--	38.1	20.7	36.8	128	46.7	21.9
Miscellaneous											
Total Organic Carbon	mg/kg	--	--	--	--	NA	NA	34,100	NA	83,300	13,900

See notes on Page 12.

US EPA ARCHIVE DOCUMENT

TABLE 1 - VALIDATED ANALTICAL DATA SUMMARY TABLE

FORMER KOPPERS WOOD-TREATING SITE - CARBONDALE, ILLINOIS

Sample ID:		Current		Proposed		A4-8	A4-9	A4-10	A5-6
Depth Interval (in.):		USEPA PRGs		USEPA PRGs		0 - 6	0 - 6	0 - 6	0 - 6
Date Collected:	Units	R	C/I	R	C/I	03/31/10	03/31/10	03/31/10	03/30/10
PCDDs/PCDFs									
1,2,3,4,6,7,8-HpCDD	ug/kg	--	--	--	--	0.474 [0.431]	0.0596	0.084	9.9 EJ [15 EJ]
1,2,3,4,6,7,8-HpCDF	ug/kg	--	--	--	--	0.0824 [0.0751]	0.00254 J	0.000582 U	1.38 [2.35]
1,2,3,4,7,8,9-HpCDF	ug/kg	--	--	--	--	0.00579 [0.00603]	0.000676 U	0.000429 U	0.118 [0.173]
1,2,3,4,7,8-HxCDD	ug/kg	--	--	--	--	0.00766 [0.00705]	0.00145 UX	0.00204 J	0.0812 [0.121]
1,2,3,4,7,8-HxCDF	ug/kg	--	--	--	--	0.00521 [0.00428 J]	0.000413 U	0.000325 U	0.0763 [0.105]
1,2,3,6,7,8-HxCDD	ug/kg	--	--	--	--	0.016 [0.0137]	0.00167 J	0.00222 J	0.277 [0.405]
1,2,3,6,7,8-HxCDF	ug/kg	--	--	--	--	0.00348 J [0.00311 J]	0.000417 U	0.00032 U	0.0246 [0.0361]
1,2,3,7,8,9-HxCDD	ug/kg	--	--	--	--	0.0131 [0.0114]	0.00182 J	0.00227 J	0.123 [0.19]
1,2,3,7,8,9-HxCDF	ug/kg	--	--	--	--	0.00137 J [0.00126 J]	0.000363 U	0.000539 U	0.0224 [0.0256]
1,2,3,7,8-PeCDD	ug/kg	--	--	--	--	0.00348 J [0.00341 J]	0.00062 U	0.00083 J	0.0325 [0.0443]
1,2,3,7,8-PeCDF	ug/kg	--	--	--	--	0.000528 J [0.000691 J]	0.000512 U	0.000404 U	0.00621 [0.00719]
2,3,4,6,7,8-HxCDF	ug/kg	--	--	--	--	0.00604 [0.00498]	0.000484 U	0.000407 U	0.0615 [0.0779]
2,3,4,7,8-PeCDF	ug/kg	--	--	--	--	0.00598 [0.00519]	0.000933 U	0.000403 U	0.0355 [0.0416]
2,3,7,8-TCDD	ug/kg	--	--	--	--	0.000716 J [0.000635 J]	0.000245 J	0.000211 U	0.00399 [0.00434]
2,3,7,8-TCDF	ug/kg	--	--	--	--	0.00082 J [0.000873 J]	0.000379 U	0.000349 U	0.00155 [0.00188]
37Cl-2,3,7,8-TCDD	ug/kg	--	--	--	--	0.134 [0.14]	0.143	0.135	0.136 [0.139]
OCDD	ug/kg	--	--	--	--	8.69 EJ [8.57 EJ]	1.57	3.26	94.9 EJ [167 EDJ]
OCDF	ug/kg	--	--	--	--	0.28 [0.246]	0.00721 J	0.00142 UX	7.43 [8.96 EJ]
Total HpCDD	ug/kg	--	--	--	--	1.03 [0.965]	0.148	0.229	25.5 J [37 J]
Total HpCDF	ug/kg	--	--	--	--	0.29 [0.264]	0.00254	0.00103 UX	8.56 [12.8]
Total HxCDD	ug/kg	--	--	--	--	0.154 [0.149]	0.0256	0.0417	2.91 [3.68]
Total HxCDF	ug/kg	--	--	--	--	0.115 [0.104]	0.00207	0.000391	2.29 [2.68]
Total PeCDD	ug/kg	--	--	--	--	0.03 [0.0252]	0.00336	0.00656	0.325 [0.414]
Total PeCDF	ug/kg	--	--	--	--	0.0549 [0.0514]	0.00159	0.000404 U	0.304 PJ [0.352 PJ]
Total TCDD	ug/kg	--	--	--	--	0.00524 [0.00594]	0.000493	0.000336 UX	0.0642 [0.0664]
Total TCDF	ug/kg	--	--	--	--	0.022 [0.0152]	0.000379 U	0.00039 UX	0.041 PJ [0.0473 PJ]
2,3,7,8-TCDD TEQ	ug/kg	1	5-20	0.072	0.95	0.0197 [0.0181]	0.00169	0.0033	0.259 [0.386]
SVOCs									
Pentachlorophenol	mg/kg	--	--	--	--	0.047 U [0.097 U]	0.051 U	0.043 U	0.4 J [0.53 J]
Acenaphthene	mg/kg	--	--	--	--	0.0089 J [0.02 U]	0.01 U	0.0088 U	0.13 [0.18]
Acenaphthylene	mg/kg	--	--	--	--	0.035 [0.02]	0.0046 J	0.0088 U	1.8 [2.6]
Anthracene	mg/kg	--	--	--	--	0.038 [0.026]	0.0043 J	0.0088 U	2.2 [3]
Benzo(a)anthracene	mg/kg	--	--	--	--	0.11 [0.081]	0.0098 J	0.0088 U	1.2 [1.7]
Benzo(a)pyrene	mg/kg	--	--	--	--	0.13 [0.11]	0.014	0.0027 J	2.3 [3.6]
Benzo(b)fluoranthene	mg/kg	--	--	--	--	0.3 JY [0.25 JY]	0.027	0.0035 J	3.3 [5.5]
Benzo(ghi)perylene	mg/kg	--	--	--	--	0.14 [0.12]	0.016	0.0088 U	2.9 [4.2]
Benzo(k)fluoranthene	mg/kg	--	--	--	--	0.26 JY [0.22 JY]	0.0089 J	0.0088 U	1.5 [1.9]
Chrysene	mg/kg	--	--	--	--	0.18 [0.16]	0.017	0.0088 U	1.7 [3]
Dibenzo(a,h)anthracene	mg/kg	--	--	--	--	0.03 [0.029]	0.01 U	0.0088 U	0.67 [1.1]
Fluoranthene	mg/kg	--	--	--	--	0.26 [0.23]	0.025	0.0066 J	1.5 [2.2]
Fluorene	mg/kg	--	--	--	--	0.006 J [0.0066 J]	0.01 U	0.0088 U	0.2 [0.27]
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	--	--	0.13 [0.12]	0.014	0.0088 U	2.4 [3.6]
Naphthalene	mg/kg	--	--	--	--	0.023 [0.011 J]	0.01 U	0.0088 U	0.089 J [0.14]
Phenanthrene	mg/kg	--	--	--	--	0.11 [0.087]	0.015	0.0076 J	0.35 [0.5]
Pyrene	mg/kg	--	--	--	--	0.17 [0.14]	0.016	0.0052 J	1.7 [2.5]
Total PAHs	mg/kg	--	--	--	--	1.67 J [1.39 J]	0.172 J	0.0256 J	23.9 J [36]
Metals									
Arsenic	mg/kg	--	--	--	--	7.1 [6.7]	8.4	12.8	6.5 [6.4]
Chromium	mg/kg	--	--	--	--	18.2 [18.9]	19.6	15	20.2 J [21.2 J]
Copper	mg/kg	--	--	--	--	24.6 [23.8]	22.9	16.7	24.3 [26.8]
Miscellaneous									
Total Organic Carbon	mg/kg	--	--	--	--	NA	NA	NA	28,400 [27,700]

See notes on Page 12.

US EPA ARCHIVE DOCUMENT

TABLE 1 - VALIDATED ANALTICAL DATA SUMMARY TABLE

FORMER KOPPERS WOOD-TREATING SITE - CARBONDALE, ILLINOIS

Sample ID:		Current		Proposed		A5-7	A6-1	A6-2	A6-3	A6-4
Depth Interval (in.):		USEPA PRGs		USEPA PRGs		0 - 6	0 - 6	0 - 6	0 - 6	0 - 6
Date Collected:	Units	R	C/I	R	C/I	03/30/10	03/31/10	03/31/10	03/31/10	03/31/10
PCDDs/PCDFs										
1,2,3,4,6,7,8-HpCDD	ug/kg	--	--	--	--	23.5 EJ	2.14	0.728	0.341	0.633
1,2,3,4,6,7,8-HpCDF	ug/kg	--	--	--	--	4.34 EJ	0.382 J	0.123	0.0417	0.103
1,2,3,4,7,8,9-HpCDF	ug/kg	--	--	--	--	0.358	0.0297	0.00903	0.00249 UX	0.00845
1,2,3,4,7,8-HxCDD	ug/kg	--	--	--	--	0.194	0.0194	0.00641	0.00476 J	0.00719
1,2,3,4,7,8-HxCDF	ug/kg	--	--	--	--	0.187	0.0169	0.00393 J	0.00334 J	0.00637
1,2,3,6,7,8-HxCDD	ug/kg	--	--	--	--	0.823	0.0692	0.0218	0.0101	0.02
1,2,3,6,7,8-HxCDF	ug/kg	--	--	--	--	0.0613	0.00723	0.00177 J	0.00192 J	0.00428 J
1,2,3,7,8,9-HxCDD	ug/kg	--	--	--	--	0.314	0.0302	0.0108	0.00764	0.0125
1,2,3,7,8,9-HxCDF	ug/kg	--	--	--	--	0.0487	0.0043 J	0.000931 U	0.000822 J	0.00235 J
1,2,3,7,8-PeCDD	ug/kg	--	--	--	--	0.0756	0.00746	0.0026 J	0.00224 J	0.00307 J
1,2,3,7,8-PeCDF	ug/kg	--	--	--	--	0.0115	0.0013 J	0.000532 J	0.000412 J	0.00115 J
2,3,4,6,7,8-HxCDF	ug/kg	--	--	--	--	0.154	0.0155	0.0041 J	0.0032 J	0.00927
2,3,4,7,8-PeCDF	ug/kg	--	--	--	--	0.0706	0.00612	0.00182 J	0.00445 J	0.0169
2,3,7,8-TCDD	ug/kg	--	--	--	--	0.008	0.000944 J	0.000562 J	0.00046 J	0.00046 UX
2,3,7,8-TCDF	ug/kg	--	--	--	--	0.00281	0.000794 U	0.000249 J	0.0005 J	0.00131
37Cl-2,3,7,8-TCDD	ug/kg	--	--	--	--	0.144	0.134	0.142	0.139	0.145
OCDD	ug/kg	--	--	--	--	214 EDJ	26 EJ	15.2 EJ	12.8 EJ	10.4 EJ
OCDF	ug/kg	--	--	--	--	17.8 EJ	1.77	0.575	0.149	0.459
Total HpCDD	ug/kg	--	--	--	--	54.3 J	4.39	1.45	0.77	1.27
Total HpCDF	ug/kg	--	--	--	--	27.7 J	2.01 J	0.572	0.154	0.44
Total HxCDD	ug/kg	--	--	--	--	6.98	0.5	0.156	0.111	0.158
Total HxCDF	ug/kg	--	--	--	--	5.96	0.548	0.137	0.0619	0.174
Total PeCDD	ug/kg	--	--	--	--	0.838	0.0725	0.0201	0.0179	0.0291
Total PeCDF	ug/kg	--	--	--	--	0.637 PJ	0.0663 PJ	0.017 PJ	0.0399	0.132 PJ
Total TCDD	ug/kg	--	--	--	--	0.143	0.0141	0.00514	0.004	0.00796
Total TCDF	ug/kg	--	--	--	--	0.0848 PJ	0.00742 PJ	0.0032 PJ	0.013	0.0372
2,3,7,8-TCDD TEQ	ug/kg	1	5-20	0.072	0.95	0.635	0.0604	0.022	0.015	0.0252
SVOCs										
Pentachlorophenol	mg/kg	--	--	--	--	2.1 DJ	0.19	0.13	0.23 U	0.09 U
Acenaphthene	mg/kg	--	--	--	--	0.4 DJ	0.0094 J	0.0094 J	1.2	0.019
Acenaphthylene	mg/kg	--	--	--	--	4.6 DJ	0.14	0.18	0.34	0.098
Anthracene	mg/kg	--	--	--	--	5.6 DJ	0.21	0.19	0.46	0.093
Benzo(a)anthracene	mg/kg	--	--	--	--	2.1 DJ	0.12	0.41	0.5	0.2
Benzo(a)pyrene	mg/kg	--	--	--	--	5.6 DJ	0.18	0.61	0.56	0.22
Benzo(b)fluoranthene	mg/kg	--	--	--	--	9 DJ	0.37	1.1	1.1 JY	0.35
Benzo(ghi)perylene	mg/kg	--	--	--	--	8.6 DJ	0.19	0.38	0.9	0.21
Benzo(k)fluoranthene	mg/kg	--	--	--	--	2 DJ	0.11	0.35	0.97 JY	0.11
Chrysene	mg/kg	--	--	--	--	3.7 DJ	0.2	0.58	0.53	0.26
Dibenzo(a,h)anthracene	mg/kg	--	--	--	--	2 DJ	0.051	0.13	0.11	0.042
Fluoranthene	mg/kg	--	--	--	--	4.5 DJ	0.19	0.29	1.6	0.34
Fluorene	mg/kg	--	--	--	--	0.53 DJ	0.014 J	0.02	0.99	0.021
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	--	--	7.5 DJ	0.23	0.4	0.85	0.2
Naphthalene	mg/kg	--	--	--	--	0.68 DJ	0.017 J	0.0081 J	2	0.057
Phenanthrene	mg/kg	--	--	--	--	2.5 DJ	0.068	0.067	2.1	0.19
Pyrene	mg/kg	--	--	--	--	3.4 DJ	0.18	0.34	1.1	0.23
Total PAHs	mg/kg	--	--	--	--	62.7	2.28 J	5.06 J	14.3	2.64
Metals										
Arsenic	mg/kg	--	--	--	--	10.4	7.4	11.9	16.5	8.2
Chromium	mg/kg	--	--	--	--	21.9 J	15.4	15.1	22.2	19
Copper	mg/kg	--	--	--	--	26.8	16.2	15.6	31.2	38.2
Miscellaneous										
Total Organic Carbon	mg/kg	--	--	--	--	27,100	24,900	15,300	20,300	NA

See notes on Page 12.

US EPA ARCHIVE DOCUMENT

TABLE 1 - VALIDATED ANALTICAL DATA SUMMARY TABLE

FORMER KOPPERS WOOD-TREATING SITE - CARBONDALE, ILLINOIS

Sample ID:		Current		Proposed		A6-5	A6-6	A6-7
Depth Interval (in.):		USEPA PRGs		USEPA PRGs		0 - 6	0 - 6	0 - 6
Date Collected:	Units	R	C/I	R	C/I	03/31/10	03/31/10	03/31/10
PCDDs/PCDFs								
1,2,3,4,6,7,8-HpCDD	ug/kg	--	--	--	--	0.0916 [0.0975]	0.358	0.136
1,2,3,4,6,7,8-HpCDF	ug/kg	--	--	--	--	0.00565 [0.00748]	0.0426	0.019
1,2,3,4,7,8,9-HpCDF	ug/kg	--	--	--	--	0.00126 U [0.000713 U]	0.0026 J	0.0014 J
1,2,3,4,7,8-HxCDD	ug/kg	--	--	--	--	0.00179 J [0.0012 UX]	0.00372 J	0.00174 J
1,2,3,4,7,8-HxCDF	ug/kg	--	--	--	--	0.000502 U [0.000605 U]	0.00187 J	0.00105 J
1,2,3,6,7,8-HxCDD	ug/kg	--	--	--	--	0.00266 J [0.00261 UX]	0.0107	0.00418 J
1,2,3,6,7,8-HxCDF	ug/kg	--	--	--	--	0.0005 U [0.000621 U]	0.00114 UX	0.00114 UX
1,2,3,7,8,9-HxCDD	ug/kg	--	--	--	--	0.00258 J [0.00254 J]	0.007	0.00295 J
1,2,3,7,8,9-HxCDF	ug/kg	--	--	--	--	0.000271 U [0.000401 U]	0.000666 U	0.000562 U
1,2,3,7,8-PeCDD	ug/kg	--	--	--	--	0.000786 J [0.000701 J]	0.00187 J	0.000761 J
1,2,3,7,8-PeCDF	ug/kg	--	--	--	--	0.000389 U [0.000406 U]	0.000311 J	0.000683 U
2,3,4,6,7,8-HxCDF	ug/kg	--	--	--	--	0.00054 J [0.000621 J]	0.00246 J	0.00134 J
2,3,4,7,8-PeCDF	ug/kg	--	--	--	--	0.00102 J [0.000761 J]	0.00234 J	0.00247 J
2,3,7,8-TCDD	ug/kg	--	--	--	--	0.000348 U [0.000344 U]	0.000468 J	0.000321 J
2,3,7,8-TCDF	ug/kg	--	--	--	--	0.000507 U [0.000642 U]	0.000299 UX	0.000339 U
37Cl-2,3,7,8-TCDD	ug/kg	--	--	--	--	0.135 [0.137]	0.142	0.136
OCDD	ug/kg	--	--	--	--	2.84 [3.24]	11.5 EJ	3.6
OCDF	ug/kg	--	--	--	--	0.0207 [0.0259]	0.175	0.0791
Total HpCDD	ug/kg	--	--	--	--	0.221 [0.226]	0.809	0.297
Total HpCDF	ug/kg	--	--	--	--	0.0223 [0.0259]	0.176	0.08
Total HxCDD	ug/kg	--	--	--	--	0.0332 [0.0267]	0.104	0.0407
Total HxCDF	ug/kg	--	--	--	--	0.00805 [0.00798]	0.0528	0.0307
Total PeCDD	ug/kg	--	--	--	--	0.00781 J [0.00212 J]	0.0142	0.0072
Total PeCDF	ug/kg	--	--	--	--	0.00719 [0.00313]	0.0219	0.0171 PJ
Total TCDD	ug/kg	--	--	--	--	0.000729 [0.000506 UX]	0.00296	0.00365
Total TCDF	ug/kg	--	--	--	--	0.00196 [0.000775]	0.00631	0.00791 PJ
2,3,7,8-TCDD TEQ	ug/kg	1	5-20	0.072	0.95	0.00368 [0.00327]	0.0132	0.00562
SVOCs								
Pentachlorophenol	mg/kg	--	--	--	--	0.049 U	0.054 U	0.047 U
Acenaphthene	mg/kg	--	--	--	--	0.0099 U	0.011	0.011
Acenaphthylene	mg/kg	--	--	--	--	0.012	0.079	0.053
Anthracene	mg/kg	--	--	--	--	0.011	0.071	0.051
Benzo(a)anthracene	mg/kg	--	--	--	--	0.024	0.079	0.089
Benzo(a)pyrene	mg/kg	--	--	--	--	0.03	0.16	0.12
Benzo(b)fluoranthene	mg/kg	--	--	--	--	0.051	0.27	0.2
Benzo(ghi)perylene	mg/kg	--	--	--	--	0.029	0.15	0.11
Benzo(k)fluoranthene	mg/kg	--	--	--	--	0.013	0.081	0.071
Chrysene	mg/kg	--	--	--	--	0.032	0.13	0.1
Dibenzo(a,h)anthracene	mg/kg	--	--	--	--	0.007 J	0.042	0.028
Fluoranthene	mg/kg	--	--	--	--	0.045	0.11	0.15
Fluorene	mg/kg	--	--	--	--	0.0099 U	0.017	0.012
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	--	--	0.028	0.15	0.11
Naphthalene	mg/kg	--	--	--	--	0.0054 J	0.028	0.043
Phenanthrene	mg/kg	--	--	--	--	0.021	0.059	0.12
Pyrene	mg/kg	--	--	--	--	0.033	0.081	0.087
Total PAHs	mg/kg	--	--	--	--	0.341 J	1.52	1.36
Metals								
Arsenic	mg/kg	--	--	--	--	8	21.5	8.5
Chromium	mg/kg	--	--	--	--	14.7	19.5	16.8
Copper	mg/kg	--	--	--	--	17.2	24	23.6
Miscellaneous								
Total Organic Carbon	mg/kg	--	--	--	--	13,300	12,800	NA

See notes on Page 12.

US EPA ARCHIVE DOCUMENT

TABLE 1 - VALIDATED ANALTICAL DATA SUMMARY TABLE

FORMER KOPPERS WOOD-TREATING SITE - CARBONDALE, ILLINOIS

Sample ID:		Current		Proposed		A6-8	NPL
Depth Interval (in.):		USEPA PRGs		USEPA PRGs		0 - 6	0 - 6
Date Collected:	Units	R	C/I	R	C/I	03/31/10	03/29/10
PCDDs/PCDFs							
1,2,3,4,6,7,8-HpCDD	ug/kg	--	--	--	--	0.0847	0.413
1,2,3,4,6,7,8-HpCDF	ug/kg	--	--	--	--	0.0013 J	0.0518
1,2,3,4,7,8,9-HpCDF	ug/kg	--	--	--	--	0.000229 U	0.004 J
1,2,3,4,7,8-HxCDD	ug/kg	--	--	--	--	0.00146 J	0.00475 J
1,2,3,4,7,8-HxCDF	ug/kg	--	--	--	--	0.000207 U	0.00355 J
1,2,3,6,7,8-HxCDD	ug/kg	--	--	--	--	0.00216 J	0.0114
1,2,3,6,7,8-HxCDF	ug/kg	--	--	--	--	0.000207 U	0.00195 J
1,2,3,7,8,9-HxCDD	ug/kg	--	--	--	--	0.00262 J	0.00723
1,2,3,7,8,9-HxCDF	ug/kg	--	--	--	--	0.000329 U	0.00101 U
1,2,3,7,8-PeCDD	ug/kg	--	--	--	--	0.00075 UX	0.00244 J
1,2,3,7,8-PeCDF	ug/kg	--	--	--	--	0.000421 U	0.000808 J
2,3,4,6,7,8-HxCDF	ug/kg	--	--	--	--	0.000245 U	0.00348 J
2,3,4,7,8-PeCDF	ug/kg	--	--	--	--	0.000373 U	0.00328 J
2,3,7,8-TCDD	ug/kg	--	--	--	--	0.00114 UX	0.00063 J
2,3,7,8-TCDF	ug/kg	--	--	--	--	0.00025 U	0.000928 J
37Cl-2,3,7,8-TCDD	ug/kg	--	--	--	--	0.13	0.142
OCDD	ug/kg	--	--	--	--	3.36	12.6 EJ
OCDF	ug/kg	--	--	--	--	0.00396 J	0.215
Total HpCDD	ug/kg	--	--	--	--	0.216	0.854
Total HpCDF	ug/kg	--	--	--	--	0.0013	0.212
Total HxCDD	ug/kg	--	--	--	--	0.0376	0.12
Total HxCDF	ug/kg	--	--	--	--	0.00127 UX	0.0614
Total PeCDD	ug/kg	--	--	--	--	0.00429	0.0381
Total PeCDF	ug/kg	--	--	--	--	0.000299	0.0229
Total TCDD	ug/kg	--	--	--	--	0.00132	0.0319
Total TCDF	ug/kg	--	--	--	--	0.000374	0.0201
2,3,7,8-TCDD TEQ	ug/kg	1	5-20	0.072	0.95	0.00249	0.0159
SVOCs							
Pentachlorophenol	mg/kg	--	--	--	--	0.041 U	0.016 J
Acenaphthene	mg/kg	--	--	--	--	0.0084 U	0.011 J
Acenaphthylene	mg/kg	--	--	--	--	0.0084 U	0.039
Anthracene	mg/kg	--	--	--	--	0.0013 J	0.058
Benzo(a)anthracene	mg/kg	--	--	--	--	0.0084 U	0.14
Benzo(a)pyrene	mg/kg	--	--	--	--	0.0084 U	0.14
Benzo(b)fluoranthene	mg/kg	--	--	--	--	0.0024 J	0.16
Benzo(ghi)perylene	mg/kg	--	--	--	--	0.0084 U	0.12
Benzo(k)fluoranthene	mg/kg	--	--	--	--	0.0035 J	0.069
Chrysene	mg/kg	--	--	--	--	0.0084 U	0.15
Dibenzo(a,h)anthracene	mg/kg	--	--	--	--	0.0084 U	0.015 J
Fluoranthene	mg/kg	--	--	--	--	0.0055 J	0.29
Fluorene	mg/kg	--	--	--	--	0.0084 U	0.0086 J
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	--	--	0.0084 U	0.094
Naphthalene	mg/kg	--	--	--	--	0.0084 U	0.043
Phenanthrene	mg/kg	--	--	--	--	0.0068 J	0.19
Pyrene	mg/kg	--	--	--	--	0.0038 J	0.24
Total PAHs	mg/kg	--	--	--	--	0.0233 J	1.77 J
Metals							
Arsenic	mg/kg	--	--	--	--	10.4	9.6
Chromium	mg/kg	--	--	--	--	15	12.9 J
Copper	mg/kg	--	--	--	--	15.3	21.8
Miscellaneous							
Total Organic Carbon	mg/kg	--	--	--	--	NA	NA

See notes on Page 12.

US EPA ARCHIVE DOCUMENT

TABLE 1 - VALIDATED ANALYTICAL DATA SUMMARY TABLE

FORMER KOPPERS WOOD-TREATING SITE - CARBONDALE, ILLINOIS

Notes:

PCDDs/PCDFs = polychlorinated dibenzo-p-dioxins/polychlorinated dibenzofurans
PAHs - polycyclic aromatic hydrocarbons
TEQ = Toxicity Equivalent, calculated using WHO-2005 TEFs and non-detects = 0
WHO = World Health Organization
TEFs = Toxicity Equivalent Factors
USEPA = United States Environmental Protection Agency
PRGs = preliminary remediation goals
Current: USEPA April 1998
Proposed: USEPA December 2009
R = Residential
C/I = Commercial/Industrial
NA = not analyzed
ug/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
J = Estimated value.
U = Not detected above laboratory reporting limit (associated value is the laboratory reporting limit).
DJ = Diluted sample result less than the calibration range.
JY = The laboratory quantitated the peak as benzo(b)fluoranthene and reported benzo(k)fluoranthene as non-detect. The benzo(k)fluoranthene concentrations for these samples have been calculated from the peak area identified as benzo(b)fluoranthene using the appropriate benzo(k)fluoranthene response factor. Both compounds have been reported due to the lack of chromatographic resolution and the reported benzo(b)fluoranthene and benzo(k)fluoranthene concentrations have been qualified as ("JY") indicating the compounds could not be resolved (DJY indicates a diluted sample).
UJ = Not detected above the reported sample quantitation limit; however, the reported limit is approximate and may or may not represent the actual limit of quantitation.
UX = Elevated detection limit as estimated maximum possible concentration.
EDJ = Diluted sample result greater than the calibration range.
EJ = Original sample result greater than the calibration range.
PJ = The amount reported is the estimated maximum possible concentration due to possible chlorinated diphenylether interference.

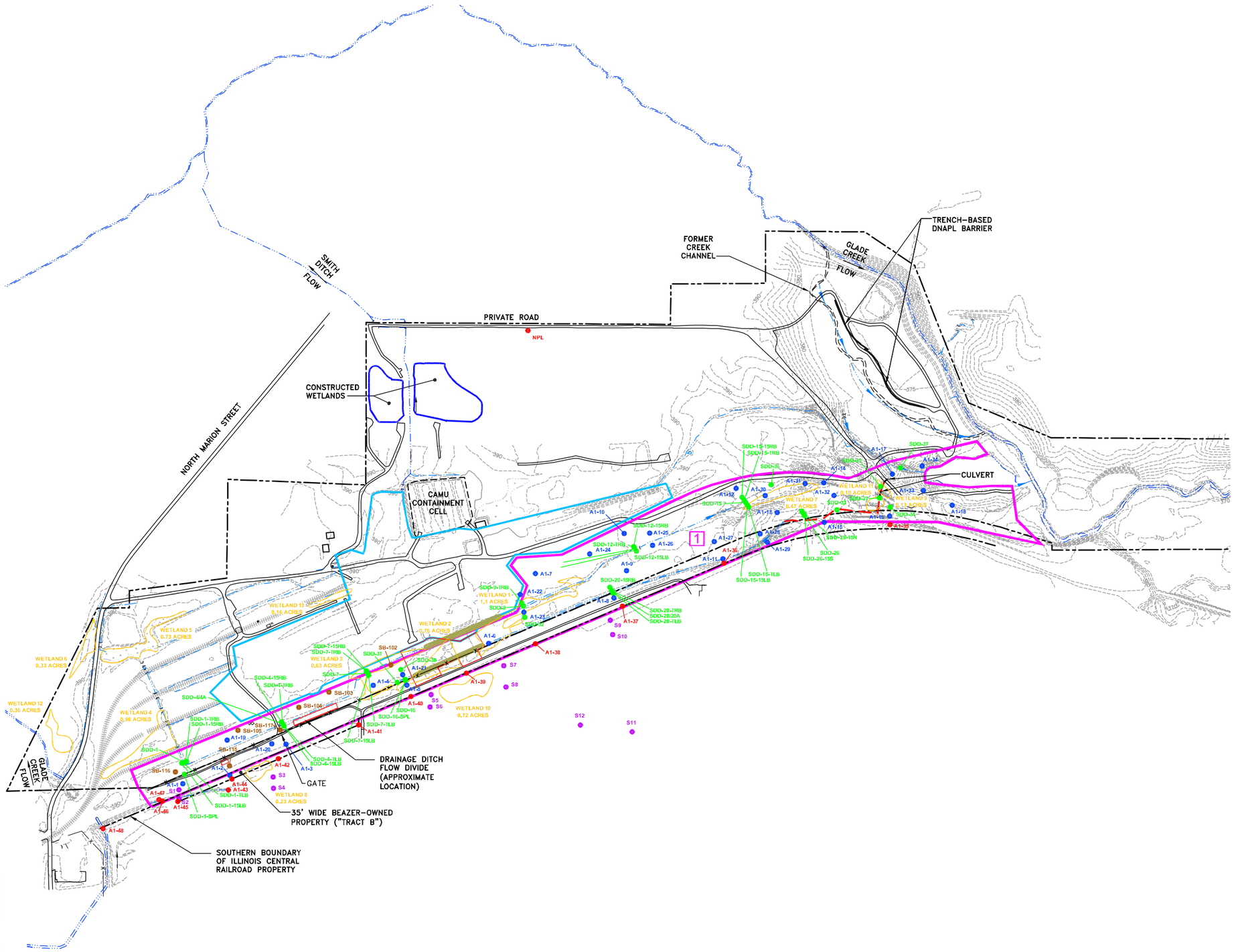
US EPA ARCHIVE DOCUMENT

ARCADIS

Attachment 2

Sample Location Maps

US EPA ARCHIVE DOCUMENT



LEGEND:

- EDGE OF WATER
- DRAINAGE DITCH AND DIRECTION OF FLOW
- APPROXIMATE SOUTHERN DRAINAGE DITCH FLOW PATH DOWNSTREAM OF DEFINED CHANNEL
- PROPERTY BOUNDARY (SEE NOTE 2)
- FENCELINE
- EXISTING CONTOUR LINE
- FORMER PROCESS AREA SURFACE COVER
- SOIL REMOVAL AREA (SOIL/DEBRIS PILES AND SURFICIAL ASPHALT-LIKE MATERIALS)
- PRELIMINARY WETLAND BOUNDARY (SEE NOTE 3)
- PORTIONS OF SOUTHERN DRAINAGE DITCHES THAT HAVE BEEN FILLED IN PRIOR TO OR DURING SURFACE COVER CONSTRUCTION OR REMOVAL OF SOIL AND DEBRIS PILES.
- S1 — 2005 RESIDENTIAL SAMPLE (USEPA)
- SB-102 — 2005 SURFACE COVER DELINEATION SAMPLE
- SDD-22 — 2006/2008 SOUTHERN DRAINAGE DITCHES AREA SAMPLE
- A1-1 — DECEMBER 2009 SAMPLE LOCATION
- A1-36 — MARCH 2010 SAMPLE LOCATION
- EVALUATION AREA

NOTES:

1. SITE FEATURES AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRIC MAPPING PROVIDED BY LOCKWOOD MAPPING COMPANY IN SEPTEMBER 2001 AND SURVEY DATA PROVIDED BY ENGINEERING DESIGN SOURCE, INC. IN JANUARY 2004, AND BASED ON AERIAL PHOTOGRAPHY PROVIDED BY LOCKWOOD MAPPING, INC. TAKEN ON NOVEMBER 22, 1996 AT AN APPROXIMATE SCALE OF 1"=500'. TOPOGRAPHY IN THE EASTERN SOUTHERN DRAINAGE DITCHES AREA BASED ON TOPOGRAPHIC FIELD SURVEY CONDUCTED IN AUGUST 2007.
2. PROPERTY BOUNDARY IS APPROXIMATE; OBTAINED FROM A COMBINATION OF SITE SURVEY DATA, HISTORICAL MAPS AND TAX MAPS.
3. PRELIMINARY WETLAND BOUNDARIES DELINEATED BY ARCADIS IN DECEMBER 2009.

0 300' 600'
GRAPHIC SCALE

BEAZER EAST, INC.
FORMER KOPPERS WOOD TREATING SITE
CARBONDALE, ILLINOIS

EVALUATION AREA 1 SAMPLE LOCATIONS

ARCADIS

FIGURE
1

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: L. FORAKER LD: PM: R. ANDERSON PM: J. HOLDEN TM: J. HOLDEN LY: R: ON=*;OFF=*REF*
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CITY: SYRACUSE DIV/GROUP: ENVCAD DB: L. FORAKER LD: PIC: R. ANDERSON PM: J. HOLDEN TM: J. HOLDEN LYR: ON=*;OFF=*REF*
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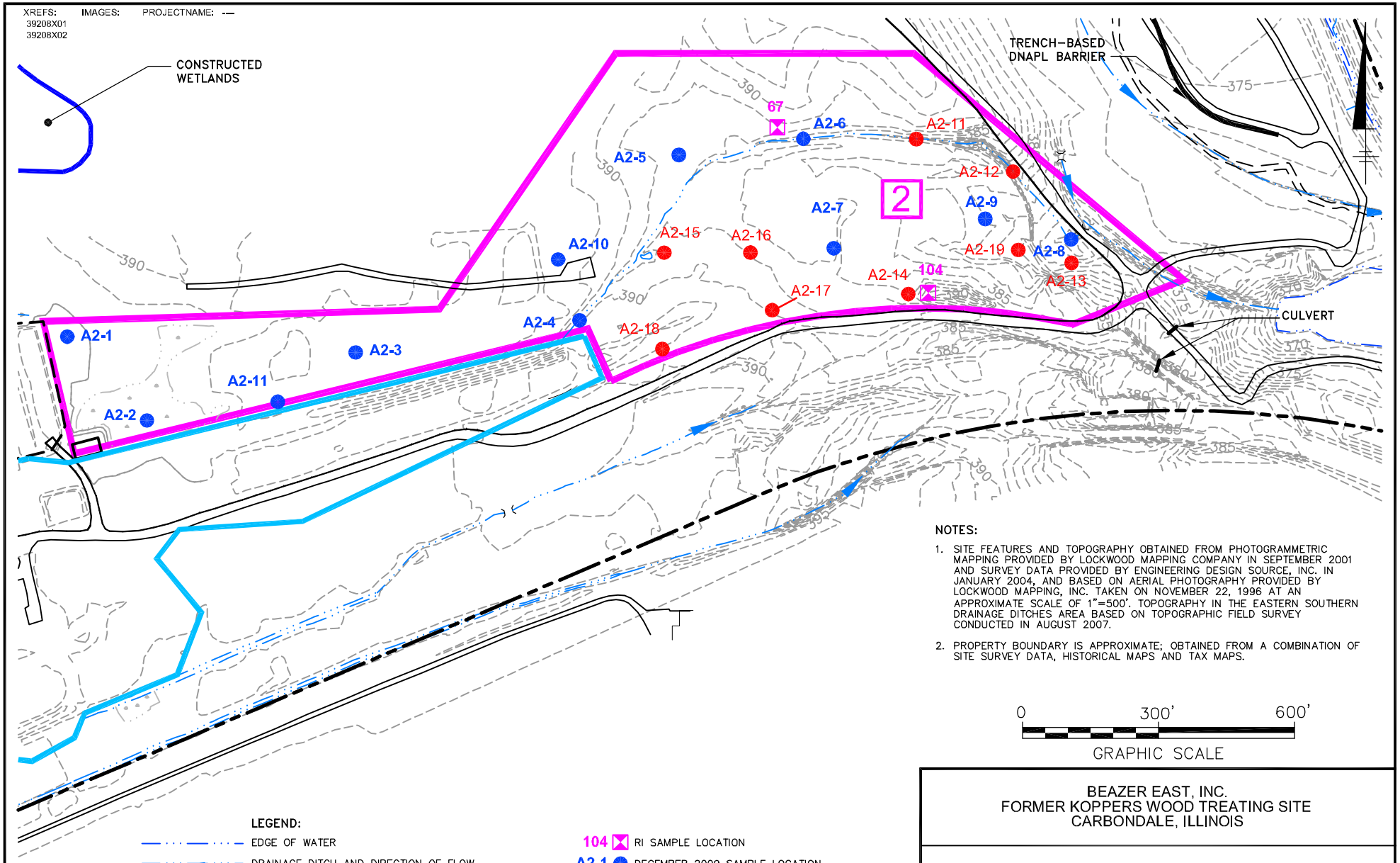

NOTES:

1. SITE FEATURES AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRIC MAPPING PROVIDED BY LOCKWOOD MAPPING COMPANY IN SEPTEMBER 2001 AND SURVEY DATA PROVIDED BY ENGINEERING DESIGN SOURCE, INC. IN JANUARY 2004, AND BASED ON AERIAL PHOTOGRAPHY PROVIDED BY LOCKWOOD MAPPING, INC. TAKEN ON NOVEMBER 22, 1996 AT AN APPROXIMATE SCALE OF 1"=500'. TOPOGRAPHY IN THE EASTERN SOUTHERN DRAINAGE DITCHES AREA BASED ON TOPOGRAPHIC FIELD SURVEY CONDUCTED IN AUGUST 2007.
2. PROPERTY BOUNDARY IS APPROXIMATE; OBTAINED FROM A COMBINATION OF SITE SURVEY DATA, HISTORICAL MAPS AND TAX MAPS.

0 300' 600'
GRAPHIC SCALE

LEGEND:

- EDGE OF WATER
- DRAINAGE DITCH AND DIRECTION OF FLOW
- PROPERTY BOUNDARY (SEE NOTE 2)
- EXISTING CONTOUR LINE
- FORMER PROCESS AREA SURFACE COVER
- 104 RI SAMPLE LOCATION
- A2-1 DECEMBER 2009 SAMPLE LOCATION
- A2-14 MARCH 2010 SAMPLE LOCATION
- EVALUATION AREA

BEAZER EAST, INC.
FORMER KOPPERS WOOD TREATING SITE
CARBONDALE, ILLINOIS

EVALUATION AREA 2 SAMPLE LOCATIONS

ARCADIS

FIGURE
2

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: L. FORAKER LD: PIC: R. ANDERSON PM: J. HOLDEN TM: J. HOLDEN LYR: ON=*;OFF=*REF*
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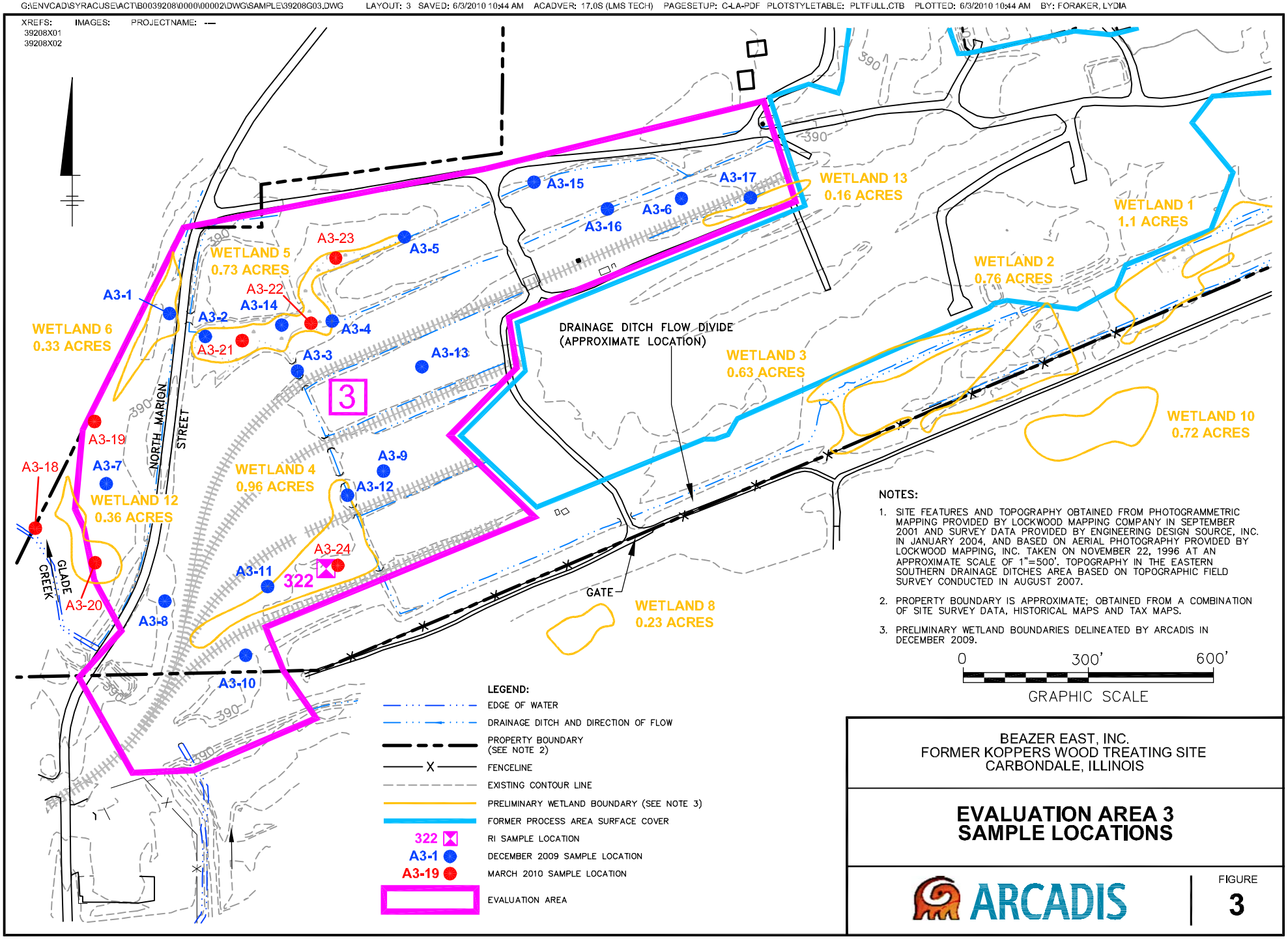
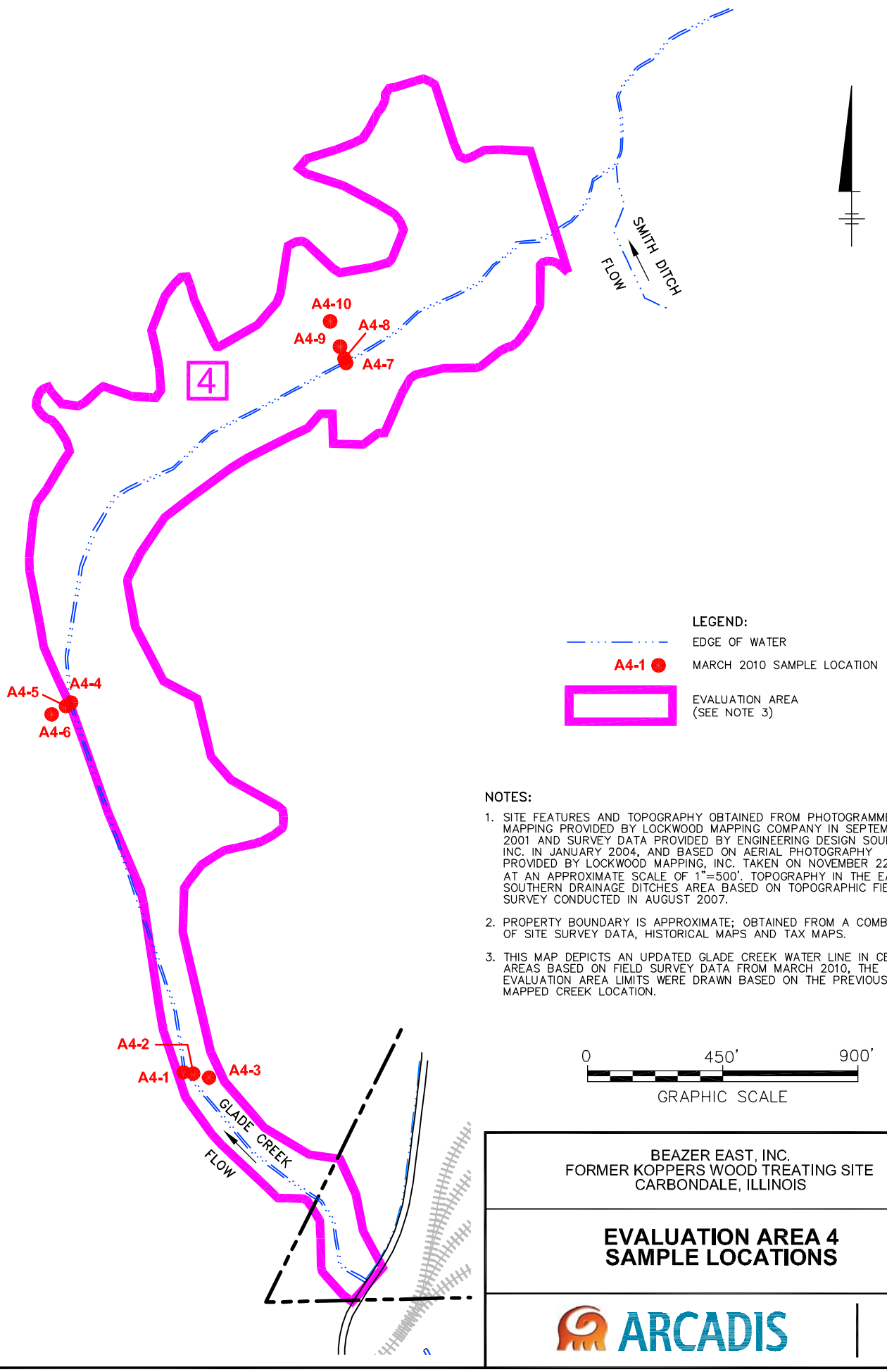


BEAZER EAST, INC.
FORMER KOPPERS WOOD TREATING SITE
CARBONDALE, ILLINOIS

EVALUATION AREA 3 SAMPLE LOCATIONS

ARCADIS

FIGURE
3



NOTES:

1. SITE FEATURES AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRIC MAPPING PROVIDED BY LOCKWOOD MAPPING COMPANY IN SEPTEMBER 2001 AND SURVEY DATA PROVIDED BY ENGINEERING DESIGN SOURCE, INC. IN JANUARY 2004, AND BASED ON AERIAL PHOTOGRAPHY PROVIDED BY LOCKWOOD MAPPING, INC. TAKEN ON NOVEMBER 22, 1996 AT AN APPROXIMATE SCALE OF 1"=500'. TOPOGRAPHY IN THE EASTERN SOUTHERN DRAINAGE DITCHES AREA BASED ON TOPOGRAPHIC FIELD SURVEY CONDUCTED IN AUGUST 2007.
2. PROPERTY BOUNDARY IS APPROXIMATE; OBTAINED FROM A COMBINATION OF SITE SURVEY DATA, HISTORICAL MAPS AND TAX MAPS.
3. THIS MAP DEPICTS AN UPDATED GLADE CREEK WATER LINE IN CERTAIN AREAS BASED ON FIELD SURVEY DATA FROM MARCH 2010, THE EVALUATION AREA LIMITS WERE DRAWN BASED ON THE PREVIOUSLY MAPPED CREEK LOCATION.

BEAZER EAST, INC.
FORMER KOPPERS WOOD TREATING SITE
CARBONDALE, ILLINOIS

EVALUATION AREA 4 SAMPLE LOCATIONS

ARCADIS

FIGURE
4

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: L. FORAKER LD: PIC: R. ANDERSON PM: J. HOLDEN TM: J. HOLDEN LYR: ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0039208\0000\0002\DWG\SAMPLE\392208G04.DWG LAYOUT: 4 SAVED: 6/3/2010 10:35 AM ACADVER: 17.0S (LMS TECH) PAGESETUP: C-PA-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 6/3/2010 10:35 AM BY: FORAKER, LYDIA
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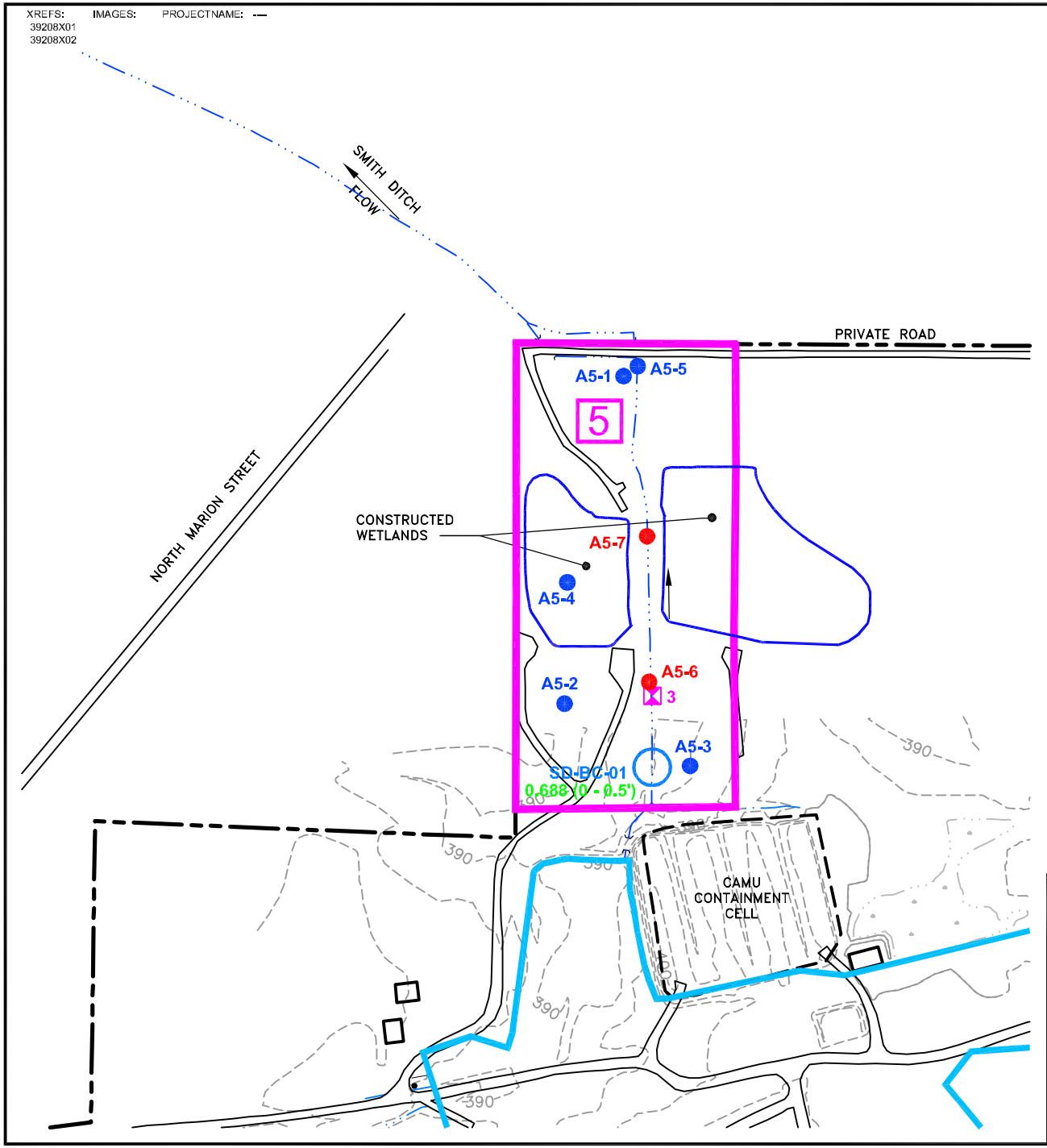

LEGEND:

- EDGE OF WATER
- DRAINAGE DITCH AND DIRECTION OF FLOW
- PROPERTY BOUNDARY (SEE NOTE 2)
- FENCELINE
- EXISTING CONTOUR LINE
- FORMER PROCESS AREA SURFACE COVER
- 3 — RI SAMPLE LOCATION
- SD-BC-01 — BCWP SEDIMENT SAMPLE LOCATION
- 0.688 (0 - 0.5') — TCDD-TEQ CONCENTRATION (ug/kg) AND SAMPLE DEPTH INTERVAL
- A5-1 — DECEMBER 2009 SAMPLE LOCATION
- A5-7 — MARCH 2010 SAMPLE LOCATION
- EVALUATION AREA

NOTES:

1. SITE FEATURES AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRIC MAPPING PROVIDED BY LOCKWOOD MAPPING COMPANY IN SEPTEMBER 2001 AND SURVEY DATA PROVIDED BY ENGINEERING DESIGN SOURCE, INC. IN JANUARY 2004, AND BASED ON AERIAL PHOTOGRAPHY PROVIDED BY LOCKWOOD MAPPING, INC. TAKEN ON NOVEMBER 22, 1996 AT AN APPROXIMATE SCALE OF 1"=500'. TOPOGRAPHY IN THE EASTERN SOUTHERN DRAINAGE DITCHES AREA BASED ON TOPOGRAPHIC FIELD SURVEY CONDUCTED IN AUGUST 2007.
2. PROPERTY BOUNDARY IS APPROXIMATE; OBTAINED FROM A COMBINATION OF SITE SURVEY DATA, HISTORICAL MAPS AND TAX MAPS.

0 300' 600'
GRAPHIC SCALE

BEAZER EAST, INC.
FORMER KOPPERS WOOD TREATING SITE
CARBONDALE, ILLINOIS

EVALUATION AREA 5 SAMPLE LOCATIONS

ARCADIS

FIGURE
5

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: L. FORAKER LD: PIC: R. ANDERSON PM: J. HOLDEN TM: J. HOLDEN LYR: ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0039208\0000\00002\DWG\SAMPLE\39208G06.DWG LAYOUT: 6 SAVED: 6/3/2010 10:35 AM ACADVER: 17.0S (LMS TECH) PAGESETUP: C-LA-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 6/3/2010 10:35 AM BY: FORAKER, LYDIA

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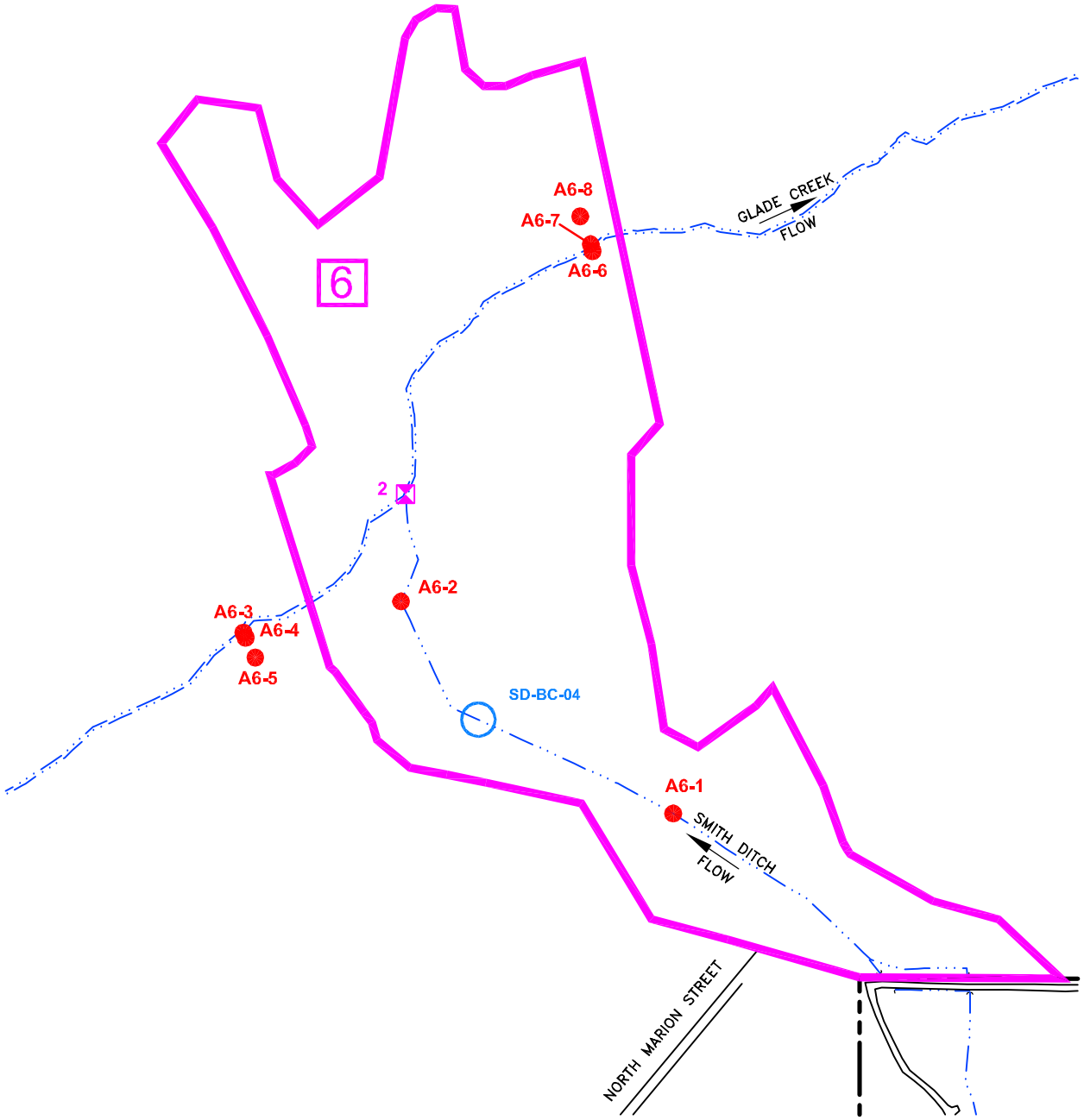

LEGEND:

- EDGE OF WATER
- 2 RI SAMPLE LOCATION
- SD-BC-04 BCWP SEDIMENT SAMPLE LOCATION
- A6-1 MARCH 2010 SAMPLE LOCATION
- EVALUATION AREA (SEE NOTE 3)

NOTES:

1. SITE FEATURES AND TOPOGRAPHY OBTAINED FROM PHOTOGRAMMETRIC MAPPING PROVIDED BY LOCKWOOD MAPPING COMPANY IN SEPTEMBER 2001 AND SURVEY DATA PROVIDED BY ENGINEERING DESIGN SOURCE, INC. IN JANUARY 2004, AND BASED ON AERIAL PHOTOGRAPHY PROVIDED BY LOCKWOOD MAPPING, INC. TAKEN ON NOVEMBER 22, 1996 AT AN APPROXIMATE SCALE OF 1"=500'. TOPOGRAPHY IN THE EASTERN SOUTHERN DRAINAGE DITCHES AREA BASED ON TOPOGRAPHIC FIELD SURVEY CONDUCTED IN AUGUST 2007.
2. PROPERTY BOUNDARY IS APPROXIMATE; OBTAINED FROM A COMBINATION OF SITE SURVEY DATA, HISTORICAL MAPS AND TAX MAPS.
3. THIS MAP DEPICTS UPDATED GLADE CREEK AND SMITH DITCH WATER LINES IN CERTAIN AREAS BASED ON FIELD SURVEY DATA FROM MARCH 2010. THE EVALUATION AREA LIMITS WERE DRAWN BASED ON THE PREVIOUSLY MAPPED CREEK/DITCH LOCATIONS.

0 350' 700'
GRAPHIC SCALE

BEAZER EAST, INC.
FORMER KOPPERS WOOD TREATING SITE
CARBONDALE, ILLINOIS

EVALUATION AREA 6 SAMPLE LOCATIONS

ARCADIS

FIGURE
6

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Attachment 3

Data Validation Reports

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ARCADIS
Infrastructure, environment, buildings

Imagine the result

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Beazer East, Inc.
Former Koppers Wood-Treating Site

Data Review

CARBONDALE, ILLINOIS

SVOCs, Metals, and TOC

SDG # C0D020489

Analyses Performed By:
TestAmerica Laboratories, Inc.
Pittsburgh, Pennsylvania

Report: # 12082R
Review Level: Tier III
Project: B0039208.0000.00002

ARCADIS

SUMMARY

The following is an assessment of the data package for Sample Delivery Group (SDG) # C0D020489 for sampling from the Beazer East, Inc. Former Koppers Wood-Treating Site in Carbondale, Illinois. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
					VOC	SVOC	PCB	MET	MISC
A2-12 (0-6”)	C0D020489001	Sediment	3/29/2010			X		X	X
RB032910	C0D020489002	Water	3/29/2010			X		X	X
A2-11 (0-6”)	C0D020489003	Sediment	3/29/2010			X		X	X
A2-13 (0-6”)	C0D020489004	Soil	3/29/2010			X		X	
Field Duplicate #1	C0D020489005	Soil	3/29/2010	A2-13 (0-6”)		X		X	
A2-14 (0-6”)	C0D020489006	Soil	3/29/2010			X		X	
A2-15 (0-6”)	C0D020489007	Soil	3/29/2010			X		X	
A2-16 (0-6”)	C0D020489008	Soil	3/29/2010			X		X	
A2-17 (0-6”)	C0D020489009	Soil	3/29/2010			X		X	
A2-18 (0-6”)	C0D020489010	Soil	3/29/2010			X		X	
A2-19 (0-6”)	C0D020489011	Sediment	3/29/2010			X		X	X
Field Duplicate #2	C0D020489012	Sediment	3/29/2010	A2-19 (0-6”)		X		X	X
NPL (0-6”)	C0D020489013	Soil	3/29/2010			X		X	
A5-6 (0-6”)	C0D020489014	Sediment	3/30/2010			X		X	X
Field Duplicate #3	C0D020489015	Sediment	3/30/2010	A5-6 (0-6”)		X		X	X
A5-7 (0-6”)	C0D020489016	Sediment	3/30/2010			X		X	X
A1-37 (0-6”)	C0D020489017	Soil	3/30/2010			X		X	
A1-36 (0-6”)	C0D020489018	Soil	3/30/2010			X		X	
A1-38 (0-6”)	C0D020489019	Soil	3/30/2010			X		X	
A1-39 (0-6”)	C0D020489020	Soil	3/30/2010			X		X	
A1-35 (0-6”)	C0D020489021	Soil	3/30/2010			X		X	
A1-40 (0-6”)	C0D020489022	Soil	3/30/2010			X		X	
A1-41 (0-6”)	C0D020489023	Soil	3/30/2010			X		X	
A1-42 (0-6”)	C0D020489024	Soil	3/30/2010			X		X	
A1-43 (0-6”)	C0D020489025	Sediment	3/30/2010			X		X	X
A1-44 (0-6”)	C0D020489026	Sediment	3/30/2010			X		X	X
Field Duplicate #4	C0D020489027	Sediment	3/30/2010	A1-44 (0-6”)		X		X	X
A1-47 (0-6”)	C0D020489028	Sediment	3/30/2010			X		X	X
A1-45 (0-6”)	C0D020489029	Soil	3/30/2010			X		X	
A1-46 (0-6”)	C0D020489030	Sediment	3/30/2010			X		X	X
A1-48 (0-6”)	C0D020489031	Sediment	3/30/2010			X		X	X
RB033010	C0D020489032	Water	3/30/2010			X		X	X

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Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
					VOC	SVOC	PCB	MET	MISC
RB033110	C0D020489033	Water	3/31/2010			X		X	X
A3-20 (0-6”)	C0D020489034	Sediment	3/30/2010			X		X	X
Field Duplicate #5	C0D020489035	Sediment	3/30/2010	A3-20 (0-6”)		X		X	X
A3-18 (0-6”)	C0D020489036	Sediment	3/30/2010			X		X	X
A3-19 (0-6”)	C0D020489037	Sediment	3/30/2010			X		X	X
A3-23 (0-6”)	C0D020489038	Sediment	3/30/2010			X		X	X
A3-22 (0-6”)	C0D020489039	Sediment	3/30/2010			X		X	X
A3-21 (0-6”)	C0D020489040	Sediment	3/30/2010			X		X	X
A3-24 (0-6”)	C0D020489041	Sediment	3/30/2010			X		X	X
A6-1 (0-6”)	C0D020489042	Sediment	3/31/2010			X		X	X
A6-2 (0-6”)	C0D020489043	Sediment	3/31/2010			X		X	X
A6-3 (0-6”)	C0D020489044	Sediment	3/31/2010			X		X	X
A6-4 (0-6”)	C0D020489045	Soil	3/31/2010			X		X	
A6-5 (0-6”)	C0D020489046	Sediment	3/31/2010			X		X	X
A4-7 (0-6”)	C0D020489047	Sediment	3/31/2010			X		X	X
A4-8 (0-6”)	C0D020489048	Soil	3/31/2010			X		X	
Field Duplicate #6	C0D020489049	Soil	3/31/2010	A4-8 (0-6”)		X		X	
A4-9 (0-6”)	C0D020489050	Soil	3/31/2010			X		X	
A4-10 (0-6”)	C0D020489051	Soil	3/31/2010			X		X	
A6-6 (0-6”)	C0D020489052	Sediment	3/31/2010			X		X	X
A6-7 (0-6”)	C0D020489053	Soil	3/31/2010			X		X	
A6-8 (0-6”)	C0D020489054	Soil	3/31/2010			X		X	
A4-5 (0-6”)	C0D020489055	Soil	3/31/2010			X		X	
A4-6 (0-6”)	C0D020489056	Sediment	3/31/2010			X		X	X
A4-4 (0-6”)	C0D020489057	Sediment	3/31/2010			X		X	X
A4-1 (0-6”)	C0D020489058	Sediment	3/31/2010			X		X	X
A4-2 (0-6”)	C0D020489059	Soil	3/31/2010			X		X	
A4-3 (0-6”)	C0D020489060	Soil	3/31/2010			X		X	

1. The matrix spike/matrix spike duplicate (MS/MSD) analyses were performed on sample locations A2-17 (0-6”), A1-43 (0-6”), and A6-1 (0-6”).
2. Sample results were reported on a dry-weight basis.

Analyses:

SVOC: Semivolatile Organic Compounds (client specific target compound list) – USEPA SW846 Method 8270C.

MET: Metals (client specific target analyte list) – USEPA SW846 Method 6010B.

MISC: Total Organic Carbon (TOC) – Walkley-Black Method and USEPA SW846 Method 9060.

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ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

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SVOCs – INTRODUCTION

Analyses were performed according to United Stated Environmental Protection Agency (USEPA) Method SW846 8270C. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999 and USEPA Region V Standard Operating Procedures (SOPs; USEPA Region V, 1993; 1997).

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank; its presence in the sample may be suspect.

- Quantitation Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected as unusable. The analyte may or may not be present in the sample.

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Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

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SVOCs – DATA VALIDATION SUMMARY

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270C	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4±2 °C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4±2 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e. laboratory method blank and field equipment rinse blanks) are prepared to identify any contamination that may have been introduced into the samples during sample preparation or field activity. Laboratory method blanks measure laboratory contamination. Equipment rinse blanks also measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

SVOC target compounds were not detected above the MDL in the associated blanks; therefore, detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

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All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the initial and continuing calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction (acid or base/neutral) exhibit recoveries within the laboratory-established acceptance limits.

Samples associated with surrogates exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Surrogate	Recovery
A2-12 (0-6”), A2-14 (0-6”), A2-15 (0-6”), A2-16 (0-6”), A2-17 (0-6”), A2-19 (0-6”), Field Duplicate #2, A5-7 (0-6”), A1-37 (0-6”), A1-41 (0-6”), A3-22 (0-6”), A3-21 (0-6”), and A3-24 (0-6”)	Phenol-d_5 2-Fluorophenol 2,4,6-Tribromophenol Nitrobenzene-d_5 2-Fluorobiphenyl Terphenyl-d_{14}	D
A1-44 (0-6”)	Phenol-d_5 2-Fluorophenol 2,4,6-Tribromophenol Nitrobenzene-d_5 2-Fluorobiphenyl Terphenyl-d_{14}	AC

D Diluted below detection limit
AC Acceptable

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of two surrogate deviations within each fraction, the sample results associated with the deviant fraction are qualified as documented in the table below. In the case of one or more surrogate recoveries in a fraction < 10%, the qualification is applied.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
D – Surrogates diluted below the calibration curve due to high analyte concentrations.	Non-detect	J[1]
	Detect	

[1] A more concentrated analysis was not performed with surrogate compounds within the calibration range; therefore, no determination of extraction efficiency could be made.

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6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the target SVOCs exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

Samples associated with internal standards exhibiting responses outside of the control limits are presented in the following table.

Sample Locations	Internal Standard	Response
A1-41 (0-6”), A1-47 (0-6”), A3-20 (0-6”), Field Duplicate #5, A3-21 (0-6”), A3-24 (0-6”)	Chrysene-d_{12} Perylene-d_{12}	> UL
A1-46 (0-6”), A3-19 (0-6”)	Perylene-d_{12}	> UL

AC Acceptable

The criteria used to evaluate the internal standard responses are presented in the following table. In the case of an internal standard deviation, the compounds quantitated under the deviant internal standard are qualified as documented in the table below.

Control limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No action
	Detect	J
< the lower control limit (LL) but > 25%	Non-detect	UJ
	Detect	J
< 25%	Non-detect	R
	Detect	J

Note: No sample results were qualified as unusable (R) due to the deviations listed above.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater. Sample results associated with MS/MSD exceedances where the parent samples are not site-specific are not qualified.

The MS/MSD analyses performed on sample locations A1-43 (0-6) and A6-1 (0-6) exhibited acceptable recoveries. Samples associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
A2-17 (0-6)	All spiked compounds	D	D

D Diluted below detection limit

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The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
D – Surrogates diluted below the calibration curve due to high analyte concentrations.	Non-detect	J[1]
	Detect	J[1]
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

[1] A more concentrated analysis was not performed with matrix spike compounds within the calibration range; therefore, no determination of extraction efficiency could be made.

The MS/MSD analysis performed on sample location A6-1 (0-6") exhibited acceptable RPDs between the MS and MSD. Samples associated with MS/MSD analyses exhibiting an RPD greater than the control limit are presented in the following table.

Sample Locations	Compound
A2-17 (0-6")	All spiked compounds (RPDs could not be determined due to dilution)
A1-43 (0-6")	Pyrene

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

8. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

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9. Field Duplicate Sample Analysis

Field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. A control limit of 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to five times the RL, a control limit of three times the RL is applied for soil matrices.

Results (in mg/kg) for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
A2-13 (0-6")/Field Duplicate #1	Acenaphthene	0.0064 J	0.033	AC
	Acenaphthylene	0.081	0.28	110.2 %
	Anthracene	0.091	0.17	60.5 %
	Benzo(a)anthracene	0.14	0.44	103.4 %
	Benzo(a)pyrene	0.18	0.57	104.0 %
	Benzo(b)fluoranthene	0.40	0.72	57.1 %
	Benzo(ghi)perylene	0.15	0.49	106.2 %
	Benzo(k)fluoranthene	0.37	0.28	27.7 %
	Chrysene	0.22	0.62	95.2 %
	Dibenzo(a,h)anthracene	0.044	0.10	AC
	Fluoranthene	0.26	1.4	137.3 %
	Fluorene	0.019 U	0.081	NC
	Indeno(1,2,3-cd)pyrene	0.13	0.40	101.8 %
	Naphthalene	0.020	0.16	155.5 %
	Pentachlorophenol	0.078 J	0.061	AC
	Phenanthrene	0.086	1.2	173.2 %
	Pyrene	0.23	1.1	130.8 %
A2-19 (0-6")/Field Duplicate #2	Acenaphthene	0.57	0.57	0.0 %
	Acenaphthylene	8.9	9.2	3.3 %
	Anthracene	32	26	20.6 %
	Benzo(a)anthracene	8.0	7.6	5.1 %
	Benzo(a)pyrene	17	17	0.0 %
	Benzo(b)fluoranthene	35	43	20.5 %
	Benzo(ghi)perylene	15	16	6.4 %
	Benzo(k)fluoranthene	13	39	101.0 %
	Chrysene	21	17	21.0 %
	Dibenzo(a,h)anthracene	5.7	5.1	11.1 %
	Fluoranthene	11	11	0.0 %
	Fluorene	3.1	1.5	69.5 %
	Indeno(1,2,3-cd)pyrene	16	16	0.0 %
	Naphthalene	1.2	1.1	8.6 %
	Pentachlorophenol	22	20	9.5 %
	Phenanthrene	6.0	3.0	66.6 %
	Pyrene	11	11	0.0 %

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Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
A5-6 (0-6”)/Field Duplicate #3	Acenaphthene	0.13	0.18	32.2 %
	Acenaphthylene	1.8	2.6	36.3 %
	Anthracene	2.2	3.0	30.7 %
	Benzo(a)anthracene	1.2	1.7	34.4 %
	Benzo(a)pyrene	2.3	3.6	44.0 %
	Benzo(b)fluoranthene	3.3	5.5	50.0 %
	Benzo(ghi)perylene	2.9	4.2	36.6 %
	Benzo(k)fluoranthene	1.5	1.9	23.5 %
	Chrysene	1.7	3	55.3 %
	Dibenzo(a,h)anthracene	0.67	1.1	48.5 %
	Fluoranthene	1.5	2.2	37.8 %
	Fluorene	0.20	0.27	29.7 %
	Indeno(1,2,3-cd)pyrene	2.4	3.6	40.0 %
	Naphthalene	0.089 J	0.14	44.5 %
	Pentachlorophenol	0.4 J	0.53 J	27.9 %
	Phenanthrene	0.35	0.50	35.2 %
	Pyrene	1.7	2.5	38.0 %
A1-44 (0-6”)/Field Duplicate #4	Acenaphthene	0.0097 J	0.0069 J	AC
	Acenaphthylene	0.062	0.067	7.7 %
	Anthracene	0.11	0.087	23.3 %
	Benzo(a)anthracene	0.24	0.17	34.1 %
	Benzo(a)pyrene	0.17	0.16	6.0 %
	Benzo(b)fluoranthene	0.31	0.29	6.6 %
	Benzo(ghi)perylene	0.12	0.14	15.3 %
	Benzo(k)fluoranthene	0.14	0.18	25.0 %
	Chrysene	0.28	0.24	15.3 %
	Dibenzo(a,h)anthracene	0.041	0.046	11.4 %
	Fluoranthene	0.63	0.39	47.0 %
	Fluorene	0.0086 J	0.0086 J	AC
	Indeno(1,2,3-cd)pyrene	0.12	0.14	15.3 %
	Naphthalene	0.12	0.086	33.0 %
	Pentachlorophenol	0.021 J	0.04 J	AC
	Phenanthrene	0.48	0.23	70.4 %
	Pyrene	0.38	0.26	37.5 %

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Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
A3-20 (0-6”)/Field Duplicate #5	Acenaphthene	0.0081 J	0.0079 J	AC
	Acenaphthylene	0.064	0.070	8.9 %
	Anthracene	0.074	0.082	10.2 %
	Benzo(a)anthracene	0.11	0.11	0.0 %
	Benzo(a)pyrene	0.12	0.13	8.0 %
	Benzo(b)fluoranthene	0.21	0.25	17.3 %
	Benzo(ghi)perylene	0.15	0.18	18.1 %
	Benzo(k)fluoranthene	0.097	0.084	14.4 %
	Chrysene	0.13	0.15	14.2 %
	Dibenzo(a,h)anthracene	0.035	0.035	0.0 %
	Fluoranthene	0.22	0.23	4.4 %
	Fluorene	0.0097 J	0.011 J	AC
	Indeno(1,2,3-cd)pyrene	0.13	0.16	20.6 %
	Naphthalene	0.018 J	0.016 J	AC
	Pentachlorophenol	0.037 J	0.053 J	AC
	Phenanthrene	0.074	0.073	1.3 %
	Pyrene	0.15	0.16	6.4 %
A4-8 (0-6”)/Field Duplicate #6	Acenaphthene	0.0089 J	0.02 U	AC
	Acenaphthylene	0.035	0.020	54.5 %
	Anthracene	0.038	0.026	37.5 %
	Benzo(a)anthracene	0.11	0.081	30.3 %
	Benzo(a)pyrene	0.13	0.11	16.6 %
	Benzo(b)fluoranthene	0.30	0.25	18.1 %
	Benzo(ghi)perylene	0.14	0.12	15.3 %
	Benzo(k)fluoranthene	0.26	0.22	16.7 %
	Chrysene	0.18	0.16	11.7 %
	Dibenzo(a,h)anthracene	0.030	0.029	3.3 %
	Fluoranthene	0.26	0.23	12.2 %
	Fluorene	0.006 J	0.0066 J	AC
	Indeno(1,2,3-cd)pyrene	0.13	0.12	8.0 %
	Naphthalene	0.023	0.011 J	AC
	Phenanthrene	0.11	0.087	23.3 %
	Pyrene	0.17	0.14	19.3 %

AC Acceptable
ND Not detected
NC Not compliant

The compounds acenaphthylene, benzo(a)anthracene, benzo(a)pyrene, benzo(ghi)perylene, fluorene, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene associated with sample locations A2-13 (0-6”) and Field Duplicate #1 exhibited RPDs and/or differences greater than the control limit. The compound benzo(k)fluoranthene associated with sample locations A2-19 (0-6”) and Field Duplicate #2 exhibited a RPD greater than the control limit. The associated sample results from sample locations for the listed compounds were qualified as estimated ("J") or estimated not detected ("UJ").

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10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra. Sample results (in mg/kg) associated with compounds that exhibited a concentration greater than the linear range of the instrument calibration are summarized in the following table.

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
A1-37 (0-6”)	Fluoranthene	60 E	85 D	85 D
	Pyrene	49 E	58 D	58 D
	Benzo(b)fluoranthene	51 E	52 D	52 D

Results for compounds that did not exceed the calibration range (flagged "E") from the original analysis of sample location A1-37 (0-6”) have been retained in preference to those from the higher dilution analysis.

Sample results associated with compounds exhibiting concentrations greater than the linear range are qualified as documented in the table below when reported as the final reported sample result.

Reported Sample Results	Qualification
Diluted sample result within calibration range	D
Diluted sample result less than the calibration range	DJ
Diluted sample result greater than the calibration range	EDJ
Original sample result greater than the calibration range	EJ

The isomers benzo(b)fluoranthene and benzo(k)fluoranthene associated with sample locations A2-11(0-6”), A2-13(0-6”), A2-15(0-6”), A2-16(0-6”), A2-17(0-6”), Field Duplicate #2, A1-37(0-6”), A1-38(0-6”), A1-39(0-6”), A3-23(0-6”), A6-3(0-6”), A4-7(0-6”), A4-8(0-6”), A4-5(0-6”), and Field Duplicate #6 could not be chromatographically resolved from each other. The laboratory quantitated the peak as benzo(b)fluoranthene and reported benzo(k)fluoranthene as non-detect. The benzo(k)fluoranthene concentrations for these sample locations have been calculated from the peak area identified as benzo(b)fluoranthene using the appropriate benzo(k)fluoranthene response factor. Both compounds have been reported due to the lack of chromatographic resolution and the reported benzo(b)fluoranthene and benzo(k)fluoranthene concentrations have been qualified as ("JY") indicating the compounds could not be resolved.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Except for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

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SVOCs – DATA VALIDATION CHECKLIST

SVOCs: SW-846 8270	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS) Accuracy (%R)		X		X	
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate (MSD) %R		X	X		
MS/MSD RPD		X	X		
Field/Laboratory Duplicate Sample RPD		X	X		
Surrogate Spike %R		X	X		
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X	X		
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X	X	X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

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METALS AND TOC – INTRODUCTION

Analyses were performed according to USEPA SW-846 Method 6010B, 9060, and Walkley-Black method. Data were reviewed in accordance with USEPA National Functional Guidelines of July 2002.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and that it was already subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with the USEPA National Functional Guidelines:

- Concentration Qualifiers

  U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.

  B The reported value was obtained from a reading less than the contract-required detection limit (CRDL), but greater than or equal to the instrument detection limit (IDL).

- Quantitation Qualifiers

  E The reported value is estimated due to the presence of interference.

  N Spiked sample recovery is not within control limits.

  * Duplicate analysis is not within control limits.

- Validation Qualifiers

  J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.

  UB Analyte considered non-detect at the listed value due to associated blank contamination.

  R The sample results are rejected as unusable. The analyte may or may not be present in the sample.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

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METALS – DATA VALIDATION SUMMARY

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 6010B	Water	180 days from collection to analysis	Cooled to 4±2 °C; pH < 2 with HNO_3.
	Soil	180 days from collection to analysis	Cooled to 4±2 °C

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e. laboratory method blanks and equipment rinse blanks) are prepared to identify any contamination that may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Equipment rinse blanks also measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant analytes are calculated at ten times) is calculated for QA blanks containing concentrations greater than the instrument detection limit (IDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Analytes were detected in the associated QA blanks; however, the associated sample results were greater than the BAL. Therefore, qualification of the sample results was unnecessary.

3. Calibration

Satisfactory instrument calibration is established to provide that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instruments' continuing performance is satisfactory.

3.1 Initial Calibration and Continuing Calibration

The correct number and type of standards were analyzed. The correlation coefficient of the initial calibration was greater than 0.995 for all non-ICP analytes and all initial calibration verification standard recoveries were within control limits.

All continuing calibration verification standard recoveries were within the control limit.

3.2 CRDL Check Standard

The CRDL check standard serves to verify the linearity of calibration of the analysis at the CRDL. The CRDL standard is not required for the analysis of aluminum (Al), barium (Ba), calcium (Ca), iron (Fe), magnesium (Mg), sodium (Na), and potassium (K). The criteria used to evaluate the CRDL standard analysis are presented below in the CRDL standards evaluation table.

All CRDL standard recoveries were within control limits.

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3.3 ICP Interference Control Sample (ICS)

The ICS verifies the laboratories inter-element and background correction factors.

All ICS exhibited recoveries within the control limits.

4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater. Sample results associated with MS/MSD exceedances where the parent samples are not site-specific are not qualified.

All analytes associated with MS/MSD recoveries were within control limits with the exception of the following analyte present in the table below.

Sample Location	Analytical Batch	Analyte	MS Recovery	MSD Recovery
A2-17 (0-6”)	0097431	Chromium	14	29

The criteria used to evaluate MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified. The qualifications are applied to all sample results associated with this analytical batch.

Control limit	Sample Result	Qualification
MS/MSD percent recovery 30% to 74%	Non-detect	UJ
	Detect	J
MS/MSD percent recovery < 30%	Non-detect	R
	Detect	J
MS/MSD percent recovery > 125%	Non-detect	No Action
	Detect	J

5. Field Duplicate Sample Analysis

Field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. A control limit of 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to five times the RL, a control limit of three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

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Sample ID/Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
A2-13 (0-6")/Field Duplicate #1	Arsenic	12.1	12.6	4.0 %
	Chromium	17.1	19.2	11.5 %
	Copper	45.8	65	34.6 %
A2-19 (0-6")/Field Duplicate #2	Arsenic	50.4	35.8	33.8 %
	Chromium	154	153	0.6 %
	Copper	39	42.1	7.6 %
A5-6 (0-6")/Field Duplicate #3	Arsenic	6.5	6.4	1.5 %
	Chromium	20.2	21.2	4.8 %
	Copper	24.3	26.8	9.7 %
A1-44 (0-6")/Field Duplicate #4	Arsenic	11.6	14.1	19.4 %
	Chromium	18.6	14.5	24.7 %
	Copper	12.5	12.2	2.4 %
A3-20 (0-6")/Field Duplicate #5	Arsenic	11	10.8	1.8 %
	Chromium	25.4	23.6	7.3 %
	Copper	34.1	32.4	5.1 %
A4-8 (0-6")/Field Duplicate #6	Arsenic	7.1	6.7	5.7 %
	Chromium	18.2	18.9	3.7 %
	Copper	24.6	23.8	3.3 %

The calculated RPDs between the parent sample and field duplicate were acceptable.

6. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The analytes associated with the LCS analysis must exhibit a percent recovery between the control limits of 80% and 120%.

The LCS analysis exhibited recoveries within the control limits.

7. Serial Dilution

The serial dilution analysis is used to assess if a significant physical or chemical interference exists due to sample matrix. Analytes exhibiting concentrations greater than 50 times the MDL in the undiluted sample are evaluated to determine if matrix interference exists. These analytes are required to have less than a 10% difference (%D) between sample results from the undiluted (parent) sample and results associated with the same sample analyzed with a five-fold dilution.

Serial dilution analyses were not reported in the data package.

8. Furnace Analysis QC

No furnace analyses were performed on the samples.

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9. Method of Standard Additions (MSA)

No samples were analyzed following the method of standard additions.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Except for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

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METALS – DATA VALIDTION CHECKLIST

METALS; SW-846 6000/7000	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP) Atomic Absorption – Manual Cold Vapor (CV)					
Tier II Validation					
Holding Times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Instrument Blanks		X		X	
B. Method Blanks		X		X	
C. Equipment/Field Blanks		X		X	
Laboratory Control Sample (LCS) Accuracy (%R)		X		X	
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate (MSD) %R		X	X		
MS/MSD RPD		X		X	
Field/Laboratory Duplicate Sample RPD		X		X	
ICP Serial Dilution					X
Reporting Limit Verification		X		X	
Raw Data		X		X	
Tier III Validation					
Initial Calibration Verification		X		X	
Continuing Calibration Verification		X		X	
CRDL Standard		X		X	
ICP Interference Check		X		X	
Transcription/calculation errors present		X		X	
Reporting limits adjusted to reflect sample dilutions		X		X	

%R Percent recovery
RPD Relative percent difference

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TOC – DATA VALIDATION CHECKLIST

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
Total Organic Carbon (TOC) by Walkley-Black	Soil	28 days from collection to analysis	Cooled @ 4±2 °C
Total Organic Carbon by USEPA SW846 9060	Water	28 days from collection to analysis	Cooled @ 4±2 °C; preserved to pH < 2 with H_2SO_4.

All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e. laboratory method blanks and equipment rinse blanks) are prepared to identify any contamination that may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Equipment rinse blanks also measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the instrument detection limit (IDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Analytes were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

The initial calibration must exhibit a correlation coefficient greater than 0.995. A technical review of the data applies limits to all analytes with no exceptions.

All target analytes associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (15%).

All analytes associated with the initial and continuing calibrations were within the specified control limits. The correct frequency and type of standards were analyzed.

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4. Laboratory Duplicate Analysis

The laboratory duplicate relative percent difference (RPD) criterion is applied when parent and duplicate sample concentrations are greater than or equal to five times the reporting limit (RL). A control limit of 20% for water matrices and 35% for soil matrices is applied when the criteria above is true. For the cases when the parent and/or duplicate sample concentrations are less than or equal to five times the RL, a control limit of one times the RL is applied for water matrices and two times the RL for soil matrices.

The laboratory duplicate sample results exhibited RPDs within the control limit.

5. Field Duplicate Sample Analysis

Field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. A control limit of 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to five times the RL, a control limit of three times the RL is applied for soil matrices.

Results (in mg/kg) for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
A2-19 (0-6”)/Field Duplicate #2	TOC	31600	35000	10.2 %
A5-6 (0-6”)/Field Duplicate #3	TOC	28400	27700	2.4 %
A1-44 (0-6”)/Field Duplicate #4	TOC	24300	17400	33.0 %
A3-20 (0-6”)/Field Duplicate #5	TOC	28200	34900	21.2 %

The calculated RPDs between the field duplicate samples were acceptable.

6. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

7. System Performance and Overall Assessment

Overall system performance was acceptable. Except for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

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TOC – DATA VALIDATION CHECKLIST

General Chemistry: TOC – Walkley-Black TOC – USEPA SW-846 9060	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
Miscellaneous Instrumentation					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS) Accuracy (%R)		X		X	
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R					X
Matrix Spike Duplicate (MSD) %R					X
MS/MSD RPD					X
Field/Laboratory Duplicate Sample RPD		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
Initial calibration %RSD or correlation coefficient		X		X	
Continuing calibration %R		X		X	
Raw Data		X		X	
Transcription/calculation errors present		X		X	
Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD – relative standard deviation
%R – percent recovery
RPD – relative percent difference
%D – difference

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VALIDATION PERFORMED BY: Dennis Dyke

SIGNATURE:

DATE: May 10, 2010

PEER REVIEW: Dennis Capria

DATE: May 17, 2010

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Infrastructure, environment, buildings

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Beazer East, Inc.
Former Koppers Wood-Treating Site

Data Review

CARBONDALE, ILLINOIS

PCDDs/PCDFs Analyses

SDG # 32549

Analyses Performed By:
Vista Analytical Laboratory
El Dorado Hills, California

Report #12083
Review Level: Tier III
Project: B0039208.0000.00002

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 32549 for samples collected in association with the Beazer East Inc. Former Koppers Wood-Treating Site in Carbondale, Illinois. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis
					PCDDs/PCDFs
A2-12 (0-6”)	32549-001	Sediment	3/29/2010		X
RB032910	32549-002	Water	3/29/2010		X
A2-11 (0-6”)	32549-003	Sediment	3/29/2010		X
A2-13 (0-6”)	32549-004	Soil	3/29/2010		X
Field Duplicate #1	32549-005	Soil	3/29/2010	A2-13 (0-6”)	X
A2-14 (0-6”)	32549-006	Soil	3/29/2010		X
A2-15 (0-6”)	32549-007	Soil	3/29/2010		X
A2-16 (0-6”)	32549-008	Soil	3/29/2010		X
A2-17 (0-6”)	32549-009	Soil	3/29/2010		X
A2-18 (0-6”)	32549-010	Soil	3/29/2010		X
A2-19 (0-6”)	32549-011	Sediment	3/29/2010		X
NPL (0-6”)	32549-012	Soil	3/29/2010		X
A5-6 (0-6”)	32549-013	Sediment	3/30/2010		X
Field Duplicate #2	32549-014	Sediment	3/30/2010	A5-6 (0-6”)	X
A5-7 (0-6”)	32549-015	Sediment	3/30/2010		X
A1-37 (0-6”)	32549-016	Soil	3/30/2010		X
Field Duplicate #3	32549-017	Sediment	3/30/2010	A1-37 (0-6”)	X
A1-36 (0-6”)	32549-018	Soil	3/30/2010		X
A1-38 (0-6”)	32549-019	Soil	3/30/2010		X
A1-39 (0-6”)	32549-020	Soil	3/30/2010		X

1. The matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location A2-15 (0-6”).
2. Sample results were reported on a dry-weight basis.

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ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

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PCDDs/PCDFs – INTRODUCTION

Polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8290. Data were reviewed in accordance with USEPA National Functional Guidelines of January 2005.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected as unusable. The analyte may or may not be present in the sample.

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Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

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PCDDs/PCDFs – DATA VALIDATION SUMMARY

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8290	Water	30 days from collection to extraction and 45 days from extraction to analysis	Cooled @ 4±2 °C
	Soil	30 days from collection to extraction and 45 days from extraction to analysis	Cooled @ 4±2 °C

The samples were received at the laboratory at temperatures that were less than the EPA-recommended criteria. Data qualification is unnecessary because the samples were not frozen. All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e. laboratory method blanks and equipment rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Equipment rinse blanks also measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated equipment rinse blank; however, the associated sample results were greater than the BAL. Therefore, qualification of the sample results was not required.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable; system performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

A maximum relative standard deviation (RSD) of 20% is allowed for all non-labeled compounds (target) and 30% is allowed for all labeled compounds (internal standards and recovery standards)

All target compounds associated with the continuing calibration standard must exhibited percent difference (%D) less than the control limit (20%).

All initial and continuing calibration criteria were within the control limits.

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5. Internal Standard Performance

All samples to be analyzed for PCDD/PCDF compounds are spiked with internal standards prior to extraction. Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds exhibit recoveries within the control limits of 40% to 135%.

Sample locations associated with internal standards exhibiting responses outside of the control limits are presented in the following table.

Sample Locations	Internal Standard	Response
A2-12 (0-6”), A2-11 (0-6”), A2-19 (0-6”), Field Duplicate #2, A5-7 (0-6”), A2-14 (0-6”), A2-16 (0-6”), and A2-17 (0-6”)	^{13}C-OCDD	> UL
Field Duplicate #2, A5-7 (0-6”), A2-17 (0-6”)	^{13}C-OCDF	> UL
A5-7 (0-6”)	^{13}C-1,2,3,4,6,7,8-HpCDD	> UL

The criteria used to evaluate the internal standard responses are presented in the following table. In the case of an internal standard deviation, the compounds quantitated using the deviant internal standard are qualified as documented in the table below.

Control limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No action
	Detect	J

6. Recovery Standard Performance

The recovery standard (^{37}Cl-2,3,7,8-TCDD) is added to the sample extract prior to the extract clean-up steps. The concentrations of the labeled standards (internal standards) are determined using the recovery standard.

All recovery standard recoveries were acceptable.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds spiked in the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent differences (RPDs) between the MS and MSD must be within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compounds concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPDs.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit recoveries within the laboratory-established acceptance limits.

All compounds associated with the LCS analyses exhibited recoveries within the control limits.

9. Field Duplicate Sample Analysis

Field duplicate sample analysis is used to assess the precision of the field sampling procedures and analytical method. A control limit of 100% for soil matrices is applied to the RPD between the parent and the field duplicate samples. In the case where the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of three times the RL is applied for soil matrices.

Results (in mg/kg) for field duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
A2-13 (0-6") / Field Duplicate #1	1,2,3,4,6,7,8-HpCDD	0.001	0.00257	87.9 %
	1,2,3,4,6,7,8-HpCDF	0.000251	0.000611	83.5 %
	1,2,3,4,7,8,9-HpCDF	0.0000164	0.0000395	82.6 %
	1,2,3,4,7,8-HxCDD	0.0000132	0.00003	77.7 %
	1,2,3,4,7,8-HxCDF	0.00000839	0.0000218	88.8 %
	1,2,3,6,7,8-HxCDD	0.000029	0.0000726	85.8 %
	1,2,3,6,7,8-HxCDF	0.00000332 J	0.00000842	86.8 %
	1,2,3,7,8,9-HxCDD	0.0000125	0.0000308	84.5 %
	1,2,3,7,8,9-HxCDF	0.00000188 J	0.0000048 J	87.4 %
	1,2,3,7,8-PeCDD	0.00000363 J	0.00000755	70.1 %
	1,2,3,7,8-PeCDF	0.00000085 U	0.00000292 J	AC
	2,3,4,6,7,8-HxCDF	0.00000683	0.0000161	80.8 %
	2,3,4,7,8-PeCDF	0.00000287 J	0.00000715	85.4 %
	2,3,7,8-TCDD	0.00000048 J	0.000000768 J	46.1 %
	2,3,7,8-TCDF	0.00000123	0.00000226	59.0 %
	OCDD	0.0135 E	0.0351 E	88.8 %
	OCDF	0.00135	0.00319	81.0 %
	Total HpCDD	0.00202	0.00564	94.5 %
	Total HpCDF	0.00126	0.00337	91.1 %
	Total HxCDD	0.00028	0.000778	94.1 %
	Total HxCDF	0.000262	0.000729	94.2 %
	Total PeCDD	0.000108	0.000207	62.8 %
	Total PeCDF	0.0000315	0.000085	91.8 %
	Total TCDD	0.0000926	0.000119	24.9 %
	Total TCDF	0.0000233	0.0000478	68.9 %
	WHO TEQ (Human/ Mammal-NDs Excluded)	0.0000297	0.0000729	84.2 %
	WHO TEQ (Human/ Mammal-NDs = 1/2 DL)	0.0000297	0.0000729	84.2 %

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Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
A5-6 (0-6") / Field Duplicate #2	1,2,3,4,6,7,8-HpCDD	0.0099 E	0.015 E	40.9%
	1,2,3,4,6,7,8-HpCDF	0.00138	0.00235	52.0%
	1,2,3,4,7,8,9-HpCDF	0.000118	0.000173	37.8%
	1,2,3,4,7,8-HxCDD	0.0000812	0.000121	39.3%
	1,2,3,4,7,8-HxCDF	0.0000763	0.000105	31.6%
	1,2,3,6,7,8-HxCDD	0.000277	0.000405	37.5%
	1,2,3,6,7,8-HxCDF	0.0000246	0.0000361	37.8%
	1,2,3,7,8,9-HxCDD	0.000123	0.00019	42.8%
	1,2,3,7,8,9-HxCDF	0.0000224	0.0000256	13.3%
	1,2,3,7,8-PeCDD	0.0000325	0.0000443	30.7%
	1,2,3,7,8-PeCDF	0.00000621	0.00000719	14.6%
	2,3,4,6,7,8-HxCDF	0.0000615	0.0000779	23.5%
	2,3,4,7,8-PeCDF	0.0000355	0.0000416	15.8%
	2,3,7,8-TCDD	0.00000399	0.00000434	8.4%
	2,3,7,8-TCDF	0.00000155	0.00000188	19.2%
	OCDD	0.0949 E	0.167 D,E	55.0%
	OCDF	0.00743	0.00896 E	18.6%
	Total HpCDD	0.0255	0.037	36.8%
	Total HpCDF	0.00856	0.0128	39.7%
	Total HxCDD	0.00291	0.00368	23.3%
	Total HxCDF	0.00229	0.00268	15.6%
	Total PeCDD	0.000325	0.000414	24.0%
	Total PeCDF	0.000304 P	0.000352 P	14.6%
	Total TCDD	0.0000642	0.0000664	3.3%
	Total TCDF	0.000041 P	0.0000473 P	14.2%
	WHO TEQ (Human/ Mammal-NDs Excluded)	0.000259	0.000386	39.3%
	WHO TEQ (Human/ Mammal-NDs = 1/2 DL)	0.000259	0.000386	39.3%
A1-37 (0-6") / Field Duplicate #3	1,2,3,4,6,7,8-HpCDD	0.0106	0.0154 E	36.9%
	1,2,3,4,6,7,8-HpCDF	0.00329	0.0054 E	48.5%
	1,2,3,4,7,8,9-HpCDF	0.000347	0.000558	46.6%
	1,2,3,4,7,8-HxCDD	0.0000471 J	0.0000668	34.5%
	1,2,3,4,7,8-HxCDF	0.0000933	0.000137	37.9%
	1,2,3,6,7,8-HxCDD	0.000351	0.000542	42.7%
	1,2,3,6,7,8-HxCDF	0.0000394 J	0.0000364	7.9%
	1,2,3,7,8,9-HxCDD	0.0000669	0.000114	52.0%
	1,2,3,7,8,9-HxCDF	0.0000152 U	0.0000231	AC
	1,2,3,7,8-PeCDD	0.0000127 J	0.0000165	26.0%
	1,2,3,7,8-PeCDF	0.00000544 U	0.00000287 J	AC
	2,3,4,6,7,8-HxCDF	0.0000969	0.000128	27.6%
	2,3,4,7,8-PeCDF	0.00000611 U	0.0000101	AC

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Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
A1-37 (0-6") / Field Duplicate #3 (continued)	2,3,7,8-TCDD	0.00000212 U	0.00000191	AC
	2,3,7,8-TCDF	0.00000252 U	0.00000144	AC
	OCDD	0.086	0.146 *,E	51.7%
	OCDF	0.0272	0.0413 E	41.1%
	Total HpCDD	0.0205	0.0271	27.7%
	Total HpCDF	0.0295	0.0522	55.5%
	Total HxCDD	0.00204	0.00287	33.8%
	Total HxCDF	0.00497	0.00789 P	45.4%
	Total PeCDD	0.0000506	0.000123	83.4%
	Total PeCDF	0.000178	0.000172 P	3.4%
	Total TCDD	0.0000339	0.0000598	55.2%
	Total TCDF	0.0000236	0.0000675	96.3%
	WHO TEQ (Human/ Mammal-NDs Excluded)	0.000258	0.000396	42.2%
	WHO TEQ (Human/ Mammal-NDs = 1/2 DL)	0.000261	0.000396	41.0%

AC Acceptable

The calculated RPDs between the field duplicate samples were acceptable.

10. Compound Identification

PCDD/PCDF compounds are identified by using the compound's ion abundance ratios, signal-to-noise ratios, and retention times relative to the internal standards'.

An estimated maximum possible concentration (EMPC) designation is given to compounds which have signals eluting within the established retention time window which would, if positively identified, be greater than the detection limit. The signals do not, however, meet the ion abundance ratio criteria and therefore cannot be identified as the compound of interest. The EMPC value is the estimated concentration of the interferant quantitated "as the compound of interest". This value should be considered an elevated detection limit based on potential compound identification and quantitation interference. The "UX" qualifier has been added to the following sample results (in mg/kg) to indicate the elevated detection limit as EMPC.

Sample ID	Compound	Laboratory Result	Reported Result
A2-13 (0-6")	1,2,3,7,8-PeCDF	0.000000850 EMPC	0.000000850 UX
A1-36 (0-6")	1,2,3,7,8-PeCDD	0.000000697 EMPC	0.000000697 UX
	1,2,3,6,7,8-HxCDF	0.000000971 EMPC	0.000000971 UX
A1-39 (0-6")	2,3,7,8-TCDD	0.00000134 EMPC	0.00000134 UX
A2-16 (0-6")	2,3,7,8-TCDF	0.00000752 EMPC	0.00000752 UX
A2-18 (0-6")	1,2,3,7,8-PeCDD	0.0000483 EMPC	0.0000483 UX
A1-37 (0-6")	2,3,7,8-TCDD	0.00000212 EMPC	0.00000212 UX
	2,3,4,7,8-PeCDF	0.00000611 EMPC	0.00000611 UX

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The following results exhibited evidence of interference by chlorodiphenyl ethers. The results were flagged "P" by the laboratory indicating the result is the maximum concentrations of the analytes in the case that all of the quantified area is due to the target analyte and none due to the interference. Therefore, these results have been qualified as estimated ("J").

Sample ID	Compound
A2-12 (0-6”)	1,2,3,6,7,8-HxCDF Total TCDF Total PeCDF Total HxCDF
A2-11 (0-6”), A2-19 (0-6”), A2-15 (0-6”)	Total TCDF Total PeCDF Total HxCDF
A5-6 (0-6”), Field Duplicate #2, A5-7 (0-6”)	Total TCDF Total PeCDF
Field Duplicate #3, A2-14 (0-6”)	Total PeCDF Total HxCDF
A2-16 (0-6”), A2-17 (0-6”)	Total HxCDF

Sample results that exhibited a concentration greater than the linear range of the instrument calibration are summarized in the following table (mg/kg). Note: In the instance where both the original analysis and the diluted analysis sample results exhibited a concentration greater than and/or less than the calibration linear range of the instrument; the sample result exhibiting the greatest concentration will be reported as the final result. Because the individual isomer results are included in the Total (hexa-, hepta-) results, where the isomer result has been qualified as estimated ("J") and constitutes greater than ten percent of the Total, the corresponding Total result has been qualified as estimated as well.

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
A2-12 (0-6”)	1,2,3,4,6,7,8-HpCDD	0.148 E	—	0.148 EJ
	OCDD	0.627 E	—	0.627 EJ
	1,2,3,4,6,7,8-HpCDF	0.0247 E	—	0.0247 EJ
	OCDF	0.119 E	—	0.119 EJ
	Total HpCDD	0.355	—	0.355 J
	Total HpCDF	0.141	—	0.141 J
A2-11 (0-6”)	OCDD	0.573 ED	—	0.573 EDJ
	1,2,3,4,6,7,8-HpCDF	0.0121 E	—	0.0121 EJ
	OCDF	0.0613 E	—	0.0613 EJ
	Total HpCDF	0.0731	—	0.0731 J
A2-19 (0-6”)	1,2,3,6,7,8-HxCDD	0.00697 E	—	0.00697 EJ
	1,2,3,4,6,7,8-HpCDD	0.262 ED	—	0.262 EDJ
	OCDD	0.709 ED	—	0.709 EDJ
	1,2,3,4,6,7,8-HpCDF	0.0381 E	—	0.0381 EJ
	OCDF	0.186 E	—	0.186 EJ
	Total HxCDD	0.0601	—	0.0601 J
	Total HpCDD	0.620	—	0.620 J
	Total HpCDF	0.210	—	0.210 J
A5-6 (0-6”)	1,2,3,4,6,7,8-HpCDD	0.0099 E	—	0.0099 EJ
	OCDD	0.0949 E	—	0.0949 EJ
	Total HpCDD	0.0255	—	0.0255 J
Field Duplicate #2	1,2,3,4,6,7,8-HpCDD	0.015 E	—	0.015 EJ
	OCDD	0.167 ED	—	0.167 EDJ
	OCDF	0.00896 E	—	0.00896 EJ
	Total HpCDD	0.0370	—	0.0370 J

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Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
A5-7 (0-6”)	1,2,3,4,6,7,8-HpCDD	0.0235 E	—	0.0235 EJ
	OCDD	0.214 ED	—	0.214 EDJ
	1,2,3,4,6,7,8-HpCDF	0.00434 E	—	0.00434 EJ
	OCDF	0.0178 E	—	0.0178 EJ
	Total HpCDD	0.0543	—	0.0543 J
	Total HpCDF	0.0277	—	0.0277 J
A2-13 (0-6”)	OCDD	0.0135 E	—	0.0135 EJ
Field Duplicate #1	OCDD	0.0351 E	—	0.0351 EJ
A2-15 (0-6”)	1,2,3,4,6,7,8-HpCDD	0.0798 ED	—	0.0798 EDJ
	OCDD	0.537 ED	—	0.537 EDJ
	1,2,3,4,6,7,8-HpCDF	0.0105 E	—	0.0105 EJ
	Total HpCDD	0.235 D	—	0.235 DJ
	Total HpCDF	0.0727	—	0.0727 J
Field Duplicate #3	1,2,3,4,6,7,8-HpCDD	0.0154 E	—	0.0154 EJ
	OCDD	0.146 E	—	0.146 EJ
	1,2,3,4,6,7,8-HpCDF	0.00054 E	—	0.00054 EJ
	OCDF	0.0413 E	—	0.0413 EJ
	Total HpCDD	0.0271	—	0.0271 J
	Total HpCDF	0.0522	—	0.0522 J
A1-36 (0-6”)	OCDD	0.00883 E	—	0.00883 EJ
A1-39 (0-6”)	OCDD	0.0308 E	—	0.0308 EJ
A2-14 (0-6”)	1,2,3,4,6,7,8-HpCDD	0.296 E	—	0.296 EJ
	OCDD	4.85 ED	—	4.85 EDJ
	OCDF	0.202 E	—	0.202 EJ
	Total HpCDD	0.570	—	0.570 J
A2-16 (0-6”)	1,2,3,4,6,7,8-HpCDD	0.252 E	—	0.252 EJ
	OCDD	3.27 ED	—	3.27 EDJ
	OCDF	0.158 E	—	0.158 EJ
	Total HpCDD	0.757	—	0.757 J
A2-17 (0-6”)	1,2,3,4,6,7,8-HpCDD	0.181 ED	—	0.181 EDJ
	OCDD	2.63 ED	—	2.63 EDJ
	OCDF	0.130 E	—	0.130 EJ
	Total HpCDD	0.368	—	0.368 J
A2-18 (0-6”)	OCDD	0.583 E	—	0.583 EJ

Sample results associated with compounds exhibiting concentration greater than the linear range qualified as documented in the table below when reported as the final reported sample result.

Reported Sample Results	Qualification
Diluted sample result within calibration range	D
Diluted sample result less than the calibration range	DJ
Diluted sample result greater than the calibration range	EDJ
Original sample result greater than the calibration range	EJ

11. System Performance and Overall Assessment

Overall system performance was acceptable. Except for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

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PCDDs/PCDFs – DATA VALIDATION CHECKLIST

PCDDs/PCDFs; SW-846 8290	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS) Accuracy (%R)		X		X	
Laboratory Control Sample Duplicate (LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate (MSD) %R		X		X	
MS/MSD RPD		X		X	
Field/Laboratory Duplicate Sample RPD		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Signal-to-noise ratio $\geq$ 10:1		X		X	
Internal standard performance		X	X		
Recovery standard performance		X		X	
Resolution mix $\leq$ 25%		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

RSD – relative standard deviation
%R - percent recovery
RPD - relative percent difference
%D – difference

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VALIDATION PERFORMED BY: Dennis Dyke

SIGNATURE:

DATE: May 11, 2010

PEER REVIEW: Dennis Capria

DATE: May 17, 2010

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Beazer East, Inc.
Former Koppers Wood-Treating Site

Data Review

CARBONDALE, ILLINOIS

PCDDs/PCDFS Analyses

SDG # 32550

Analyses Performed By:
Vista Analytical Laboratory
El Dorado Hills, California

Report #12089
Review Level: Tier III
Project: B0039208.0000.00002

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SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 32550 for samples collected in association with the Beazer East Inc. Former Koppers Wood-Treating Site in Carbondale, Illinois. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis
					PCDDs/PCDFs
RB033010	32550-001	Water	3/30/2010		X
RB033110	32550-002	Water	3/31/2010		X
A1-35 (0-6”)	32550-003	Soil	3/30/2010		X
A1-40 (0-6”)	32550-004	Soil	3/30/2010		X
A1-41 (0-6”)	32550-005	Soil	3/30/2010		X
A1-42 (0-6”)	32550-006	Soil	3/30/2010		X
A1-43 (0-6”)	32550-007	Sediment	3/30/2010		X
A1-44 (0-6”)	32550-008	Sediment	3/30/2010		X
A1-47 (0-6”)	32550-009	Sediment	3/30/2010		X
A1-45 (0-6”)	32550-010	Soil	3/30/2010		X
A1-46 (0-6”)	32550-011	Sediment	3/30/2010		X
A1-48 (0-6”)	32550-012	Sediment	3/30/2010		X
A3-20 (0-6”)	32550-013	Sediment	3/30/2010		X
Field Duplicate #4	32550-014	Sediment	3/30/2010	A3-20 (0-6”)	X
A3-18 (0-6”)	32550-015	Sediment	3/30/2010		X
A3-19 (0-6”)	32550-016	Sediment	3/30/2010		X
A3-23 (0-6”)	32550-017	Sediment	3/30/2010		X
A3-22 (0-6”)	32550-018	Sediment	3/30/2010		X
A3-21 (0-6”)	32550-019	Sediment	3/30/2010		X
A3-24 (0-6”)	32550-020	Sediment	3/30/2010		X

1. The matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location A1-48 (0-6”).
2. Sample results were reported on a dry-weight basis.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

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PCDDs/PCDFs – INTRODUCTION

Polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8290. Data were reviewed in accordance with USEPA National Functional Guidelines of January 2005.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected as unusable. The analyte may or may not be present in the sample.

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Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

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PCDDs/PCDFs – DATA VALIDATION SUMMARY

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8290	Water	30 days from collection to extraction and 45 days from extraction to analysis	Cooled @ 4±2 °C
	Soil	30 days from collection to extraction and 45 days from extraction to analysis	Cooled @ 4±2 °C

The samples were received at the laboratory at temperatures that were less than the EPA-recommended criteria. Data qualification is unnecessary because the samples were not frozen. All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e. laboratory method blanks and equipment rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Equipment rinse blanks also measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated equipment rinse blanks; however, the associated sample results were either greater than the BAL or non-detect. Therefore, qualification of the sample results was not required.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable; system performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

A maximum relative standard deviation (RSD) of 20% is allowed for all non-labeled compounds (target) and 30% is allowed for all labeled compounds (internal standards and recovery standards)

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All target compounds associated with the continuing calibration standard must exhibited percent difference (%D) less than the control limit (20%).

All initial and continuing calibration criteria were within the control limits.

5. Internal Standard Performance

All samples to be analyzed for PCDD/PCDF compounds are spiked with internal standards prior to extraction. Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds exhibit recoveries within the control limits of 40% to 135%.

Sample locations associated with internal standards exhibiting responses outside of the control limits are presented in the following table.

Sample Locations	Internal Standard	Response
A3-22 (0-6”) and A3-21 (0-6”)	^{13}C-OCDD	> UL

The criteria used to evaluate the internal standard responses are presented in the following table. In the case of an internal standard deviation, the compounds quantitated using the deviant internal standard are qualified as documented in the table below.

Control limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No action
	Detect	J

6. Recovery Standard Performance

The recovery standard (^{37}Cl-2,3,7,8-TCDD) is added to the sample extract prior to the extract clean-up steps. The concentrations of the labeled standards (internal standards) are determined using the recovery standard.

All recovery standard recoveries were acceptable.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds spiked in the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent differences (RPDs) between the MS and MSD must be within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compounds concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

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Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
A1-48 (0-6")	1,2,3,6,7,8-HxCDD	< LL but > 10%	< LL but > 10%
	1,2,3,4,7,8-HxCDF	< 10%	< 10%
	2,3,4,7,8-PeCDF	AC	< LL but > 10%

AC = Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	J
	Detect	J
< 10%	Non-detect	R
	Detect	J

The MS/MSD exhibited acceptable RPDs between the MS and MSD.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit recoveries within the laboratory-established acceptance limits.

All compounds associated with the LCS analyses exhibited recoveries within the control limits.

9. Field Duplicate Sample Analysis

Field duplicate analysis is used to assess the precision of the field sampling procedures and analytical method. A control limit of 100% for soil matrices is applied to the RPD between the parent and the field duplicate samples. In the case where the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of three times the RL is applied for soil matrices.

Results (in mg/kg) for the field duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
A3-20 (0-6") / Field Duplicate #4	1,2,3,4,6,7,8-HpCDD	0.00415 E	0.00443 E	6.5%
	1,2,3,4,6,7,8-HpCDF	0.000815	0.000925	12.6%
	1,2,3,4,7,8,9-HpCDF	0.0000607	0.0000672	10.1%
	1,2,3,4,7,8-HxCDD	0.0000377	0.0000408	7.8%
	1,2,3,4,7,8-HxCDF	0.0000465	0.0000542	15.2%
	1,2,3,6,7,8-HxCDD	0.000118	0.000133	11.9%

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Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
A3-20 (0-6") / Field Duplicate #4 (Continued)	1,2,3,6,7,8-HxCDF	0.0000223	0.0000233	4.3%
	1,2,3,7,8,9-HxCDD	0.0000699	0.0000725	3.6%
	1,2,3,7,8,9-HxCDF	0.000011	0.0000119	7.8%
	1,2,3,7,8-PeCDD	0.0000144	0.0000162	11.7%
	1,2,3,7,8-PeCDF	0.00000377 J	0.00000447 J	16.9%
	2,3,4,6,7,8-HxCDF	0.000041	0.0000489	17.5%
	2,3,4,7,8-PeCDF	0.0000256	0.0000306	17.7%
	2,3,7,8-TCDD	0.0000018 U	0.00000243	AC
	2,3,7,8-TCDF	0.0000019	0.00000264	32.5%
	OCDD	0.0491 E	0.0518 E	5.3%
	OCDF	0.00366	0.00395	7.6%
	Total HpCDD	0.00851	0.00898	5.3%
	Total HpCDF	0.00391	0.0042	7.1%
	Total HxCDD	0.000884	0.00097	9.2%
	Total HxCDF	0.000991	0.00113	13.1%
	Total PeCDD	0.000108	0.000114	5.4%
	Total PeCDF	0.000277	0.000309	10.9%
	Total TCDD	0.0000251	0.0000285	12.6%
	Total TCDF	0.0000691	0.0000818	16.8%
	WHO TEQ (Human/ Mammal-NDs Excluded)	0.000123	0.000138	11.4%
	WHO TEQ (Human/ Mammal-NDs = 1/2 DL)	0.000124	0.000138	10.6%

AC Acceptable

The calculated RPDs between the field duplicate samples were acceptable.

10. Compound Identification

PCDD/PCDF compounds are identified by using the compound's ion abundance ratios, signal-to-noise ratios, and retention times relative to the internal standards'.

An estimated maximum possible concentration (EMPC) designation is given to compounds which have signals eluting within the established retention time window which would, if positively identified, be greater than the detection limit. The signals do not, however, meet the ion abundance ratio criteria and therefore cannot be identified as the compound of interest. The EMPC value is the estimated concentration of the interferant quantitated "as the compound of interest". This value should be considered an elevated detection limit based on potential compound identification and quantitation interference. The "UX" qualifier has been added to the following sample results (in mg/kg) to indicate the elevated detection limit as EMPC.

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Sample ID	Compound	Laboratory Result	Reported Result
A1-35 (0-6”)	1,2,3,7,8-PeCDD	0.00000146 EMPC	0.00000146 UX
	2,3,7,8-TCDF	0.000000831 EMPC	0.000000831 UX
	1,2,3,7,8-PeCDF	0.000000705 EMPC	0.000000705 UX
	2,3,4,6,7,8-HxCDF	0.00000168 EMPC	0.00000168 UX
A1-40 (0-6”)	1,2,3,7,8-PeCDD	0.00000290 EMPC	0.00000290 UX
	2,3,7,8-TCDF	0.000000478 EMPC	0.000000478 UX
A1-41 (0-6”)	1,2,3,7,8-PeCDF	0.00000108 EMPC	0.00000108 UX
A1-42 (0-6”)	2,3,7,8-TCDD	0.000000316 EMPC	0.000000316 UX
	1,2,3,7,8-PeCDD	0.000000882 EMPC	0.000000882 UX
	1,2,3,4,7,8-HxCDD	0.00000189 EMPC	0.00000189 UX
	2,3,4,7,8-PeCDF	0.000000778 EMPC	0.000000778 UX
	1,2,3,4,7,8,9-HpCDF	0.000000888 EMPC	0.000000888 UX
A1-43 (0-6”)	2,3,7,8-TCDD	0.000000334 EMPC	0.000000334 UX
	Total TCDD	0.000000334 EMPC	0.000000334 UX
	Total PeCDD	0.00000234 EMPC	0.00000234 UX
	Total PeCDF	0.000000446 EMPC	0.000000446 UX
A1-47 (0-6”)	1,2,3,4,7,8-HxCDD	0.00000166 EMPC	0.00000166 UX
	2,3,7,8-TCDF	0.000000716 EMPC	0.000000716 UX
	Total TCDD	0.000000282 EMPC	0.000000282 UX
A1-45 (0-6”)	2,3,7,8-TCDD	0.000000676 EMPC	0.000000676 UX
	Total TCDD	0.000000676 EMPC	0.000000676 UX
A1-46 (0-6”)	Total TCDF	0.000000639 EMPC	0.000000639 UX
A3-20 (0-6”)	2,3,7,8-TCDD	0.00000180 EMPC	0.00000180 UX
A3-18 (0-6”)	1,2,3,6,7,8-HxCDD	0.00000269 EMPC	0.00000269 UX
	Total TCDF	0.000000365 EMPC	0.000000365 UX
A3-19 (0-6”)	2,3,7,8-TCDD	0.000000854 EMPC	0.000000854 UX
	1,2,3,7,8-PeCDF	0.00000245 EMPC	0.00000245 UX

The following results exhibited evidence of interference by chlorodiphenyl ethers. The results were flagged "P" by the laboratory indicating the result is the maximum concentrations of the analytes in the case that all of the quantified area is due to the target analyte and none due to the interference. Therefore, these results have been qualified as estimated ("J").

Sample ID	Compound
A3-21 (0-6”)	Total PeCDF Total HxCDF
A3-24 (0-6”)	Total TCDF Total PeCDF

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Sample results that exhibited a concentration greater than the linear range of the instrument calibration are summarized in the following table (mg/kg). Note: In the instance where both the original analysis and the diluted analysis sample results exhibited a concentration greater than and/or less than the calibration linear range of the instrument; the sample result exhibiting the greatest concentration will be reported as the final result. Because the individual isomer results are included in the Total (hexa-, hepta-) results, where the isomer result has been qualified as estimated ("J") and constitutes greater than ten percent of the Total, the corresponding Total result has been qualified as estimated as well.

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
A1-35 (0-6”)	OCDD	0.0125 E	—	0.0125 EJ
A1-41 (0-6”)	OCDD	0.0283 E	—	0.0283 EJ
A1-42 (0-6”)	OCDD	0.00928 E	—	0.00928 EJ
A1-44 (0-6”)	OCDD	0.0103 E	—	0.0103 EJ
A1-48 (0-6”)	1,2,3,4,6,7,8-HpCDD	0.00613 E	—	0.00613 EJ
	OCDD	0.0891 ED	—	0.0891 EDJ
	Total HpCDD	0.0123	—	0.0123 J
A3-20 (0-6”)	1,2,3,4,6,7,8-HpCDD	0.00415 E	—	0.00415 EJ
	OCDD	0.0491 E	—	0.0491 EJ
	Total HpCDD	0.00851	—	0.00851 J
Field Duplicate #4	1,2,3,4,6,7,8-HpCDD	0.00443 E	—	0.00443 EJ
	OCDD	0.0518 E	—	0.0518 EJ
	Total HpCDD	0.00898	—	0.00898 J
A3-19 (0-6”)	OCDD	0.0238 E	—	0.0238 EJ
A3-23 (0-6”)	1,2,3,4,6,7,8-HpCDD	0.0172 E	—	0.0172 EJ
	OCDD	0.137 ED	—	0.137 EDJ
	1,2,3,4,6,7,8-HpCDF	0.00451 E	—	0.00451 EJ
	OCDF	0.0189 E	—	0.0189 EJ
	Total HpCDD	0.0447	—	0.0447 J
	Total HpCDF	0.0316	—	0.0316 J
A3-22 (0-6”)	1,2,3,4,6,7,8-HpCDD	0.105 ED	—	0.105 EDJ
	OCDD	0.471 ED	—	0.471 EDJ
	1,2,3,4,6,7,8-HpCDF	0.0237 E	—	0.0237 EJ
	OCDF	0.0982 E	—	0.0982 EJ
	Total HpCDD	0.223	—	0.223 J
	Total HpCDF	0.150	—	0.150 J
A3-21 (0-6”)	1,2,3,6,7,8-HxCDD	0.0496 E	—	0.0496 EJ
	1,2,3,4,6,7,8-HpCDD	0.160 ED	—	0.160 EDJ
	OCDD	0.570 ED	—	0.570 EDJ
	1,2,3,4,6,7,8-HpCDF	0.0406 E	—	0.0406 EJ
	OCDF	0.207 E	—	0.207 EJ
	Total HxCDD	0.0473	—	0.0473 J
	Total HpCDD	0.365	—	0.365 J
	Total HpCDF	0.277	—	0.277 J
A3-24 (0-6”)	1,2,3,4,6,7,8-HpCDD	0.117 ED	—	0.117 EDJ
	OCDD	0.524 ED	—	0.524 EDJ
	1,2,3,4,7,8-HxCDF	0.00774 E	—	0.00774 EJ
	1,2,3,4,6,7,8-HpCDF	0.0268 E	—	0.0268 EJ
	OCDF	0.100 E	—	0.100 EJ
	Total HpCDD	0.241	—	0.241 J
	Total HxCDF	0.0622	—	0.0622 J
	Total HpCDF	0.161	—	0.161 J

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Sample results associated with compounds exhibiting concentration greater than the linear range qualified as documented in the table below when reported as the final reported sample result.

Reported Sample Results	Qualification
Diluted sample result within calibration range	D
Diluted sample result less than the calibration range	DJ
Diluted sample result greater than the calibration range	EDJ
Original sample result greater than the calibration range	EJ

11. System Performance and Overall Assessment

Overall system performance was acceptable. Except for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

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PCDDs/PCDFs – DATA VALIDATION CHECKLIST

PCDDs/PCDFs; SW-846 8290	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS) Accuracy (%R)		X		X	
Laboratory Control Sample Duplicate (LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate (MSD) %R		X	X		
MS/MSD RPD		X		X	
Field/Laboratory Duplicate Sample RPD		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Signal-to-noise ratio $\geq$ 10:1		X		X	
Internal standard performance		X	X		
Recovery standard performance		X		X	
Resolution mix $\leq$ 25%		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

RSD – relative standard deviation
%R - percent recovery
RPD - relative percent difference
%D – difference

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VALIDATION PERFORMED BY: Dennis Dyke

SIGNATURE:

DATE: May 11, 2010

PEER REVIEW: Dennis Capria

DATE: May 17, 2010

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Infrastructure, environment, buildings

Imagine the result

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Beazer East, Inc.
Former Koppers Wood-Treating Site

Data Review

CARBONDALE, ILLINOIS

PCDDs/PCDFs Analyses

SDG # 32551

Analyses Performed By:
Vista Analytical Laboratory
El Dorado Hills, California

Report #12090
Review Level: Tier III
Project: B0039208.0000.00002

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) # 32551 for samples collected in association with the Beazer East Inc. Former Koppers Wood-Treating Site in Carbondale, Illinois. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis
					PCDDs/PCDFs
A6-1 (0-6”)	32551-001	Sediment	3/31/2010		X
A6-2 (0-6”)	32551-002	Sediment	3/31/2010		X
A6-3 (0-6”)	32551-003	Sediment	3/31/2010		X
A6-4 (0-6”)	32551-004	Soil	3/31/2010		X
A6-5 (0-6”)	32551-005	Sediment	3/31/2010		X
Field Duplicate #5	32551-006	Soil	3/31/2010	A6-5 (0-6”)	X
A4-7 (0-6”)	32551-007	Sediment	3/31/2010		X
A4-8 (0-6”)	32551-008	Soil	3/31/2010		X
Field Duplicate #6	32551-009	Soil	3/31/2010	A4-8 (0-6”)	X
A4-9 (0-6”)	32551-010	Soil	3/31/2010		X
A4-10 (0-6”)	32551-011	Soil	3/31/2010		X
A6-6 (0-6”)	32551-012	Sediment	3/31/2010		X
A6-7 (0-6”)	32551-013	Soil	3/31/2010		X
A6-8 (0-6”)	32551-014	Soil	3/31/2010		X
A4-5 (0-6”)	32551-015	Soil	3/31/2010		X
A4-6 (0-6”)	32551-016	Sediment	3/31/2010		X
A4-4 (0-6”)	32551-017	Sediment	3/31/2010		X
A4-1 (0-6”)	32551-018	Sediment	3/31/2010		X
A4-2 (0-6”)	32551-019	Soil	3/31/2010		X
A4-3 (0-6”)	32551-020	Soil	3/31/2010		X

1. The matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location A6-1 (0-6”).
2. Sample results were reported on a dry-weight basis.

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ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

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  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

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  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected as unusable. The analyte may or may not be present in the sample.

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Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

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The samples were received at the laboratory at temperatures that were less than the EPA-recommended criteria. Data qualification is unnecessary because the samples were not frozen. All samples were analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e. laboratory method blanks and equipment rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Equipment rinse blanks also measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated equipment rinse blank (which was analyzed with SDG 32550); however, the associated sample results were either greater than the BAL or non-detect. Therefore, qualification of the sample results was not required.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable; system performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

A maximum relative standard deviation (RSD) of 20% is allowed for all non-labeled compounds (target) and 30% is allowed for all labeled compounds (internal standards and recovery standards)

All target compounds associated with the continuing calibration standard must exhibited percent difference (%D) less than the control limit (20%).

All initial and continuing calibration criteria were within the control limits.

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5. Internal Standard Performance

All samples to be analyzed for PCDD/PCDF compounds are spiked with internal standards prior to extraction. Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria require the internal standard compounds exhibit recoveries within the control limits of 40% to 135%.

All internal standard areas and retention times were within established limits.

6. Recovery Standard Performance

The recovery standard (^{37}Cl-2,3,7,8-TCDD) is added to the sample extract prior to the extract clean-up steps. The concentrations of the labeled standards (internal standards) are determined using the recovery standard.

All recovery standard recoveries were acceptable.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds spiked in the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent differences (RPDs) between the MS and MSD must be within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compounds concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
A6-1 (0-6”)	1,2,3,4,6,7,8-HpCDF	> UL	< LL but > 10%

AC = Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	J
	Detect	J
< 10%	Non-detect	R
	Detect	J

The MS/MSD exhibited acceptable RPDs between the MS and MSD.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit recoveries within the laboratory-established acceptance limits.

All compounds associated with the LCS analyses exhibited recoveries within the control limits.

9. Field Duplicate Sample Analysis

Field duplicate analysis is used to assess the precision of the field sampling procedures and analytical method. A control limit of 100% for soil matrices is applied to the RPD between the parent and the field duplicate samples. In the case where the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of three times the RL is applied for soil matrices.

Results (in mg/kg) for the field duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
A6-5 (0-6") / Field Duplicate #5	1,2,3,4,6,7,8-HpCDD	0.0000916	0.0000975	6.2%
	1,2,3,4,6,7,8-HpCDF	0.00000565	0.00000748	27.8%
	1,2,3,4,7,8-HxCDD	0.00000179 J	0.0000012 U	AC
	1,2,3,6,7,8-HxCDD	0.00000266 J	0.00000261 U	AC
	1,2,3,7,8,9-HxCDD	0.00000258 J	0.00000254 J	1.5%
	1,2,3,7,8-PeCDD	0.000000786 J	0.000000701 J	11.4%
	2,3,4,6,7,8-HxCDF	0.00000054 J	0.000000621 J	13.9%
	2,3,4,7,8-PeCDF	0.00000102 J	0.000000761 J	29.0%
	OCDD	0.00284	0.00324	13.1%
	OCDF	0.0000207	0.0000259	22.3%
	Total HpCDD	0.000221	0.000226	2.2%
	Total HpCDF	0.0000223	0.0000259	14.9%
	Total HxCDD	0.0000332	0.0000267	21.7%
	Total HxCDF	0.00000805	0.00000798	0.8%
	Total PeCDD	0.00000781	0.00000212	114.6%
	Total PeCDF	0.00000719	0.00000313	78.6%
	Total TCDD	0.000000729	0.000000506 U	AC
	Total TCDF	0.00000196	0.000000775	86.6%
	WHO TEQ (Human/ Mammal-NDs Excluded)	0.00000368	0.00000327	11.7%
	WHO TEQ (Human/ Mammal-NDs = 1/2 DL)	0.00000395	0.00000376	4.9%
A4-8 (0-6") / Field Duplicate #6	1,2,3,4,6,7,8-HpCDD	0.000474	0.000431	9.5%
	1,2,3,4,6,7,8-HpCDF	0.0000824	0.0000751	9.2%
	1,2,3,4,7,8,9-HpCDF	0.00000579	0.00000603	4.0%
	1,2,3,4,7,8-HxCDD	0.00000766	0.00000705	8.2%
	1,2,3,4,7,8-HxCDF	0.00000521	0.00000428 J	19.5%
	1,2,3,6,7,8-HxCDD	0.000016	0.0000137	15.4%
	1,2,3,6,7,8-HxCDF	0.00000348 J	0.00000311 J	11.2%

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Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
A4-8 (0-6") / Field Duplicate #6 (continued)	1,2,3,7,8,9-HxCDD	0.0000131	0.0000114	13.8%
	1,2,3,7,8,9-HxCDF	0.00000137 J	0.00000126 J	8.3%
	1,2,3,7,8-PeCDD	0.00000348 J	0.00000341 J	2.0%
	1,2,3,7,8-PeCDF	0.000000528 J	0.000000691 J	26.7%
	2,3,4,6,7,8-HxCDF	0.00000604	0.00000498	19.2%
	2,3,4,7,8-PeCDF	0.00000598	0.00000519	14.1%
	2,3,7,8-TCDD	0.000000716 J	0.000000635 J	11.9%
	2,3,7,8-TCDF	0.00000082 J	0.000000873 J	6.2%
	OCDD	0.00869 E	0.00857 E	1.3%
	OCDF	0.00028	0.000246	12.9%
	Total HpCDD	0.00103	0.000965	6.5%
	Total HpCDF	0.00029	0.000264	9.3%
	Total HxCDD	0.000154	0.000149	3.3%
	Total HxCDF	0.000115	0.000104	10.0%
	Total PeCDD	0.00003	0.0000252	17.3%
	Total PeCDF	0.0000549	0.0000514	6.5%
	Total TCDD	0.00000524	0.00000594	12.5%
	Total TCDF	0.000022	0.0000152	36.5%
	WHO TEQ (Human/ Mammal-NDs Excluded)	0.0000197	0.0000181	8.4%
	WHO TEQ (Human/ Mammal-NDs = 1/2 DL)	0.0000197	0.0000181	8.4%

AC Acceptable

The Total PeCDD associated with samples locations A6-5 (0-6") and Field Duplicate #5 exhibited a RPD greater than the control limit. The Total PeCDD results for sample locations A6-5 (0-6") and Field Duplicate #5 were qualified as estimated ("J").

10. Compound Identification

PCDD/PCDF compounds are identified by using the compound's ion abundance ratios, signal-to-noise ratios, and retention times relative to the internal standards'.

An estimated maximum possible concentration (EMPC) designation is given to compounds which have signals eluting within the established retention time window which would, if positively identified, be greater than the detection limit. The signals do not, however, meet the ion abundance ratio criteria and therefore cannot be identified as the compound of interest. The EMPC value is the estimated concentration of the interferant quantitated "as the compound of interest". This value should be considered an elevated detection limit based on potential compound identification and quantitation interference. The "UX" qualifier has been added to the following sample results (in mg/kg) to indicate the elevated detection limit as EMPC.

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Sample ID	Compound	Laboratory Result	Reported Result
A6-3 (0-6”)	1,2,3,4,7,8,9-HpCDF	0.00000249 EMPC	0.00000249 UX
Field Duplicate #5	1,2,3,4,7,8-HxCDD	0.00000120 EMPC	0.00000120 UX
	1,2,3,6,7,8-HxCDD	0.00000261 EMPC	0.00000261 UX
	Total TCDD	0.000000506 EMPC	0.000000506 UX
A4-10 (0-6”)	OCDF	0.00000142 EMPC	0.00000142 UX
	Total TCDD	0.000000336 EMPC	0.000000336 UX
	Total TCDF	0.000000390 EMPC	0.000000390 UX
	Total HpCDF	0.00000103 EMPC	0.00000103 UX
A6-6 (0-6”)	2,3,7,8-TCDF	0.000000299 EMPC	0.000000299 UX
	1,2,3,6,7,8-HxCDF	0.00000114 EMPC	0.00000114 UX
A6-7 (0-6”)	1,2,3,6,7,8-HxCDF	0.000000701 EMPC	0.000000701 UX
A6-8 (0-6”)	2,3,7,8-TCDD	0.000000196 EMPC	0.000000196 UX
	1,2,3,7,8-PeCDD	0.000000750 EMPC	0.000000750 UX
A4-5 (0-6”)	2,3,7,8-TCDD	0.000000541 EMPC	0.000000541 UX
A4-2 (0-6”)	2,3,7,8-TCDD	0.000000457 EMPC	0.000000457 UX
	1,2,3,7,8-PeCDD	0.00000144 EMPC	0.00000144 UX
	2,3,7,8-TCDF	0.000000624 EMPC	0.000000624 UX
A4-3 (0-6”)	1,2,3,7,8-PeCDD	0.000000645 EMPC	0.000000645 UX
	2,3,4,7,8-PeCDF	0.00000101 EMPC	0.00000101 UX
	1,2,3,6,7,8-HxCDF	0.000000540 EMPC	0.000000540 UX
A6-4 (0-6”)	2,3,7,8-TCDD	0.000000460 EMPC	0.000000460 UX
A4-9 (0-6”)	1,2,3,4,7,8-HxCDD	0.00000145 EMPC	0.00000145 UX

The following results exhibited evidence of interference by chlorodiphenyl ethers. The results were flagged "P" by the laboratory indicating the result is the maximum concentrations of the analytes in the case that all of the quantified area is due to the target analyte and none due to the interference. Therefore, these results have been qualified as estimated ("J").

Sample ID	Compound
A6-1 (0-6”), A6-2 (0-6”), A6-7 (0-6”)	Total TCDF Total PeCDF
A4-5 (0-6”), A6-4 (0-6”)	Total PeCDF
A4-6 (0-6”)	Total TCDF Total PeCDF Total HxCDF
A4-4 (0-6”)	Total PeCDF Total HxCDF

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Sample results that exhibited a concentration greater than the linear range of the instrument calibration are summarized in the following table (mg/kg).

Sample ID	Compound	Original Analysis	Diluted Analysis	Reported Analysis
A6-1 (0-6”)	OCDD	0.0260 E	—	0.0260 EJ
A6-2 (0-6”)	OCDD	0.0152 E	—	0.0152 EJ
A6-3 (0-6”)	OCDD	0.0128 E	—	0.0128 EJ
A6-6 (0-6”)	OCDD	0.0115 E	—	0.0115 EJ
A4-6 (0-6”)	OCDD	0.0211 E	—	0.0211 EJ
A4-4 (0-6”)	OCDD	0.0159 E	—	0.0159 EJ
A4-1 (0-6”)	OCDD	0.0106 E	—	0.0106 EJ
A4-2 (0-6”)	OCDD	0.0121 E	—	0.0121 EJ
A4-3 (0-6”)	OCDD	0.00921 E	—	0.00921 EJ
A6-4 (0-6”)	OCDD	0.0104 E	—	0.0104 EJ
A4-8 (0-6”)	OCDD	0.00869 E	—	0.00869 EJ
Field Duplicate #6	OCDD	0.00857 E	—	0.00857 EJ

Note: In the instance where both the original analysis and the diluted analysis sample results exhibited a concentration greater than and/or less than the calibration linear range of the instrument; the sample result exhibiting the greatest concentration will be reported as the final result.

Sample results associated with compounds exhibiting concentration greater than the linear range qualified as documented in the table below when reported as the final reported sample result.

Reported Sample Results	Qualification
Diluted sample result within calibration range	D
Diluted sample result less than the calibration range	DJ
Diluted sample result greater than the calibration range	EDJ
Original sample result greater than the calibration range	EJ

11. System Performance and Overall Assessment

Overall system performance was acceptable. Except for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

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PCDDs/PCDFs – DATA VALIDATION CHECKLIST

PCDDs/PCDFs; SW-846 8290	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
Laboratory Control Sample (LCS) Accuracy (%R)		X		X	
Laboratory Control Sample Duplicate (LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate (MSD) %R		X	X		
MS/MSD RPD		X		X	
Field/Laboratory Duplicate Sample RPD		X	X		
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Signal-to-noise ratio $\geq$ 10:1		X		X	
Internal standard performance		X		X	
Recovery standard performance		X		X	
Resolution mix $\leq$ 25%		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	
E. Reporting limits adjusted to reflect sample dilutions		X		X	

RSD – relative standard deviation
%R - percent recovery
RPD - relative percent difference
%D – difference

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VALIDATION PERFORMED BY: Dennis Dyke

SIGNATURE:

DATE: May 11, 2010

PEER REVIEW: Dennis Capria

DATE: May 17, 2010

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ARCADIS

Attachment 4

Validated Laboratory Data Sheets

US EPA ARCHIVE DOCUMENT

Sample ID: **A1-35 (0-6")** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Soil	Lab Sample:	32550-003	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.35 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	68.0	Date Analyzed DB-5:	17-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0900						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.607		
1,2,3,7,8-PeCDD	ND		1.46	UX
1,2,3,4,7,8-HxCDD	5.18			
1,2,3,6,7,8-HxCDD	11.3			
1,2,3,7,8,9-HxCDD	8.34			
1,2,3,4,6,7,8-HpCDD	375			
OCDD	12500			E J
2,3,7,8-TCDF	ND		0.831	UX
1,2,3,7,8-PeCDF	ND		0.705	UX
2,3,4,7,8-PeCDF	1.69			J
1,2,3,4,7,8-HxCDF	2.57			J
1,2,3,6,7,8-HxCDF	1.18			J
2,3,4,6,7,8-HxCDF	ND		1.68	UX
1,2,3,7,8,9-HxCDF	ND	1.49		
1,2,3,4,6,7,8-HpCDF	42.3			
1,2,3,4,7,8,9-HpCDF	1.98			J
OCDF	167			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	82.0	40 - 135	
	13C-1,2,3,7,8-PeCDD	70.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	82.6	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	82.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	90.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	76.2	40 - 135	
	13C-OCDD	86.6	40 - 135	
	13C-2,3,7,8-TCDF	77.9	40 - 135	
	13C-1,2,3,7,8-PeCDF	68.5	40 - 135	
	13C-2,3,4,7,8-PeCDF	73.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	81.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	86.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	76.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	78.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	77.6	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	68.2	40 - 135	
	13C-OCDF	64.9	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	81.3	40 - 135	

Totals	
Total TCDD	10.3
Total PeCDD	20.8
Total HxCDD	124
Total HpCDD	843
Total TCDF	3.10
Total PeCDF	11.9
Total HxCDF	49.1
Total HpCDF	163

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **11.4**

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 15:17

Sample ID: A1-36 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32549-018	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.25 g	QC Batch No.:	2967	Date Extracted:	21-Apr-10
Date Collected:	30-Mar-10	%Solids:	70.3	Date Analyzed DB-5:	25-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0845						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.593			J
1,2,3,7,8-PeCDD	ND		0.697 UX	
1,2,3,4,7,8-HxCDD	1.88			J
1,2,3,6,7,8-HxCDD	10.7			
1,2,3,7,8,9-HxCDD	3.79			J
1,2,3,4,6,7,8-HpCDD	341			
OCDD	8830			E J
2,3,7,8-TCDF	ND	0.367		
1,2,3,7,8-PeCDF	ND	0.948		
2,3,4,7,8-PeCDF	ND	0.844		
1,2,3,4,7,8-HxCDF	2.43			J
1,2,3,6,7,8-HxCDF	ND		0.971 UX	
2,3,4,6,7,8-HxCDF	1.91			J
1,2,3,7,8,9-HxCDF	ND	0.870		
1,2,3,4,6,7,8-HpCDF	79.8			
1,2,3,4,7,8,9-HpCDF	6.44			
OCDF	560			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	95.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	94.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	98.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	99.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	95.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	82.2	40 - 135	
	13C-OCDD	83.1	40 - 135	
	13C-2,3,7,8-TCDF	92.0	40 - 135	
	13C-1,2,3,7,8-PeCDF	95.6	40 - 135	
	13C-2,3,4,7,8-PeCDF	100	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	93.5	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	92.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	87.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	80.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	74.3	40 - 135	
	13C-OCDF	67.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	87.6	40 - 135	

Totals		
Total TCDD	2.67	3.32
Total PeCDD	10.7	13.3
Total HxCDD	65.4	66.8
Total HpCDD	659	
Total TCDF	0.760	
Total PeCDF	4.00	
Total HxCDF	82.1	83.0
Total HpCDF	466	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 9.75

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A1-37 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32549-016	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	3.32 g	QC Batch No.:	2975	Date Extracted:	23-Apr-10
Date Collected:	30-Mar-10	%Solids:	60.9	Date Analyzed DB-5:	25-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0840						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		2.12	UX
1,2,3,7,8-PeCDD	12.7			J
1,2,3,4,7,8-HxCDD	47.1			J
1,2,3,6,7,8-HxCDD	351			
1,2,3,7,8,9-HxCDD	66.9			
1,2,3,4,6,7,8-HpCDD	10600			
OCDD	86000			
2,3,7,8-TCDF	ND	2.52		
1,2,3,7,8-PeCDF	ND	5.44		
2,3,4,7,8-PeCDF	ND		6.11	UX
1,2,3,4,7,8-HxCDF	93.3			
1,2,3,6,7,8-HxCDF	39.4			J
2,3,4,6,7,8-HxCDF	96.9			
1,2,3,7,8,9-HxCDF	ND	15.2		
1,2,3,4,6,7,8-HpCDF	3290			
1,2,3,4,7,8,9-HpCDF	347			
OCDF	27200			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	94.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	86.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	95.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	88.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	76.6	40 - 135	
	13C-OCDD	76.8	40 - 135	
	13C-2,3,7,8-TCDF	89.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	83.6	40 - 135	
	13C-2,3,4,7,8-PeCDF	84.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	90.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	91.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	88.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	82.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	71.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	72.8	40 - 135	
	13C-OCDF	70.1	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	84.8	40 - 135	

Totals		
Total TCDD	33.9	36.1
Total PeCDD	50.6	74.1
Total HxCDD	2040	
Total HpCDD	20500	
Total TCDF	23.6	31.0
Total PeCDF	178	187
Total HxCDF	4970	
Total HpCDF	29500	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 258

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: **FIELD DUPLICATE #3** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32549-017	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.98 g	QC Batch No.:	2967	Date Extracted:	21-Apr-10
Date Collected:	30-Mar-10	%Solids:	62.6	Date Analyzed DB-5:	25-Apr-10	Dates Analyzed DB-225:	26-Apr-10
Time Collected:	NA						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	1.91			
1,2,3,7,8-PeCDD	16.5			
1,2,3,4,7,8-HxCDD	66.8			
1,2,3,6,7,8-HxCDD	542			
1,2,3,7,8,9-HxCDD	114			
1,2,3,4,6,7,8-HpCDD	15400			E 5
OCDD	146000			*, E 5
2,3,7,8-TCDF	1.44			
1,2,3,7,8-PeCDF	2.87			J
2,3,4,7,8-PeCDF	10.1			
1,2,3,4,7,8-HxCDF	137			
1,2,3,6,7,8-HxCDF	36.4			
2,3,4,6,7,8-HxCDF	128			
1,2,3,7,8,9-HxCDF	23.1			
1,2,3,4,6,7,8-HpCDF	5400			E 5
1,2,3,4,7,8,9-HpCDF	558			
OCDF	41300			E 5

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	92.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	89.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	102	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	102	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	104	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	116	40 - 135	
	13C-OCDD	89.5	40 - 135	*
	13C-2,3,7,8-TCDF	87.7	40 - 135	
	13C-1,2,3,7,8-PeCDF	107	40 - 135	
	13C-2,3,4,7,8-PeCDF	101	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	86.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	94.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	87.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	86.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	89.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	83.4	40 - 135	
	13C-OCDF	117	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.8	40 - 135	

Totals			
Total TCDD	59.8	60.2	
Total PeCDD	123		
Total HxCDD	2870		
Total HpCDD	27100		5
Total TCDF	67.5	69.9	
Total PeCDF	172		P 5
Total HxCDF	7890		P 5
Total HpCDF	52200		5

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **396**

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: **A1-38 (0-6")** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32549-019	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	8.19 g	QC Batch No.:	2967	Date Extracted:	21-Apr-10
Date Collected:	30-Mar-10	%Solids:	61.6	Date Analyzed DB-5:	25-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0850						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.672			J
1,2,3,7,8-PeCDD	1.35			J
1,2,3,4,7,8-HxCDD	2.32			J
1,2,3,6,7,8-HxCDD	5.94			
1,2,3,7,8,9-HxCDD	3.57			J
1,2,3,4,6,7,8-HpCDD	225			
OCDD	5450			
2,3,7,8-TCDF	ND	0.332		
1,2,3,7,8-PeCDF	ND	0.660		
2,3,4,7,8-PeCDF	1.20			J
1,2,3,4,7,8-HxCDF	1.97			J
1,2,3,6,7,8-HxCDF	0.606			J
2,3,4,6,7,8-HxCDF	1.30			J
1,2,3,7,8,9-HxCDF	ND	0.757		
1,2,3,4,6,7,8-HpCDF	23.1			
1,2,3,4,7,8,9-HpCDF	2.01			J
OCDF	111			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	92.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	88.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	93.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	98.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	95.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	82.9	40 - 135	
	13C-OCDD	85.6	40 - 135	
	13C-2,3,7,8-TCDF	94.9	40 - 135	
	13C-1,2,3,7,8-PeCDF	93.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	97.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	88.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	91.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	87.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	85.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	74.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	77.2	40 - 135	
	13C-OCDF	75.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	87.1	40 - 135	

Totals		
Total TCDD	7.88	10.1
Total PeCDD	14.4	25.6
Total HxCDD	115	
Total HpCDD	514	
Total TCDF	3.80	4.04
Total PeCDF	6.03	6.51
Total HxCDF	36.0	
Total HpCDF	122	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **8.13**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A1-39 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32549-020	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	8.36 g	QC Batch No.:	2967	Date Extracted:	21-Apr-10
Date Collected:	30-Mar-10	%Solids:	60.9	Date Analyzed DB-5:	25-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0855						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		1.34	UX
1,2,3,7,8-PeCDD	12.8			
1,2,3,4,7,8-HxCDD	32.6			
1,2,3,6,7,8-HxCDD	74.9			
1,2,3,7,8,9-HxCDD	51.9			
1,2,3,4,6,7,8-HpCDD	2510			
OCDD	30800			E J
2,3,7,8-TCDF	0.646			J
1,2,3,7,8-PeCDF	1.16			J
2,3,4,7,8-PeCDF	4.50			J
1,2,3,4,7,8-HxCDF	16.2			
1,2,3,6,7,8-HxCDF	7.29			
2,3,4,6,7,8-HxCDF	12.7			
1,2,3,7,8,9-HxCDF	3.24			J
1,2,3,4,6,7,8-HpCDF	402			
1,2,3,4,7,8,9-HpCDF	28.5			
OCDF	1960			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.2	40 - 135	
	13C-1,2,3,7,8-PeCDD	87.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	87.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	90.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	93.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	86.0	40 - 135	
	13C-OCDD	81.1	40 - 135	
	13C-2,3,7,8-TCDF	92.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	92.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	93.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	87.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.7	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	88.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	88.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	76.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	72.2	40 - 135	
	13C-OCDF	68.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	86.1	40 - 135	

Totals		
Total TCDD	11.4	18.0
Total PeCDD	64.8	
Total HxCDD	468	
Total HpCDD	4380	
Total TCDF	11.8	14.0
Total PeCDF	40.7	41.2
Total HxCDF	361	
Total HpCDF	1780	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 73.4

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A1-40 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Soil	Lab Sample:	32550-004	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	9.17 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	54.5	Date Analyzed DB-5:	17-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0905						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	8.05			
1,2,3,7,8-PeCDD	ND		2.90	UX
1,2,3,4,7,8-HxCDD	ND	4.42		
1,2,3,6,7,8-HxCDD	5.09			
1,2,3,7,8,9-HxCDD	ND	4.75		
1,2,3,4,6,7,8-HpCDD	207			
OCDD	6430			
2,3,7,8-TCDF	ND		0.478	UX
1,2,3,7,8-PeCDF	ND	0.547		
2,3,4,7,8-PeCDF	0.633			J
1,2,3,4,7,8-HxCDF	ND	1.97		
1,2,3,6,7,8-HxCDF	ND	1.77		
2,3,4,6,7,8-HxCDF	ND	1.88		
1,2,3,7,8,9-HxCDF	ND	1.38		
1,2,3,4,6,7,8-HpCDF	31.8			
1,2,3,4,7,8,9-HpCDF	2.06			J
OCDF	168			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	81.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	65.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	78.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	83.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	78.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	67.8	40 - 135	
	13C-OCDD	71.2	40 - 135	
	13C-2,3,7,8-TCDF	74.6	40 - 135	
	13C-1,2,3,7,8-PeCDF	65.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	65.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	79.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	90.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	75.3	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	74.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	65.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	63.6	40 - 135	
	13C-OCDF	60.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	87.0	40 - 135	

Totals		
Total TCDD	22.0	22.4
Total PeCDD	64.9	67.8
Total HxCDD	117	
Total HpCDD	521	
Total TCDF	3.98	6.73
Total PeCDF	5.69	8.94
Total HxCDF	30.1	32.1
Total HpCDF	149	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 13.1

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: A1-41 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Soil	Lab Sample:	32550-005	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	6.71 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	78.0	Date Analyzed DB-5:	17-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0910						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.742			J
1,2,3,7,8-PeCDD	13.3			
1,2,3,4,7,8-HxCDD	34.7			
1,2,3,6,7,8-HxCDD	31.3			
1,2,3,7,8,9-HxCDD	73.0			
1,2,3,4,6,7,8-HpCDD	2140			
OCDD	28300			E J
2,3,7,8-TCDF	ND	0.798		
1,2,3,7,8-PeCDF	ND		1.08	UX
2,3,4,7,8-PeCDF	4.35			J
1,2,3,4,7,8-HxCDF	13.8			
1,2,3,6,7,8-HxCDF	17.1			
2,3,4,6,7,8-HxCDF	27.0			
1,2,3,7,8,9-HxCDF	2.26			J
1,2,3,4,6,7,8-HpCDF	546			
1,2,3,4,7,8,9-HpCDF	22.5			
OCDF	1140			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	86.2	40 - 135	
	13C-1,2,3,7,8-PeCDD	74.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	95.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	90.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	87.0	40 - 135	
	13C-OCDD	118	40 - 135	
	13C-2,3,7,8-TCDF	82.6	40 - 135	
	13C-1,2,3,7,8-PeCDF	73.5	40 - 135	
	13C-2,3,4,7,8-PeCDF	79.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	90.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	96.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	81.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	76.7	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	73.5	40 - 135	
	13C-OCDF	73.8	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	86.2	40 - 135	

Totals		
Total TCDD	0.742	3.08
Total PeCDD	61.4	62.3
Total HxCDD	563	
Total HpCDD	3970	
Total TCDF	12.0	
Total PeCDF	92.6	95.9
Total HxCDF	521	
Total HpCDF	1500	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 71.2

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: A1-42 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Soil	Lab Sample:	32550-006	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.04 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	71.4	Date Analyzed DB-5:	17-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0915						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.316	UX
1,2,3,7,8-PeCDD	ND		0.882	UX
1,2,3,4,7,8-HxCDD	ND		1.89	UX
1,2,3,6,7,8-HxCDD	4.18			J
1,2,3,7,8,9-HxCDD	3.48			J
1,2,3,4,6,7,8-HpCDD	160			
OCDD	9280			E J
2,3,7,8-TCDF	ND	0.622		
1,2,3,7,8-PeCDF	ND	0.840		
2,3,4,7,8-PeCDF	ND		0.778	UX
1,2,3,4,7,8-HxCDF	1.20			J
1,2,3,6,7,8-HxCDF	ND	1.03		
2,3,4,6,7,8-HxCDF	1.14			J
1,2,3,7,8,9-HxCDF	ND	0.783		
1,2,3,4,6,7,8-HpCDF	16.0			
1,2,3,4,7,8,9-HpCDF	ND		0.888	UX
OCDF	58.8			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	87.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	74.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	89.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	87.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	89.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	70.5	40 - 135	
	13C-OCDD	79.0	40 - 135	
	13C-2,3,7,8-TCDF	84.2	40 - 135	
	13C-1,2,3,7,8-PeCDF	77.0	40 - 135	
	13C-2,3,4,7,8-PeCDF	86.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	92.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	99.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	85.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	71.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	68.5	40 - 135	
	13C-OCDF	61.2	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	87.3	40 - 135	

Totals		
Total TCDD	2.70	3.01
Total PeCDD	6.57	8.26
Total HxCDD	46.8	48.7
Total HpCDD	378	
Total TCDF	3.22	
Total PeCDF	4.20	5.23
Total HxCDF	16.3	17.6
Total HpCDF	56.3	57.2

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 5.56

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: A1-43 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32550-007	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.78 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	65.4	Date Analyzed DB-5:	17-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0920						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.334	UX
1,2,3,7,8-PeCDD	ND	0.664		
1,2,3,4,7,8-HxCDD	ND	1.89		
1,2,3,6,7,8-HxCDD	ND	2.55		
1,2,3,7,8,9-HxCDD	ND	1.89		
1,2,3,4,6,7,8-HpCDD	79.1			
OCDD	4000			
2,3,7,8-TCDF	ND	0.490		
1,2,3,7,8-PeCDF	ND	0.637		
2,3,4,7,8-PeCDF	ND	0.619		
1,2,3,4,7,8-HxCDF	ND	0.800		
1,2,3,6,7,8-HxCDF	ND	0.404		
2,3,4,6,7,8-HxCDF	ND	0.498		
1,2,3,7,8,9-HxCDF	ND	0.685		
1,2,3,4,6,7,8-HpCDF	5.72			
1,2,3,4,7,8,9-HpCDF	ND	0.887		
OCDF	21.7			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	81.7	40 - 135	
	13C-1,2,3,7,8-PeCDD	67.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	79.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	78.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	76.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	64.0	40 - 135	
	13C-OCDD	65.3	40 - 135	
	13C-2,3,7,8-TCDF	76.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	68.1	40 - 135	
	13C-2,3,4,7,8-PeCDF	70.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	87.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	90.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	76.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	71.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	61.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	58.2	40 - 135	
	13C-OCDF	57.2	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	79.6	40 - 135	

Totals				
Total TCDD	ND		0.334	UX
Total PeCDD	ND		2.34	UX
Total HxCDD	23.0			
Total HpCDD	238			
Total TCDF	ND	0.490		
Total PeCDF	ND		0.446	UX
Total HxCDF	4.45			
Total HpCDF	22.7			

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 2.05

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: A1-44 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32550-008	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.84 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	64.1	Date Analyzed DB-5:	18-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0925						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.490		
1,2,3,7,8-PeCDD	3.04			J
1,2,3,4,7,8-HxCDD	6.46			
1,2,3,6,7,8-HxCDD	24.2			
1,2,3,7,8,9-HxCDD	11.2			
1,2,3,4,6,7,8-HpCDD	670			
OCDD	10300			E J
2,3,7,8-TCDF	0.589			J
1,2,3,7,8-PeCDF	2.27			J
2,3,4,7,8-PeCDF	14.9			
1,2,3,4,7,8-HxCDF	28.5			
1,2,3,6,7,8-HxCDF	7.22			
2,3,4,6,7,8-HxCDF	12.3			
1,2,3,7,8,9-HxCDF	7.74			
1,2,3,4,6,7,8-HpCDF	130			
1,2,3,4,7,8,9-HpCDF	14.8			
OCDF	596			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	85.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	74.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	88.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	85.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	84.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	74.6	40 - 135	
	13C-OCDD	87.3	40 - 135	
	13C-2,3,7,8-TCDF	83.1	40 - 135	
	13C-1,2,3,7,8-PeCDF	75.1	40 - 135	
	13C-2,3,4,7,8-PeCDF	79.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	89.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	98.8	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	82.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	79.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	72.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	67.3	40 - 135	
	13C-OCDF	66.8	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	83.9	40 - 135	

Totals		
Total TCDD	4.79	
Total PeCDD	30.7	31.7
Total HxCDD	205	
Total HpCDD	1680	
Total TCDF	7.31	10.2
Total PeCDF	80.6	
Total HxCDF	255	257
Total HpCDF	666	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 28.8

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: A1-45 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Soil	Lab Sample:	32550-010	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.06 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	71.6	Date Analyzed DB-5:	18-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0940						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.676	UX
1,2,3,7,8-PeCDD	ND	0.967		
1,2,3,4,7,8-HxCDD	ND	1.54		
1,2,3,6,7,8-HxCDD	ND	1.84		
1,2,3,7,8,9-HxCDD	0.943			J
1,2,3,4,6,7,8-HpCDD	55.2			
OCDD	7630			
2,3,7,8-TCDF	ND	0.477		
1,2,3,7,8-PeCDF	ND	0.719		
2,3,4,7,8-PeCDF	ND	0.676		
1,2,3,4,7,8-HxCDF	0.751			J
1,2,3,6,7,8-HxCDF	ND	0.554		
2,3,4,6,7,8-HxCDF	ND	0.719		
1,2,3,7,8,9-HxCDF	ND	0.892		
1,2,3,4,6,7,8-HpCDF	5.36			
1,2,3,4,7,8,9-HpCDF	ND	0.801		
OCDF	20.7			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	85.0	40 - 135	
	13C-1,2,3,7,8-PeCDD	75.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	88.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	86.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	86.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	73.0	40 - 135	
	13C-OCDD	84.8	40 - 135	
	13C-2,3,7,8-TCDF	82.7	40 - 135	
	13C-1,2,3,7,8-PeCDF	73.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	76.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	89.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	91.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	81.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	78.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	72.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	70.4	40 - 135	
	13C-OCDF	67.2	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	84.9	40 - 135	

Totals			
Total TCDD	ND	0.676	UX
Total PeCDD	2.28	3.13	
Total HxCDD	11.8		
Total HpCDD	123		
Total TCDF	0.841		
Total PeCDF	0.762		
Total HxCDF	0.751	6.47	
Total HpCDF	20.8		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 3.07

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: A1-46 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32550-011	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.45 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	67.5	Date Analyzed DB-5:	18-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0945						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.610		
1,2,3,7,8-PeCDD	ND	0.984		
1,2,3,4,7,8-HxCDD	ND	3.96		
1,2,3,6,7,8-HxCDD	ND	3.81		
1,2,3,7,8,9-HxCDD	ND	4.21		
1,2,3,4,6,7,8-HpCDD	83.6			
OCDD	4370			
2,3,7,8-TCDF	ND	0.488		
1,2,3,7,8-PeCDF	ND	1.16		
2,3,4,7,8-PeCDF	1.30			J
1,2,3,4,7,8-HxCDF	1.75			J
1,2,3,6,7,8-HxCDF	ND	0.673		
2,3,4,6,7,8-HxCDF	ND	1.46		
1,2,3,7,8,9-HxCDF	ND	1.02		
1,2,3,4,6,7,8-HpCDF	9.81			
1,2,3,4,7,8,9-HpCDF	ND	1.28		
OCDF	35.6			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	77.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	62.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	79.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	81.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	76.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	63.1	40 - 135	
	13C-OCDD	67.4	40 - 135	
	13C-2,3,7,8-TCDF	76.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	58.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	62.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	79.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	83.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	75.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	73.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	63.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	61.1	40 - 135	
	13C-OCDF	56.7	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	87.5	40 - 135	

Totals				
Total TCDD	ND	0.792		
Total PeCDD	ND	1.26		
Total HxCDD	18.2			
Total HpCDD	185			
Total TCDF	ND		0.639	UX
Total PeCDF	1.30		4.71	
Total HxCDF	13.0		14.0	
Total HpCDF	34.6			

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 2.82

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: A1-47 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32550-009	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.75 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	64.8	Date Analyzed DB-5:	18-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0935						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.425		
1,2,3,7,8-PeCDD	ND	1.20		
1,2,3,4,7,8-HxCDD	ND		1.66	UX
1,2,3,6,7,8-HxCDD	9.38			
1,2,3,7,8,9-HxCDD	ND	3.39		
1,2,3,4,6,7,8-HpCDD	226			
OCDD	4970			
2,3,7,8-TCDF	ND		0.716	UX
1,2,3,7,8-PeCDF	2.18			J
2,3,4,7,8-PeCDF	28.6			
1,2,3,4,7,8-HxCDF	32.5			
1,2,3,6,7,8-HxCDF	7.26			
2,3,4,6,7,8-HxCDF	9.82			
1,2,3,7,8,9-HxCDF	9.32			
1,2,3,4,6,7,8-HpCDF	67.0			
1,2,3,4,7,8,9-HpCDF	8.48			
OCDF	263			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	85.2	40 - 135	
	13C-1,2,3,7,8-PeCDD	75.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	91.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	89.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	74.2	40 - 135	
	13C-OCDD	77.7	40 - 135	
	13C-2,3,7,8-TCDF	87.7	40 - 135	
	13C-1,2,3,7,8-PeCDF	77.7	40 - 135	
	13C-2,3,4,7,8-PeCDF	83.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	94.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	95.7	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	80.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	74.6	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	68.6	40 - 135	
	13C-OCDF	65.8	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	83.0	40 - 135	

Totals			
Total TCDD	ND	0.282	UX
Total PeCDD	1.79	7.62	
Total HxCDD	50.6	52.3	
Total HpCDD	472		
Total TCDF	8.59	9.31	
Total PeCDF	100	100	
Total HxCDF	202	203	
Total HpCDF	324		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 20.1

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 15:49

Sample ID: A1-48 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32550-012	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	6.72 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	76.0	Date Analyzed DB-5:	18-Apr-10	Dates Analyzed DB-225:	20-Apr-10
Time Collected:	1050						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.476		
1,2,3,7,8-PeCDD	2.63			J
1,2,3,4,7,8-HxCDD	7.80			
1,2,3,6,7,8-HxCDD	110			J
1,2,3,7,8,9-HxCDD	20.5			
1,2,3,4,6,7,8-HpCDD	6130			E J
OCDD	89100			D,E J
2,3,7,8-TCDF	1.91			
1,2,3,7,8-PeCDF	9.60			
2,3,4,7,8-PeCDF	96.9			J
1,2,3,4,7,8-HxCDF	222			J
1,2,3,6,7,8-HxCDF	40.7			
2,3,4,6,7,8-HxCDF	53.5			
1,2,3,7,8,9-HxCDF	46.3			
1,2,3,4,6,7,8-HpCDF	980			
1,2,3,4,7,8,9-HpCDF	87.8			
OCDF	5620			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	86.2	40 - 135	
	13C-1,2,3,7,8-PeCDD	66.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	83.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	86.3	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	84.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	109	40 - 135	
	13C-OCDD	113	40 - 135	D
	13C-2,3,7,8-TCDF	80.9	40 - 135	
	13C-1,2,3,7,8-PeCDF	68.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	68.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	87.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	94.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	83.7	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	87.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	86.8	40 - 135	
	13C-OCDF	112	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	85.9	40 - 135	

Totals		
Total TCDD	2.25	
Total PeCDD	14.1	18.7
Total HxCDD	496	J
Total HpCDD	12300	J
Total TCDF	23.8	30.8
Total PeCDF	422	432 J
Total HxCDF	1560	J
Total HpCDF	5980	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 183

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: A2-11 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Sediment	Lab Sample:	32549-003	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	8.07 g	QC Batch No.:	2956	Date Extracted:	19-Apr-10
Date Collected:	29-Mar-10	%Solids:	62.5	Date Analyzed DB-5:	21-Apr-10	Dates Analyzed DB-225:	21-Apr-10
Time Collected:	1550						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	9.63			
1,2,3,7,8-PeCDD	114			
1,2,3,4,7,8-HxCDD	805			
1,2,3,6,7,8-HxCDD	2010			
1,2,3,7,8,9-HxCDD	680			
1,2,3,4,6,7,8-HpCDD	111000			D
OCDD	573000			D,E
2,3,7,8-TCDF	9.19			
1,2,3,7,8-PeCDF	37.8			
2,3,4,7,8-PeCDF	221			
1,2,3,4,7,8-HxCDF	675			
1,2,3,6,7,8-HxCDF	154			
2,3,4,6,7,8-HxCDF	311			
1,2,3,7,8,9-HxCDF	159			
1,2,3,4,6,7,8-HpCDF	12100			E
1,2,3,4,7,8,9-HpCDF	968			
OCDF	61300			E

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	84.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	86.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	95.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	77.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	72.8	40 - 135	D
	13C-OCDD	173	40 - 135	D,I
	13C-2,3,7,8-TCDF	80.7	40 - 135	
	13C-1,2,3,7,8-PeCDF	77.0	40 - 135	
	13C-2,3,4,7,8-PeCDF	80.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	89.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	92.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.3	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	82.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	79.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	75.4	40 - 135	
	13C-OCDF	76.8	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	99.8	40 - 135	

Totals			
Total TCDD	482		
Total PeCDD	2820		
Total HxCDD	25600		
Total HpCDD	279000		D
Total TCDF	150	152	P
Total PeCDF	1460	1460	P
Total HxCDF	17200		P
Total HpCDF	73100		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **2100**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A2-12 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Sediment	Lab Sample:	32549-001	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.71 g	QC Batch No.:	2956	Date Extracted:	19-Apr-10
Date Collected:	29-Mar-10	%Solids:	64.9	Date Analyzed DB-5:	21-Apr-10	Dates Analyzed DB-225:	21-Apr-10
Time Collected:	1530						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	9.88			
1,2,3,7,8-PeCDD	173			
1,2,3,4,7,8-HxCDD	1280			
1,2,3,6,7,8-HxCDD	3980			
1,2,3,7,8,9-HxCDD	1080			
1,2,3,4,6,7,8-HpCDD	148000			E
OCDD	627000			D,E
2,3,7,8-TCDF	8.77			
1,2,3,7,8-PeCDF	49.1			
2,3,4,7,8-PeCDF	302			
1,2,3,4,7,8-HxCDF	1270			
1,2,3,6,7,8-HxCDF	289			P
2,3,4,6,7,8-HxCDF	606			
1,2,3,7,8,9-HxCDF	255			
1,2,3,4,6,7,8-HpCDF	24700			E
1,2,3,4,7,8,9-HpCDF	2000			
OCDF	119000			E

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	99.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	86.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	82.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	89.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	70.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	74.1	40 - 135	
	13C-OCDD	260	40 - 135	D,I
	13C-2,3,7,8-TCDF	87.9	40 - 135	
	13C-1,2,3,7,8-PeCDF	86.6	40 - 135	
	13C-2,3,4,7,8-PeCDF	84.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	87.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	92.5	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	73.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	81.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	72.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	67.8	40 - 135	
	13C-OCDF	59.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	94.3	40 - 135	

Totals		
Total TCDD	400	
Total PeCDD	3350	
Total HxCDD	43800	
Total HpCDD	355000	
Total TCDF	204	P
Total PeCDF	2180	P
Total HxCDF	33200	P
Total HpCDF	141000	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 3120

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A2-13 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32549-004	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.16 g	QC Batch No.:	2967	Date Extracted:	21-Apr-10
Date Collected:	29-Mar-10	%Solids:	70.2	Date Analyzed DB-5:	22-Apr-10	Dates Analyzed DB-225:	26-Apr-10
Time Collected:	1520						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.480			J
1,2,3,7,8-PeCDD	3.63			J
1,2,3,4,7,8-HxCDD	13.2			
1,2,3,6,7,8-HxCDD	29.0			
1,2,3,7,8,9-HxCDD	12.5			
1,2,3,4,6,7,8-HpCDD	1000			
OCDD	13500			E J
2,3,7,8-TCDF	1.23			
1,2,3,7,8-PeCDF	ND		0.850	UX
2,3,4,7,8-PeCDF	2.87			J
1,2,3,4,7,8-HxCDF	8.39			
1,2,3,6,7,8-HxCDF	3.32			J
2,3,4,6,7,8-HxCDF	6.83			
1,2,3,7,8,9-HxCDF	1.88			J
1,2,3,4,6,7,8-HpCDF	251			
1,2,3,4,7,8,9-HpCDF	16.4			
OCDF	1350			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	92.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	98.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	103	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	102	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	115	40 - 135	
	13C-OCDD	134	40 - 135	
	13C-2,3,7,8-TCDF	88.7	40 - 135	
	13C-1,2,3,7,8-PeCDF	99.3	40 - 135	
	13C-2,3,4,7,8-PeCDF	103	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	84.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	91.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	90.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	93.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	97.6	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	102	40 - 135	
	13C-OCDF	114	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	87.1	40 - 135	

Totals		
Total TCDD	92.6	99.0
Total PeCDD	108	110
Total HxCDD	280	
Total HpCDD	2020	
Total TCDF	23.3	31.5
Total PeCDF	31.5	33.3
Total HxCDF	262	
Total HpCDF	1260	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 29.7

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: **FIELD DUPLICATE#1** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32549-005	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.32 g	QC Batch No.:	2967	Date Extracted:	21-Apr-10
Date Collected:	29-Mar-10	%Solids:	68.5	Date Analyzed DB-5:	22-Apr-10	Dates Analyzed DB-225:	26-Apr-10
Time Collected:	NA						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.768			J
1,2,3,7,8-PeCDD	7.55			
1,2,3,4,7,8-HxCDD	30.0			
1,2,3,6,7,8-HxCDD	72.6			
1,2,3,7,8,9-HxCDD	30.8			
1,2,3,4,6,7,8-HpCDD	2570			
OCDD	35100			E J
2,3,7,8-TCDF	2.26			
1,2,3,7,8-PeCDF	2.92			J
2,3,4,7,8-PeCDF	7.15			
1,2,3,4,7,8-HxCDF	21.8			
1,2,3,6,7,8-HxCDF	8.42			
2,3,4,6,7,8-HxCDF	16.1			
1,2,3,7,8,9-HxCDF	4.80			J
1,2,3,4,6,7,8-HpCDF	611			
1,2,3,4,7,8,9-HpCDF	39.5			
OCDF	3190			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	94.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	99.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	108	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	98.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	99.3	40 - 135	
	13C-OCDD	103	40 - 135	
	13C-2,3,7,8-TCDF	92.9	40 - 135	
	13C-1,2,3,7,8-PeCDF	92.8	40 - 135	
	13C-2,3,4,7,8-PeCDF	95.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	89.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	93.9	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	90.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	90.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	85.9	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	82.2	40 - 135	
	13C-OCDF	87.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	84.9	40 - 135	

Totals	
Total TCDD	119
Total PeCDD	207
Total HxCDD	778
Total HpCDD	5640
Total TCDF	47.8
Total PeCDF	85.0
Total HxCDF	729
Total HpCDF	3370

48.2
85.5

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **72.9**

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A2-14 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32549-006	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	2.62 g	QC Batch No.:	2975	Date Extracted:	23-Apr-10
Date Collected:	29-Mar-10	%Solids:	77.7	Date Analyzed DB-5:	25-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	1450						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	16.0			
1,2,3,7,8-PeCDD	237			
1,2,3,4,7,8-HxCDD	1430			
1,2,3,6,7,8-HxCDD	6330			
1,2,3,7,8,9-HxCDD	2300			
1,2,3,4,6,7,8-HpCDD	296000			E
OCDD	4850000			D,E
2,3,7,8-TCDF	ND	6.91		
1,2,3,7,8-PeCDF	25.6			J
2,3,4,7,8-PeCDF	104			
1,2,3,4,7,8-HxCDF	871			
1,2,3,6,7,8-HxCDF	241			
2,3,4,6,7,8-HxCDF	646			
1,2,3,7,8,9-HxCDF	142			
1,2,3,4,6,7,8-HpCDF	31600			
1,2,3,4,7,8,9-HpCDF	2580			
OCDF	202000			E

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	82.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	71.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	81.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	87.3	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	81.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	120	40 - 135	
	13C-OCDD	160	40 - 135	D,I
	13C-2,3,7,8-TCDF	80.2	40 - 135	
	13C-1,2,3,7,8-PeCDF	71.0	40 - 135	
	13C-2,3,4,7,8-PeCDF	72.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	81.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	83.0	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	76.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	81.6	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	71.4	40 - 135	
	13C-OCDF	130	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	75.2	40 - 135	

Totals			
Total TCDD	118	137	
Total PeCDD	1180	1210	
Total HxCDD	34400		
Total HpCDD	570000		
Total TCDF	159	177	
Total PeCDF	1260		P
Total HxCDF	38400		P
Total HpCDF	248000		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 6300

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A2-15 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32549-007	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.31 g	QC Batch No.:	2967	Date Extracted:	21-Apr-10
Date Collected:	29-Mar-10	%Solids:	69.7	Date Analyzed DB-5:	24-Apr-10	Dates Analyzed DB-225:	26-Apr-10
Time Collected:	1510						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	3.20			
1,2,3,7,8-PeCDD	48.1			
1,2,3,4,7,8-HxCDD	152			
1,2,3,6,7,8-HxCDD	1820			
1,2,3,7,8,9-HxCDD	355			
1,2,3,4,6,7,8-HpCDD	79800			D,E 5
OCDD	537000			D,E 5
2,3,7,8-TCDF	5.64			
1,2,3,7,8-PeCDF	25.7			
2,3,4,7,8-PeCDF	153			
1,2,3,4,7,8-HxCDF	733			
1,2,3,6,7,8-HxCDF	136			
2,3,4,6,7,8-HxCDF	281			
1,2,3,7,8,9-HxCDF	155			
1,2,3,4,6,7,8-HpCDF	10500			E 5
1,2,3,4,7,8,9-HpCDF	1200			
OCDF	61500			D

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	94.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	96.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	105	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	107	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	101	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	89.2	40 - 135	D
	13C-OCDD	89.2	40 - 135	D,I
	13C-2,3,7,8-TCDF	95.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	87.0	40 - 135	
	13C-2,3,4,7,8-PeCDF	100	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	91.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	91.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	93.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	91.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	96.0	40 - 135	
	13C-OCDF	73.2	40 - 135	D,I
CRS	37Cl-2,3,7,8-TCDD	90.1	40 - 135	

Totals

Total TCDD	35.0	36.9	
Total PeCDD	318		
Total HxCDD	17100		
Total HpCDD	235000		D 5
Total TCDF	75.8	79.1	P 5
Total PeCDF	983		P 5
Total HxCDF	15800		P 5
Total HpCDF	72700		5

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 1560

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A2-16 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32549-008	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	3.41 g	QC Batch No.:	2975	Date Extracted:	23-Apr-10
Date Collected:	29-Mar-10	%Solids:	60.8	Date Analyzed DB-5:	25-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	1500						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND	6.64		
1,2,3,7,8-PeCDD	133			
1,2,3,4,7,8-HxCDD	1090			
1,2,3,6,7,8-HxCDD	4620			
1,2,3,7,8,9-HxCDD	1170			
1,2,3,4,6,7,8-HpCDD	252000			E J
OCDD	3270000			D,E J
2,3,7,8-TCDF	ND		7.52	V X
1,2,3,7,8-PeCDF	62.4			
2,3,4,7,8-PeCDF	332			
1,2,3,4,7,8-HxCDF	1730			
1,2,3,6,7,8-HxCDF	352			
2,3,4,6,7,8-HxCDF	653			
1,2,3,7,8,9-HxCDF	355			
1,2,3,4,6,7,8-HpCDF	27900			
1,2,3,4,7,8,9-HpCDF	2470			
OCDF	158000			E J

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	92.7	40 - 135	
	13C-1,2,3,7,8-PeCDD	81.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	90.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	92.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	88.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	121	40 - 135	
	13C-OCDD	166	40 - 135	D,I
	13C-2,3,7,8-TCDF	90.1	40 - 135	
	13C-1,2,3,7,8-PeCDF	81.0	40 - 135	
	13C-2,3,4,7,8-PeCDF	83.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	89.6	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	92.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	86.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	81.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	83.6	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	78.6	40 - 135	
	13C-OCDF	115	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	84.9	40 - 135	

Totals

Total TCDD	139	144	
Total PeCDD	1710	1790	
Total HxCDD	52200		
Total HpCDD	757000		J
Total TCDF	167	186	
Total PeCDF	2210		
Total HxCDF	40300		P J
Total HpCDF	222000		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 5080

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors (WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A2-17 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32549-009	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	2.78 g	QC Batch No.:	2975	Date Extracted:	23-Apr-10
Date Collected:	29-Mar-10	%Solids:	72.5	Date Analyzed DB-5:	25-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	1440						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	9.44			J
1,2,3,7,8-PeCDD	137			
1,2,3,4,7,8-HxCDD	718			
1,2,3,6,7,8-HxCDD	3920			
1,2,3,7,8,9-HxCDD	1040			
1,2,3,4,6,7,8-HpCDD	181000			D,E J
OCDD	2630000			D,E J
2,3,7,8-TCDF	ND	10.0		
1,2,3,7,8-PeCDF	35.4			J
2,3,4,7,8-PeCDF	203			
1,2,3,4,7,8-HxCDF	961			
1,2,3,6,7,8-HxCDF	242			
2,3,4,6,7,8-HxCDF	482			
1,2,3,7,8,9-HxCDF	198			
1,2,3,4,6,7,8-HpCDF	22200			
1,2,3,4,7,8,9-HpCDF	1670			
OCDF	130000			E J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	84.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	96.3	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	93.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	89.0	40 - 135	D
	13C-OCDD	138	40 - 135	D,H
	13C-2,3,7,8-TCDF	87.7	40 - 135	
	13C-1,2,3,7,8-PeCDF	84.6	40 - 135	
	13C-2,3,4,7,8-PeCDF	85.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	87.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	86.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	90.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	94.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	104	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	112	40 - 135	
	13C-OCDF	183	40 - 135	H
CRS	37Cl-2,3,7,8-TCDD	82.3	40 - 135	

Totals			
Total TCDD	122	169	
Total PeCDD	906	1020	
Total HxCDD	22500		
Total HpCDD	368000	387000	J
Total TCDF	93.8	124	
Total PeCDF	1450	1480	
Total HxCDF	24500		P J
Total HpCDF	162000		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 3840

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A2-18 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32549-010	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	2.99 g	QC Batch No.:	2975	Date Extracted:	23-Apr-10
Date Collected:	29-Mar-10	%Solids:	67.6	Date Analyzed DB-5:	25-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	1430						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	7.57			J
1,2,3,7,8-PeCDD	ND		48.3	UX
1,2,3,4,7,8-HxCDD	182			
1,2,3,6,7,8-HxCDD	890			
1,2,3,7,8,9-HxCDD	296			
1,2,3,4,6,7,8-HpCDD	37000			
OCDD	583000			E J
2,3,7,8-TCDF	9.35			J
1,2,3,7,8-PeCDF	50.2			J
2,3,4,7,8-PeCDF	393			
1,2,3,4,7,8-HxCDF	994			
1,2,3,6,7,8-HxCDF	192			
2,3,4,6,7,8-HxCDF	278			
1,2,3,7,8,9-HxCDF	218			
1,2,3,4,6,7,8-HpCDF	4580			
1,2,3,4,7,8,9-HpCDF	440			
OCDF	25100			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.8	40 - 135	
	13C-1,2,3,7,8-PeCDD	86.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	90.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	94.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	88.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	86.3	40 - 135	
	13C-OCDD	125	40 - 135	
	13C-2,3,7,8-TCDF	91.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	83.0	40 - 135	
	13C-2,3,4,7,8-PeCDF	82.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	90.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	91.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	89.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	84.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	76.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	75.2	40 - 135	
	13C-OCDF	81.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.0	40 - 135	

Totals			
Total TCDD	118	150	
Total PeCDD	323	380	
Total HxCDD	6400		
Total HpCDD	88000		
Total TCDF	43.7	55.7	
Total PeCDF	1780		
Total HxCDF	8290		
Total HpCDF	28600		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 1040

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A2-19 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Sediment	Lab Sample:	32549-011	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	8.32 g	QC Batch No.:	2956	Date Extracted:	19-Apr-10
Date Collected:	29-Mar-10	%Solids:	60.6	Date Analyzed DB-5:	21-Apr-10	Dates Analyzed DB-225:	21-Apr-10
Time Collected:	1540						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	13.6			
1,2,3,7,8-PeCDD	244			
1,2,3,4,7,8-HxCDD	2000			
1,2,3,6,7,8-HxCDD	6970			E 5
1,2,3,7,8,9-HxCDD	2110			
1,2,3,4,6,7,8-HpCDD	262000			D,E 5
OCDD	709000			D,E 5
2,3,7,8-TCDF	11.0			
1,2,3,7,8-PeCDF	62.3			
2,3,4,7,8-PeCDF	303			
1,2,3,4,7,8-HxCDF	1560			
1,2,3,6,7,8-HxCDF	366			
2,3,4,6,7,8-HxCDF	929			
1,2,3,7,8,9-HxCDF	295			
1,2,3,4,6,7,8-HpCDF	38100			E 5
1,2,3,4,7,8,9-HpCDF	3210			
OCDF	186000			E 5

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	130	40 - 135	
	13C-1,2,3,7,8-PeCDD	111	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	95.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	106	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	63.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	83.9	40 - 135	D
	13C-OCDD	481	40 - 135	D,I
	13C-2,3,7,8-TCDF	99.2	40 - 135	
	13C-1,2,3,7,8-PeCDF	89.6	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	100	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	107	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	95.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	79.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	75.2	40 - 135	
	13C-OCDF	57.0	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	129	40 - 135	

Totals				
Total TCDD	385			
Total PeCDD	3430			
Total HxCDD	60100			5
Total HpCDD	620000			D 5
Total TCDF	264		266	P 5
Total PeCDF	2590			P 5
Total HxCDF	50300			P 5
Total HpCDF	210000			5

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **5080**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A3-18 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32550-015	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	6.92 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	72.4	Date Analyzed DB-5:	18-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	1110						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.651		
1,2,3,7,8-PeCDD	ND	1.23		
1,2,3,4,7,8-HxCDD	1.41			J
1,2,3,6,7,8-HxCDD	ND		2.69	UX
1,2,3,7,8,9-HxCDD	ND	3.63		
1,2,3,4,6,7,8-HpCDD	111			
OCDD	4200			
2,3,7,8-TCDF	ND	0.460		
1,2,3,7,8-PeCDF	ND	0.851		
2,3,4,7,8-PeCDF	0.863			J
1,2,3,4,7,8-HxCDF	0.955			J
1,2,3,6,7,8-HxCDF	ND	0.821		
2,3,4,6,7,8-HxCDF	ND	0.968		
1,2,3,7,8,9-HxCDF	ND	1.34		
1,2,3,4,6,7,8-HpCDF	13.4			
1,2,3,4,7,8,9-HpCDF	ND	1.38		
OCDF	70.8			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	88.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	70.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	92.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	89.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	71.3	40 - 135	
	13C-OCDD	72.7	40 - 135	
	13C-2,3,7,8-TCDF	83.3	40 - 135	
	13C-1,2,3,7,8-PeCDF	72.1	40 - 135	
	13C-2,3,4,7,8-PeCDF	70.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	88.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	93.8	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	80.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	73.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	69.1	40 - 135	
	13C-OCDF	61.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	87.3	40 - 135	

Totals			
Total TCDD	0.872		
Total PeCDD	1.11		
Total HxCDD	17.3	20.0	
Total HpCDD	260		
Total TCDF	ND	0.365	UX
Total PeCDF	1.93	3.94	
Total HxCDF	16.8	18.2	
Total HpCDF	68.0		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 3.02

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: A3-19 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32550-016	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	8.02 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	63.4	Date Analyzed DB-5:	18-Apr-10	Dates Analyzed DB-225:	20-Apr-10
Time Collected:	1120						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.854	UX
1,2,3,7,8-PeCDD	8.66			
1,2,3,4,7,8-HxCDD	19.9			
1,2,3,6,7,8-HxCDD	59.1			
1,2,3,7,8,9-HxCDD	30.7			
1,2,3,4,6,7,8-HpCDD	2000			
OCDD	23800			E J
2,3,7,8-TCDF	1.19			
1,2,3,7,8-PeCDF	ND		2.45	UX
2,3,4,7,8-PeCDF	20.3			
1,2,3,4,7,8-HxCDF	36.1			
1,2,3,6,7,8-HxCDF	13.7			
2,3,4,6,7,8-HxCDF	24.0			
1,2,3,7,8,9-HxCDF	10.5			
1,2,3,4,6,7,8-HpCDF	435			
1,2,3,4,7,8,9-HpCDF	38.6			
OCDF	2080			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.0	40 - 135	
	13C-1,2,3,7,8-PeCDD	71.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	86.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	91.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	86.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	76.0	40 - 135	
	13C-OCDD	105	40 - 135	
	13C-2,3,7,8-TCDF	83.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	69.2	40 - 135	
	13C-2,3,4,7,8-PeCDF	71.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	98.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	97.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	84.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	76.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	72.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	70.5	40 - 135	
	13C-OCDF	66.2	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.0	40 - 135	

Totals		
Total TCDD	12.2	21.1
Total PeCDD	67.1	74.0
Total HxCDD	520	530
Total HpCDD	4670	
Total TCDF	27.6	29.4
Total PeCDF	144	147
Total HxCDF	680	
Total HpCDF	2290	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 66.8

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: A3-20 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32550-013	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	9.35 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	53.7	Date Analyzed DB-5:	18-Apr-10	Dates Analyzed DB-225:	20-Apr-10
Time Collected:	1100						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	ND		1.80	UX
1,2,3,7,8-PeCDD	14.4			
1,2,3,4,7,8-HxCDD	37.7			
1,2,3,6,7,8-HxCDD	118			
1,2,3,7,8,9-HxCDD	69.9			
1,2,3,4,6,7,8-HpCDD	4150			E J
OCDD	49100			E J
2,3,7,8-TCDF	1.90			
1,2,3,7,8-PeCDF	3.77			J
2,3,4,7,8-PeCDF	25.6			
1,2,3,4,7,8-HxCDF	46.5			
1,2,3,6,7,8-HxCDF	22.3			
2,3,4,6,7,8-HxCDF	41.0			
1,2,3,7,8,9-HxCDF	11.0			
1,2,3,4,6,7,8-HpCDF	815			
1,2,3,4,7,8,9-HpCDF	60.7			
OCDF	3660			

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	87.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	68.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	90.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	90.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	86.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	89.6	40 - 135	
	13C-OCDD	146	40 - 135	
	13C-2,3,7,8-TCDF	85.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	69.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	71.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	90.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	96.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	84.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	82.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	79.7	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	74.1	40 - 135	
	13C-OCDF	77.8	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	83.5	40 - 135	

Totals		
Total TCDD	25.1	28.3
Total PeCDD	108	
Total HxCDD	884	
Total HpCDD	8510	J
Total TCDF	69.1	78.9
Total PeCDF	277	
Total HxCDF	991	
Total HpCDF	3910	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 123

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 15:17

Sample ID: **FIELD DUPLICATE #4** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32550-014	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	10.2 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	49.2	Date Analyzed DB-5:	18-Apr-10	Dates Analyzed DB-225:	20-Apr-10
Time Collected:	NA						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	2.43			
1,2,3,7,8-PeCDD	16.2			
1,2,3,4,7,8-HxCDD	40.8			
1,2,3,6,7,8-HxCDD	133			
1,2,3,7,8,9-HxCDD	72.5			
1,2,3,4,6,7,8-HpCDD	4430			E J
OCDD	51800			E J
2,3,7,8-TCDF	2.64			
1,2,3,7,8-PeCDF	4.47			J
2,3,4,7,8-PeCDF	30.6			
1,2,3,4,7,8-HxCDF	54.2			
1,2,3,6,7,8-HxCDF	23.3			
2,3,4,6,7,8-HxCDF	48.9			
1,2,3,7,8,9-HxCDF	11.9			
1,2,3,4,6,7,8-HpCDF	925			
1,2,3,4,7,8,9-HpCDF	67.2			
OCDF	3950			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	85.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	67.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	85.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	87.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	83.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	81.1	40 - 135	
	13C-OCDD	132	40 - 135	
	13C-2,3,7,8-TCDF	79.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	67.1	40 - 135	
	13C-2,3,4,7,8-PeCDF	68.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	83.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	88.5	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	78.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	75.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	71.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	67.9	40 - 135	
	13C-OCDF	68.0	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	81.1	40 - 135	

Totals			
Total TCDD	28.5	32.7	
Total PeCDD	114	123	
Total HxCDD	970		
Total HpCDD	8980		J
Total TCDF	81.8	92.3	
Total PeCDF	309	310	
Total HxCDF	1130		
Total HpCDF	4200		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **138**

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: A3-21 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32550-019	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	9.80 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	51.0	Date Analyzed DB-5:	18-Apr-10	Dates Analyzed DB-225:	20-Apr-10
Time Collected:	1145						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	32.9			
1,2,3,7,8-PeCDD	375			
1,2,3,4,7,8-HxCDD	1360			
1,2,3,6,7,8-HxCDD	4960			E
1,2,3,7,8,9-HxCDD	2230			
1,2,3,4,6,7,8-HpCDD	160000			D,E
OCDD	570000			D,E
2,3,7,8-TCDF	16.2			
1,2,3,7,8-PeCDF	92.7			
2,3,4,7,8-PeCDF	721			
1,2,3,4,7,8-HxCDF	2580			
1,2,3,6,7,8-HxCDF	759			
2,3,4,6,7,8-HxCDF	1360			
1,2,3,7,8,9-HxCDF	441			
1,2,3,4,6,7,8-HpCDF	40600			E
1,2,3,4,7,8,9-HpCDF	3290			
OCDF	207000			E

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	94.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	73.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	97.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	107	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	87.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	132	40 - 135	D
	13C-OCDD	602	40 - 135	D,I,H
	13C-2,3,7,8-TCDF	83.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	70.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	70.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	113	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	110	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	88.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	85.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	124	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	73.4	40 - 135	
	13C-OCDF	127	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	96.7	40 - 135	

Totals		
Total TCDD	296	312
Total PeCDD	2730	
Total HxCDD	47300	
Total HpCDD	365000	
Total TCDF	394	396
Total PeCDF	5700	P
Total HxCDF	57400	P
Total HpCDF	277000	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 4270

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: A3-22 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32550-018	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	11.9 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	42.5	Date Analyzed DB-5:	18-Apr-10	Dates Analyzed DB-225:	20-Apr-10
Time Collected:	1135						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	22.4			
1,2,3,7,8-PeCDD	252			
1,2,3,4,7,8-HxCDD	780			
1,2,3,6,7,8-HxCDD	2580			
1,2,3,7,8,9-HxCDD	1370			
1,2,3,4,6,7,8-HpCDD	105000			D,E J
OCDD	471000			D,E J
2,3,7,8-TCDF	12.8			
1,2,3,7,8-PeCDF	68.1			
2,3,4,7,8-PeCDF	531			
1,2,3,4,7,8-HxCDF	1820			
1,2,3,6,7,8-HxCDF	545			
2,3,4,6,7,8-HxCDF	920			
1,2,3,7,8,9-HxCDF	322			
1,2,3,4,6,7,8-HpCDF	23700			E J
1,2,3,4,7,8,9-HpCDF	1770			
OCDF	98200			E J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.7	40 - 135	
	13C-1,2,3,7,8-PeCDD	74.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	95.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	105	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	90.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	74.4	40 - 135	D
	13C-OCDD	163	40 - 135	D,I,H
	13C-2,3,7,8-TCDF	83.7	40 - 135	
	13C-1,2,3,7,8-PeCDF	68.5	40 - 135	
	13C-2,3,4,7,8-PeCDF	74.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	103	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	98.7	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	89.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	87.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	117	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	73.5	40 - 135	
	13C-OCDF	134	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	91.4	40 - 135	

Totals			
Total TCDD	196	216	
Total PeCDD	1480		
Total HxCDD	21900		
Total HpCDD	223000		J
Total TCDF	276	282	
Total PeCDF	4140		
Total HxCDF	33900		J
Total HpCDF	150000		J

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 2750

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 15:17

Sample ID: A3-23 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32550-017	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	9.07 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	55.3	Date Analyzed DB-5:	18-Apr-10	Dates Analyzed DB-225:	20-Apr-10
Time Collected:	1125						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	4.98			
1,2,3,7,8-PeCDD	57.6			
1,2,3,4,7,8-HxCDD	165			
1,2,3,6,7,8-HxCDD	536			
1,2,3,7,8,9-HxCDD	258			
1,2,3,4,6,7,8-HpCDD	17200			E J
OCDD	137000			D,E J
2,3,7,8-TCDF	13.1			
1,2,3,7,8-PeCDF	56.0			
2,3,4,7,8-PeCDF	514			
1,2,3,4,7,8-HxCDF	1020			
1,2,3,6,7,8-HxCDF	227			
2,3,4,6,7,8-HxCDF	365			
1,2,3,7,8,9-HxCDF	260			
1,2,3,4,6,7,8-HpCDF	4510			E J
1,2,3,4,7,8,9-HpCDF	460			
OCDF	18900			E J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	88.1	40 - 135	
	13C-1,2,3,7,8-PeCDD	73.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	97.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	90.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	117	40 - 135	
	13C-OCDD	118	40 - 135	D
	13C-2,3,7,8-TCDF	83.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	72.2	40 - 135	
	13C-2,3,4,7,8-PeCDF	75.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	104	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	104	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	82.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	71.9	40 - 135	
	13C-OCDF	104	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	84.0	40 - 135	

Totals

Total TCDD	65.7	79.4	
Total PeCDD	566		
Total HxCDD	6310		
Total HpCDD	44700		J
Total TCDF	194	201	
Total PeCDF	2610		
Total HxCDF	10300		
Total HpCDF	31600		J

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 771

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: A3-24 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32550-020	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	9.14 g	QC Batch No.:	2951	Date Extracted:	16-Apr-10
Date Collected:	30-Mar-10	%Solids:	54.9	Date Analyzed DB-5:	18-Apr-10	Dates Analyzed DB-225:	20-Apr-10
Time Collected:	1200						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	37.5			
1,2,3,7,8-PeCDD	429			
1,2,3,4,7,8-HxCDD	1160			
1,2,3,6,7,8-HxCDD	3880			
1,2,3,7,8,9-HxCDD	2050			
1,2,3,4,6,7,8-HpCDD	117000			D,E
OCDD	524000			D,E
2,3,7,8-TCDF	61.5			
1,2,3,7,8-PeCDF	302			
2,3,4,7,8-PeCDF	2970			
1,2,3,4,7,8-HxCDF	7740			E
1,2,3,6,7,8-HxCDF	1730			
2,3,4,6,7,8-HxCDF	2320			
1,2,3,7,8,9-HxCDF	1650			
1,2,3,4,6,7,8-HpCDF	26800			E
1,2,3,4,7,8,9-HpCDF	2710			
OCDF	100000			E

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	84.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	67.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	85.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	92.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	84.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	73.3	40 - 135	D
	13C-OCDD	103	40 - 135	D
	13C-2,3,7,8-TCDF	78.7	40 - 135	
	13C-1,2,3,7,8-PeCDF	68.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	68.6	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	116	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	103	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	80.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	75.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	101	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	65.2	40 - 135	
	13C-OCDF	96.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	84.5	40 - 135	

Totals				
Total TCDD	311		318	
Total PeCDD	2080			
Total HxCDD	28100			
Total HpCDD	241000			
Total TCDF	760		769	P
Total PeCDF	16300			P
Total HxCDF	62200			
Total HpCDF	161000			

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 5080

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 21-Apr-2010 15:17

Sample ID: A4-1 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-018	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.89 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	63.5	Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	1050						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.651			J
1,2,3,7,8-PeCDD	2.07			J
1,2,3,4,7,8-HxCDD	3.32			J
1,2,3,6,7,8-HxCDD	6.92			
1,2,3,7,8,9-HxCDD	6.70			
1,2,3,4,6,7,8-HpCDD	248			
OCDD	10600			E 5
2,3,7,8-TCDF	0.756			J
1,2,3,7,8-PeCDF	0.583			J
2,3,4,7,8-PeCDF	3.39			J
1,2,3,4,7,8-HxCDF	2.01			J
1,2,3,6,7,8-HxCDF	1.74			J
2,3,4,6,7,8-HxCDF	2.51			J
1,2,3,7,8,9-HxCDF	ND	1.15		
1,2,3,4,6,7,8-HpCDF	23.7			
1,2,3,4,7,8,9-HpCDF	2.37			J
OCDF	76.4			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	89.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	80.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	95.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	90.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	79.4	40 - 135	
	13C-OCDD	91.6	40 - 135	
	13C-2,3,7,8-TCDF	87.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	80.1	40 - 135	
	13C-2,3,4,7,8-PeCDF	83.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	89.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	91.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	87.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	86.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	76.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	75.1	40 - 135	
	13C-OCDF	76.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	87.4	40 - 135	

Totals		
Total TCDD	6.03	8.65
Total PeCDD	14.4	18.6
Total HxCDD	79.5	
Total HpCDD	567	
Total TCDF	14.5	16.4
Total PeCDF	28.8	29.4
Total HxCDF	47.7	48.2
Total HpCDF	95.9	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 12.1

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A4-2 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-019	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.74 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	64.8	Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	1055						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.457	UX
1,2,3,7,8-PeCDD	ND		1.44	UX
1,2,3,4,7,8-HxCDD	4.17			J
1,2,3,6,7,8-HxCDD	10.2			
1,2,3,7,8,9-HxCDD	7.02			
1,2,3,4,6,7,8-HpCDD	352			
OCDD	12100			E J
2,3,7,8-TCDF	ND		0.624	UX
1,2,3,7,8-PeCDF	0.631			J
2,3,4,7,8-PeCDF	5.76			
1,2,3,4,7,8-HxCDF	3.26			J
1,2,3,6,7,8-HxCDF	1.99			J
2,3,4,6,7,8-HxCDF	3.86			J
1,2,3,7,8,9-HxCDF	0.976			J
1,2,3,4,6,7,8-HpCDF	42.3			
1,2,3,4,7,8,9-HpCDF	3.84			J
OCDF	186			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.1	40 - 135	
	13C-1,2,3,7,8-PeCDD	107	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	89.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	89.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	88.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	81.1	40 - 135	
	13C-OCDD	94.3	40 - 135	
	13C-2,3,7,8-TCDF	88.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	107	40 - 135	
	13C-2,3,4,7,8-PeCDF	113	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	86.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	88.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	81.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	76.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	75.4	40 - 135	
	13C-OCDF	76.8	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	92.0	40 - 135	

Totals		
Total TCDD	7.34	7.80
Total PeCDD	10.2	19.8
Total HxCDD	96.6	
Total HpCDD	777	
Total TCDF	12.1	14.1
Total PeCDF	45.2	45.6
Total HxCDF	80.9	81.7
Total HpCDF	208	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 12.6

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A4-3 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-020	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.46 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	67.2	Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	1100						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.551		
1,2,3,7,8-PeCDD	ND		0.645	UX
1,2,3,4,7,8-HxCDD	2.32			J
1,2,3,6,7,8-HxCDD	5.06			
1,2,3,7,8,9-HxCDD	4.13			J
1,2,3,4,6,7,8-HpCDD	209			
OCDD	9210			E J
2,3,7,8-TCDF	0.387			J
1,2,3,7,8-PeCDF	ND	0.581		
2,3,4,7,8-PeCDF	ND		1.01	UX
1,2,3,4,7,8-HxCDF	1.29			J
1,2,3,6,7,8-HxCDF	ND		0.540	UX
2,3,4,6,7,8-HxCDF	0.993			J
1,2,3,7,8,9-HxCDF	ND	0.399		
1,2,3,4,6,7,8-HpCDF	19.6			
1,2,3,4,7,8,9-HpCDF	1.57			J
OCDF	87.6			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	88.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	77.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	86.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	87.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	79.9	40 - 135	
	13C-OCDD	86.9	40 - 135	
	13C-2,3,7,8-TCDF	84.7	40 - 135	
	13C-1,2,3,7,8-PeCDF	82.2	40 - 135	
	13C-2,3,4,7,8-PeCDF	84.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	90.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	91.0	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	83.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	79.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	75.7	40 - 135	
	13C-OCDF	75.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	85.8	40 - 135	

Totals		
Total TCDD	1.25	1.71
Total PeCDD	4.17	7.48
Total HxCDD	46.2	
Total HpCDD	461	
Total TCDF	1.40	2.21
Total PeCDF	6.03	7.04
Total HxCDF	22.7	23.2
Total HpCDF	83.1	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 6.51

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A4-4 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-017	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	9.19 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	54.7	Date Analyzed DB-5:	20-Apr-10	Dates Analyzed DB-225:	21-Apr-10
Time Collected:	1020						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	1.46			
1,2,3,7,8-PeCDD	4.65			J
1,2,3,4,7,8-HxCDD	10.6			
1,2,3,6,7,8-HxCDD	24.6			
1,2,3,7,8,9-HxCDD	18.0			
1,2,3,4,6,7,8-HpCDD	755			
OCDD	15900			E
2,3,7,8-TCDF	1.32			
1,2,3,7,8-PeCDF	1.16			J
2,3,4,7,8-PeCDF	9.87			
1,2,3,4,7,8-HxCDF	7.65			
1,2,3,6,7,8-HxCDF	6.01			
2,3,4,6,7,8-HxCDF	9.71			
1,2,3,7,8,9-HxCDF	2.45			J
1,2,3,4,6,7,8-HpCDF	132			
1,2,3,4,7,8,9-HpCDF	10.4			
OCDF	477			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	89.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	82.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	86.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	92.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	89.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	81.1	40 - 135	
	13C-OCDD	91.4	40 - 135	
	13C-2,3,7,8-TCDF	87.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	80.8	40 - 135	
	13C-2,3,4,7,8-PeCDF	85.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	86.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	89.0	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	81.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	75.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	73.3	40 - 135	
	13C-OCDF	73.6	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	85.1	40 - 135	

Totals			
Total TCDD	14.2	18.4	
Total PeCDD	46.4		
Total HxCDD	221		
Total HpCDD	1620		
Total TCDF	41.0	43.0	
Total PeCDF	95.8	96.6	P
Total HxCDF	198	199	P
Total HpCDF	519		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 31.0

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A4-5 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-015	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.86 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	64.3	Date Analyzed DB-5:	20-Apr-10	Dates Analyzed DB-225:	21-Apr-10
Time Collected:	1010						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.541	U X
1,2,3,7,8-PeCDD	2.32			J
1,2,3,4,7,8-HxCDD	3.44			J
1,2,3,6,7,8-HxCDD	7.68			
1,2,3,7,8,9-HxCDD	6.17			
1,2,3,4,6,7,8-HpCDD	215			
OCDD	6340			
2,3,7,8-TCDF	2.65			
1,2,3,7,8-PeCDF	1.57			J
2,3,4,7,8-PeCDF	63.5			
1,2,3,4,7,8-HxCDF	4.40			J
1,2,3,6,7,8-HxCDF	6.75			
2,3,4,6,7,8-HxCDF	19.5			
1,2,3,7,8,9-HxCDF	2.89			J
1,2,3,4,6,7,8-HpCDF	25.5			
1,2,3,4,7,8,9-HpCDF	2.05			J
OCDF	57.4			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	89.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	85.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	90.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	93.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	86.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	70.5	40 - 135	
	13C-OCDD	75.5	40 - 135	
	13C-2,3,7,8-TCDF	85.9	40 - 135	
	13C-1,2,3,7,8-PeCDF	84.5	40 - 135	
	13C-2,3,4,7,8-PeCDF	86.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	90.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	80.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	69.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	68.1	40 - 135	
	13C-OCDF	64.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	87.2	40 - 135	

Totals			
Total TCDD	17.6	20.2	
Total PeCDD	37.5		
Total HxCDD	119		
Total HpCDD	527		
Total TCDF	144	147	
Total PeCDF	478		P 5
Total HxCDF	255		
Total HpCDF	85.3		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 31.1

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors (WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A4-6 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-016	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	9.35 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	53.6	Date Analyzed DB-5:	20-Apr-10	Dates Analyzed DB-225:	21-Apr-10
Time Collected:	1015						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	1.73			
1,2,3,7,8-PeCDD	7.24			
1,2,3,4,7,8-HxCDD	15.5			
1,2,3,6,7,8-HxCDD	39.4			
1,2,3,7,8,9-HxCDD	25.3			
1,2,3,4,6,7,8-HpCDD	1350			
OCDD	21100			E 4
2,3,7,8-TCDF	2.36			
1,2,3,7,8-PeCDF	2.39			J
2,3,4,7,8-PeCDF	12.9			
1,2,3,4,7,8-HxCDF	12.3			
1,2,3,6,7,8-HxCDF	8.14			
2,3,4,6,7,8-HxCDF	13.8			
1,2,3,7,8,9-HxCDF	3.62			J
1,2,3,4,6,7,8-HpCDF	204			
1,2,3,4,7,8,9-HpCDF	15.8			
OCDF	759			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	95.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	83.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	92.6	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	93.3	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	90.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	88.9	40 - 135	
	13C-OCDD	134	40 - 135	
	13C-2,3,7,8-TCDF	87.9	40 - 135	
	13C-1,2,3,7,8-PeCDF	85.1	40 - 135	
	13C-2,3,4,7,8-PeCDF	85.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	89.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	91.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	86.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	83.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	79.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	82.3	40 - 135	
	13C-OCDF	100	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	93.6	40 - 135	

Totals			
Total TCDD	26.2	27.1	
Total PeCDD	76.7		
Total HxCDD	548		
Total HpCDD	4850		
Total TCDF	62.9	67.6	P 4
Total PeCDF	123	125	P 4
Total HxCDF	311		P 4
Total HpCDF	867		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 47.2

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A4-7 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-007	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.85 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	63.8	Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0830						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.247		
1,2,3,7,8-PeCDD	0.623			J
1,2,3,4,7,8-HxCDD	1.43			J
1,2,3,6,7,8-HxCDD	2.87			J
1,2,3,7,8,9-HxCDD	2.53			J
1,2,3,4,6,7,8-HpCDD	106			
OCDD	5030			
2,3,7,8-TCDF	ND	0.271		
1,2,3,7,8-PeCDF	ND	0.660		
2,3,4,7,8-PeCDF	0.971			J
1,2,3,4,7,8-HxCDF	0.767			J
1,2,3,6,7,8-HxCDF	0.579			J
2,3,4,6,7,8-HxCDF	0.912			J
1,2,3,7,8,9-HxCDF	ND	0.546		
1,2,3,4,6,7,8-HpCDF	11.8			
1,2,3,4,7,8,9-HpCDF	1.22			J
OCDF	42.1			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	87.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	84.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	89.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	87.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	85.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	79.2	40 - 135	
	13C-OCDD	102	40 - 135	
	13C-2,3,7,8-TCDF	86.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	88.8	40 - 135	
	13C-2,3,4,7,8-PeCDF	92.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	87.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	89.0	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	81.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	75.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	76.1	40 - 135	
	13C-OCDF	88.4	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.8	40 - 135	

Totals			
Total TCDD	ND	0.713	
Total PeCDD	4.03		4.93
Total HxCDD	34.8		
Total HpCDD	244		
Total TCDF	2.25		
Total PeCDF	7.30		7.82
Total HxCDF	17.1		17.3
Total HpCDF	44.4		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 4.54

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors (WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A4-8 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32551-008	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.51 g	QC Batch No.:	2956	Date Extracted:	19-Apr-10
Date Collected:	31-Mar-10	%Solids:	66.9	Date Analyzed DB-5:	21-Apr-10	Dates Analyzed DB-225:	21-Apr-10
Time Collected:	0835						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.716			J
1,2,3,7,8-PeCDD	3.48			J
1,2,3,4,7,8-HxCDD	7.66			
1,2,3,6,7,8-HxCDD	16.0			
1,2,3,7,8,9-HxCDD	13.1			
1,2,3,4,6,7,8-HpCDD	474			
OCDD	8690			E J
2,3,7,8-TCDF	0.820			J
1,2,3,7,8-PeCDF	0.528			J
2,3,4,7,8-PeCDF	5.98			
1,2,3,4,7,8-HxCDF	5.21			
1,2,3,6,7,8-HxCDF	3.48			J
2,3,4,6,7,8-HxCDF	6.04			
1,2,3,7,8,9-HxCDF	1.37			J
1,2,3,4,6,7,8-HpCDF	82.4			
1,2,3,4,7,8,9-HpCDF	5.79			
OCDF	280			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	89.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	77.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	88.6	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	94.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	91.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	80.7	40 - 135	
	13C-OCDD	100	40 - 135	
	13C-2,3,7,8-TCDF	87.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	82.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	80.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	88.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	92.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	86.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	87.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	79.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	76.9	40 - 135	
	13C-OCDF	87.2	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	84.0	40 - 135	

Totals		
Total TCDD	5.24	6.11
Total PeCDD	30.0	
Total HxCDD	154	
Total HpCDD	1030	
Total TCDF	22.0	23.3
Total PeCDF	54.9	55.5
Total HxCDF	115	
Total HpCDF	290	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 19.7

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 10:23

Sample ID: **FIELD DUPLICATE #6** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Soil	Lab Sample:	32551-009	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.31 g	QC Batch No.:	2956	Date Extracted:	19-Apr-10
Date Collected:	31-Mar-10	%Solids:	69.0	Date Analyzed DB-5:	21-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	NA						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	0.635			J
1,2,3,7,8-PeCDD	3.41			J
1,2,3,4,7,8-HxCDD	7.05			
1,2,3,6,7,8-HxCDD	13.7			
1,2,3,7,8,9-HxCDD	11.4			
1,2,3,4,6,7,8-HpCDD	431			
OCDD	8570			E J
2,3,7,8-TCDF	0.873			J
1,2,3,7,8-PeCDF	0.691			J
2,3,4,7,8-PeCDF	5.19			
1,2,3,4,7,8-HxCDF	4.28			J
1,2,3,6,7,8-HxCDF	3.11			J
2,3,4,6,7,8-HxCDF	4.98			
1,2,3,7,8,9-HxCDF	1.26			J
1,2,3,4,6,7,8-HpCDF	75.1			
1,2,3,4,7,8,9-HpCDF	6.03			
OCDF	246			

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.3	40 - 135	
	13C-1,2,3,7,8-PeCDD	81.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	90.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	95.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	89.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	83.9	40 - 135	
	13C-OCDD	89.1	40 - 135	
	13C-2,3,7,8-TCDF	87.9	40 - 135	
	13C-1,2,3,7,8-PeCDF	81.2	40 - 135	
	13C-2,3,4,7,8-PeCDF	82.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	91.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	93.1	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	87.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	81.7	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	77.8	40 - 135	
	13C-OCDF	78.2	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.1	40 - 135	

Totals

Total TCDD	5.94	8.34	
Total PeCDD	25.2	29.0	
Total HxCDD	149		
Total HpCDD	965		
Total TCDF	15.2	18.5	
Total PeCDF	51.4	52.0	
Total HxCDF	104		
Total HpCDF	264		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 18.1

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 07:30

Sample ID: A4-9 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Soil	Lab Sample:	32551-010	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	8.09 g	QC Batch No.:	2956	Date Extracted:	19-Apr-10
Date Collected:	31-Mar-10	%Solids:	62.0	Date Analyzed DB-5:	21-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0840						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.245			J
1,2,3,7,8-PeCDD	ND	0.620		
1,2,3,4,7,8-HxCDD	ND		1.45	UX
1,2,3,6,7,8-HxCDD	1.67			J
1,2,3,7,8,9-HxCDD	1.82			J
1,2,3,4,6,7,8-HpCDD	59.6			
OCDD	1570			
2,3,7,8-TCDF	ND	0.379		
1,2,3,7,8-PeCDF	ND	0.512		
2,3,4,7,8-PeCDF	ND	0.933		
1,2,3,4,7,8-HxCDF	ND	0.413		
1,2,3,6,7,8-HxCDF	ND	0.417		
2,3,4,6,7,8-HxCDF	ND	0.484		
1,2,3,7,8,9-HxCDF	ND	0.363		
1,2,3,4,6,7,8-HpCDF	2.54			J
1,2,3,4,7,8,9-HpCDF	ND	0.676		
OCDF	7.21			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	93.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	97.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	95.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	97.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	94.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	87.2	40 - 135	
	13C-OCDD	85.5	40 - 135	
	13C-2,3,7,8-TCDF	91.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	106	40 - 135	
	13C-2,3,4,7,8-PeCDF	105	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	90.6	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	92.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	89.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	91.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	83.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	82.1	40 - 135	
	13C-OCDF	76.7	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.5	40 - 135	

Totals			
Total TCDD	0.493		0.897
Total PeCDD	3.36		4.05
Total HxCDD	25.6		27.0
Total HpCDD	148		
Total TCDF	ND	0.379	
Total PeCDF	1.59		
Total HxCDF	2.07		3.30
Total HpCDF	2.54		7.23

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 1.69

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 07:30

Sample ID: A4-10 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-011	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	6.90 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	72.4	Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0845						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.211		
1,2,3,7,8-PeCDD	0.830			J
1,2,3,4,7,8-HxCDD	2.04			J
1,2,3,6,7,8-HxCDD	2.22			J
1,2,3,7,8,9-HxCDD	2.27			J
1,2,3,4,6,7,8-HpCDD	84.0			
OCDD	3260			
2,3,7,8-TCDF	ND	0.349		
1,2,3,7,8-PeCDF	ND	0.404		
2,3,4,7,8-PeCDF	ND	0.403		
1,2,3,4,7,8-HxCDF	ND	0.325		
1,2,3,6,7,8-HxCDF	ND	0.320		
2,3,4,6,7,8-HxCDF	ND	0.407		
1,2,3,7,8,9-HxCDF	ND	0.539		
1,2,3,4,6,7,8-HpCDF	ND	0.582		
1,2,3,4,7,8,9-HpCDF	ND	0.429		
OCDF	ND		1.42	UX

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	87.0	40 - 135	
	13C-1,2,3,7,8-PeCDD	81.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	85.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	90.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	85.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	72.7	40 - 135	
	13C-OCDD	70.2	40 - 135	
	13C-2,3,7,8-TCDF	79.9	40 - 135	
	13C-1,2,3,7,8-PeCDF	81.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	82.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	87.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	88.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	81.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	77.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	70.4	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	67.3	40 - 135	
	13C-OCDF	62.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	84.1	40 - 135	

Totals				
Total TCDD	ND		0.336	UX
Total PeCDD	6.56		7.04	
Total HxCDD	41.7			
Total HpCDD	229			
Total TCDF	ND		0.390	UX
Total PeCDF	ND	0.404		
Total HxCDF	0.391		0.726	
Total HpCDF	ND		1.03	UX

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **3.30**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A5-6 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Sediment	Lab Sample:	32549-013	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	9.24 g	QC Batch No.:	2956	Date Extracted:	19-Apr-10
Date Collected:	30-Mar-10	%Solids:	54.3	Date Analyzed DB-5:	21-Apr-10	Dates Analyzed DB-225:	21-Apr-10
Time Collected:	0815						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	3.99			
1,2,3,7,8-PeCDD	32.5			
1,2,3,4,7,8-HxCDD	81.2			
1,2,3,6,7,8-HxCDD	277			
1,2,3,7,8,9-HxCDD	123			
1,2,3,4,6,7,8-HpCDD	9900			E 5
OCDD	94900			E 5
2,3,7,8-TCDF	1.55			
1,2,3,7,8-PeCDF	6.21			
2,3,4,7,8-PeCDF	35.5			
1,2,3,4,7,8-HxCDF	76.3			
1,2,3,6,7,8-HxCDF	24.6			
2,3,4,6,7,8-HxCDF	61.5			
1,2,3,7,8,9-HxCDF	22.4			
1,2,3,4,6,7,8-HpCDF	1380			
1,2,3,4,7,8,9-HpCDF	118			
OCDF	7430			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.8	40 - 135	
	13C-1,2,3,7,8-PeCDD	81.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	88.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	92.0	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	87.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	90.4	40 - 135	
	13C-OCDD	162	40 - 135	
	13C-2,3,7,8-TCDF	89.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	82.4	40 - 135	
	13C-2,3,4,7,8-PeCDF	85.0	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	92.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	91.5	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	85.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	84.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	80.7	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	76.3	40 - 135	
	13C-OCDF	117	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	85.4	40 - 135	

Totals				
Total TCDD	64.2			
Total PeCDD	325			
Total HxCDD	2910			
Total HpCDD	25500			5
Total TCDF	41.0		45.6	P 5
Total PeCDF	304		305	P 5
Total HxCDF	2290			
Total HpCDF	8560			

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 259

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: **FIELD DUPLICATE #2** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Sediment	Lab Sample:	32549-014	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	10.3 g	QC Batch No.:	2956	Date Extracted:	19-Apr-10
Date Collected:	30-Mar-10	%Solids:	48.5	Date Analyzed DB-5:	21-Apr-10	Dates Analyzed DB-225:	21-Apr-10
Time Collected:	NA						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	4.34			
1,2,3,7,8-PeCDD	44.3			
1,2,3,4,7,8-HxCDD	121			
1,2,3,6,7,8-HxCDD	405			
1,2,3,7,8,9-HxCDD	190			
1,2,3,4,6,7,8-HpCDD	15000			E
OCDD	167000			D,E
2,3,7,8-TCDF	1.88			
1,2,3,7,8-PeCDF	7.19			
2,3,4,7,8-PeCDF	41.6			
1,2,3,4,7,8-HxCDF	105			
1,2,3,6,7,8-HxCDF	36.1			
2,3,4,6,7,8-HxCDF	77.9			
1,2,3,7,8,9-HxCDF	25.6			
1,2,3,4,6,7,8-HpCDF	2350			
1,2,3,4,7,8,9-HpCDF	173			
OCDF	8960			E

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	92.0	40 - 135	
	13C-1,2,3,7,8-PeCDD	89.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	93.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	99.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	96.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	116	40 - 135	
	13C-OCDD	139	40 - 135	D
	13C-2,3,7,8-TCDF	86.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	93.3	40 - 135	
	13C-2,3,4,7,8-PeCDF	95.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	93.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	93.8	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	88.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	92.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	88.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	84.3	40 - 135	
	13C-OCDF	149	40 - 135	H
CRS	37Cl-2,3,7,8-TCDD	86.6	40 - 135	

Totals				
Total TCDD	66.4		69.8	
Total PeCDD	414			
Total HxCDD	3680			
Total HpCDD	37000			
Total TCDF	47.3		50.0	P
Total PeCDF	352			P
Total HxCDF	2680			
Total HpCDF	12800			

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **386**

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)
The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A5-7 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Sediment	Lab Sample:	32549-015	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	10.0 g	QC Batch No.:	2956	Date Extracted:	19-Apr-10
Date Collected:	30-Mar-10	%Solids:	50.5	Date Analyzed DB-5:	21-Apr-10	Dates Analyzed DB-225:	21-Apr-10
Time Collected:	1820						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	8.00			
1,2,3,7,8-PeCDD	75.6			
1,2,3,4,7,8-HxCDD	194			
1,2,3,6,7,8-HxCDD	823			
1,2,3,7,8,9-HxCDD	314			
1,2,3,4,6,7,8-HpCDD	23500			E J
OCDD	214000			D,E J
2,3,7,8-TCDF	2.81			
1,2,3,7,8-PeCDF	11.5			
2,3,4,7,8-PeCDF	70.6			
1,2,3,4,7,8-HxCDF	187			
1,2,3,6,7,8-HxCDF	61.3			
2,3,4,6,7,8-HxCDF	154			
1,2,3,7,8,9-HxCDF	48.7			
1,2,3,4,6,7,8-HpCDF	4340			E J
1,2,3,4,7,8,9-HpCDF	358			
OCDF	17800			E J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	88.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	93.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	95.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	94.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	145	40 - 135	H
	13C-OCDD	155	40 - 135	D,H
	13C-2,3,7,8-TCDF	88.6	40 - 135	
	13C-1,2,3,7,8-PeCDF	89.7	40 - 135	
	13C-2,3,4,7,8-PeCDF	92.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	95.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	93.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	87.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	88.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	101	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	101	40 - 135	
	13C-OCDF	185	40 - 135	H
CRS	37Cl-2,3,7,8-TCDD	90.8	40 - 135	

Totals				
Total TCDD	143		145	
Total PeCDD	838			
Total HxCDD	6980			
Total HpCDD	54300			J
Total TCDF	84.8		88.2	P J
Total PeCDF	637			P J
Total HxCDF	5960			
Total HpCDF	27700			J

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 635

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: A6-1 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-001	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.62 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	66.0	Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0730						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	0.944			J
1,2,3,7,8-PeCDD	7.46			
1,2,3,4,7,8-HxCDD	19.4			
1,2,3,6,7,8-HxCDD	69.2			
1,2,3,7,8,9-HxCDD	30.2			
1,2,3,4,6,7,8-HpCDD	2140			
OCDD	26000			E J
2,3,7,8-TCDF	ND	0.794		
1,2,3,7,8-PeCDF	1.30			J
2,3,4,7,8-PeCDF	6.12			
1,2,3,4,7,8-HxCDF	16.9			
1,2,3,6,7,8-HxCDF	7.23			
2,3,4,6,7,8-HxCDF	15.5			
1,2,3,7,8,9-HxCDF	4.30			J
1,2,3,4,6,7,8-HpCDF	382			J
1,2,3,4,7,8,9-HpCDF	29.7			
OCDF	1770			

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	89.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	92.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	86.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	93.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	88.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	87.3	40 - 135	
	13C-OCDD	109	40 - 135	
	13C-2,3,7,8-TCDF	84.9	40 - 135	
	13C-1,2,3,7,8-PeCDF	89.7	40 - 135	
	13C-2,3,4,7,8-PeCDF	96.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	82.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	88.3	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.3	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	84.0	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	78.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	73.9	40 - 135	
	13C-OCDF	82.7	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	84.1	40 - 135	

Totals			
Total TCDD	14.1	17.5	
Total PeCDD	72.5		
Total HxCDD	500		
Total HpCDD	4390		
Total TCDF	7.42	9.74	P J
Total PeCDF	66.3	66.6	P J
Total HxCDF	548		
Total HpCDF	2010		J

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 60.4

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A6-2 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-002	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.77 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	65.0	Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0800						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.562			J
1,2,3,7,8-PeCDD	2.60			J
1,2,3,4,7,8-HxCDD	6.41			
1,2,3,6,7,8-HxCDD	21.8			
1,2,3,7,8,9-HxCDD	10.8			
1,2,3,4,6,7,8-HpCDD	728			
OCDD	15200			E J
2,3,7,8-TCDF	0.249			J
1,2,3,7,8-PeCDF	0.532			J
2,3,4,7,8-PeCDF	1.82			J
1,2,3,4,7,8-HxCDF	3.93			J
1,2,3,6,7,8-HxCDF	1.77			J
2,3,4,6,7,8-HxCDF	4.10			J
1,2,3,7,8,9-HxCDF	ND	0.931		
1,2,3,4,6,7,8-HpCDF	123			
1,2,3,4,7,8,9-HpCDF	9.03			
OCDF	575			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.0	40 - 135	
	13C-1,2,3,7,8-PeCDD	90.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	93.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	91.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	90.4	40 - 135	
	13C-OCDD	111	40 - 135	
	13C-2,3,7,8-TCDF	89.3	40 - 135	
	13C-1,2,3,7,8-PeCDF	92.2	40 - 135	
	13C-2,3,4,7,8-PeCDF	95.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	92.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	93.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	86.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	84.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	83.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	82.6	40 - 135	
	13C-OCDF	88.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.6	40 - 135	

Totals			
Total TCDD	5.14	6.41	
Total PeCDD	20.1	21.4	
Total HxCDD	156		
Total HpCDD	1450		
Total TCDF	3.20	4.12	P J
Total PeCDF	17.0	18.0	P J
Total HxCDF	137		
Total HpCDF	572		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 22.0

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A6-3 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-003	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	8.70 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	58.3	Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0815						

Analyte	Conc. (pg/g)	DL [a]	EMPC [b]	Qualifiers
2,3,7,8-TCDD	0.460			J
1,2,3,7,8-PeCDD	2.24			J
1,2,3,4,7,8-HxCDD	4.76			J
1,2,3,6,7,8-HxCDD	10.1			
1,2,3,7,8,9-HxCDD	7.64			
1,2,3,4,6,7,8-HpCDD	341			
OCDD	12800			E J
2,3,7,8-TCDF	0.500			J
1,2,3,7,8-PeCDF	0.412			J
2,3,4,7,8-PeCDF	4.45			J
1,2,3,4,7,8-HxCDF	3.34			J
1,2,3,6,7,8-HxCDF	1.92			J
2,3,4,6,7,8-HxCDF	3.20			J
1,2,3,7,8,9-HxCDF	0.822			J
1,2,3,4,6,7,8-HpCDF	41.7			
1,2,3,4,7,8,9-HpCDF	ND		2.49	UX
OCDF	149			

	Labeled Standard	%R	LCL-UCL [d]	Qualifiers
IS	13C-2,3,7,8-TCDD	89.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	87.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	84.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	88.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	82.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	70.9	40 - 135	
	13C-OCDD	82.1	40 - 135	
	13C-2,3,7,8-TCDF	84.6	40 - 135	
	13C-1,2,3,7,8-PeCDF	88.7	40 - 135	
	13C-2,3,4,7,8-PeCDF	92.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	86.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	89.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	81.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	77.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	67.3	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	63.8	40 - 135	
	13C-OCDF	66.6	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.4	40 - 135	

Totals		
Total TCDD	4.00	5.66
Total PeCDD	17.9	20.7
Total HxCDD	111	
Total HpCDD	770	
Total TCDF	13.0	13.5
Total PeCDF	39.9	
Total HxCDF	61.9	
Total HpCDF	154	157

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 15.0

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A6-4 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Soil	Lab Sample:	32551-004	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	6.98 g	QC Batch No.:	2956	Date Extracted:	19-Apr-10
Date Collected:	31-Mar-10	%Solids:	72.2	Date Analyzed DB-5:	21-Apr-10	Dates Analyzed DB-225:	21-Apr-10
Time Collected:	0820						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.460	UX
1,2,3,7,8-PeCDD	3.07			J
1,2,3,4,7,8-HxCDD	7.19			
1,2,3,6,7,8-HxCDD	20.0			
1,2,3,7,8,9-HxCDD	12.5			
1,2,3,4,6,7,8-HpCDD	633			
OCDD	10400			E 5
2,3,7,8-TCDF	1.31			
1,2,3,7,8-PeCDF	1.15			J
2,3,4,7,8-PeCDF	16.9			
1,2,3,4,7,8-HxCDF	6.37			
1,2,3,6,7,8-HxCDF	4.28			J
2,3,4,6,7,8-HxCDF	9.27			
1,2,3,7,8,9-HxCDF	2.35			J
1,2,3,4,6,7,8-HpCDF	103			
1,2,3,4,7,8,9-HpCDF	8.45			
OCDF	459			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	91.0	40 - 135	
	13C-1,2,3,7,8-PeCDD	88.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	94.6	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	95.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	93.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	81.9	40 - 135	
	13C-OCDD	93.1	40 - 135	
	13C-2,3,7,8-TCDF	90.2	40 - 135	
	13C-1,2,3,7,8-PeCDF	92.2	40 - 135	
	13C-2,3,4,7,8-PeCDF	92.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	86.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	89.0	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	86.5	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	85.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	78.0	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	77.2	40 - 135	
	13C-OCDF	78.2	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	91.3	40 - 135	

Totals

Total TCDD	7.96	9.37	
Total PeCDD	29.1	30.1	
Total HxCDD	158		
Total HpCDD	1270		
Total TCDF	37.2	39.8	
Total PeCDF	132	133	P 5
Total HxCDF	174		
Total HpCDF	440		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **25.2**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 07:30

Sample ID: A6-5 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-005	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.56 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	67.4	Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0825						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.348		
1,2,3,7,8-PeCDD	0.786			J
1,2,3,4,7,8-HxCDD	1.79			J
1,2,3,6,7,8-HxCDD	2.66			J
1,2,3,7,8,9-HxCDD	2.58			J
1,2,3,4,6,7,8-HpCDD	91.6			
OCDD	2840			
2,3,7,8-TCDF	ND	0.507		
1,2,3,7,8-PeCDF	ND	0.389		
2,3,4,7,8-PeCDF	1.02			J
1,2,3,4,7,8-HxCDF	ND	0.502		
1,2,3,6,7,8-HxCDF	ND	0.500		
2,3,4,6,7,8-HxCDF	0.540			J
1,2,3,7,8,9-HxCDF	ND	0.271		
1,2,3,4,6,7,8-HpCDF	5.65			
1,2,3,4,7,8,9-HpCDF	ND	1.26		
OCDF	20.7			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	90.5	40 - 135	
	13C-1,2,3,7,8-PeCDD	93.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	89.7	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	93.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	89.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	80.5	40 - 135	
	13C-OCDD	79.1	40 - 135	
	13C-2,3,7,8-TCDF	89.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	98.2	40 - 135	
	13C-2,3,4,7,8-PeCDF	103	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	81.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	88.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	83.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	81.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	76.2	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	75.2	40 - 135	
	13C-OCDF	70.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	86.3	40 - 135	

Totals			
Total TCDD	0.729	1.56	
Total PeCDD	7.81		J
Total HxCDD	33.2	33.9	
Total HpCDD	221		
Total TCDF	1.96	3.14	
Total PeCDF	7.19		
Total HxCDF	8.05	8.83	
Total HpCDF	22.3		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 3.68

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: **FIELD DUPLICATE #5** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-006	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.42 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	67.4	Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	NA						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.344		
1,2,3,7,8-PeCDD	0.701			J
1,2,3,4,7,8-HxCDD	ND		1.20	UX
1,2,3,6,7,8-HxCDD	ND		2.61	UX
1,2,3,7,8,9-HxCDD	2.54			J
1,2,3,4,6,7,8-HpCDD	97.5			
OCDD	3240			
2,3,7,8-TCDF	ND	0.642		
1,2,3,7,8-PeCDF	ND	0.406		
2,3,4,7,8-PeCDF	0.761			J
1,2,3,4,7,8-HxCDF	ND	0.605		
1,2,3,6,7,8-HxCDF	ND	0.621		
2,3,4,6,7,8-HxCDF	0.621			J
1,2,3,7,8,9-HxCDF	ND	0.401		
1,2,3,4,6,7,8-HpCDF	7.48			
1,2,3,4,7,8,9-HpCDF	ND	0.713		
OCDF	25.9			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	88.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	100	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	88.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	92.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	91.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	98.7	40 - 135	
	13C-OCDD	110	40 - 135	
	13C-2,3,7,8-TCDF	85.8	40 - 135	
	13C-1,2,3,7,8-PeCDF	93.3	40 - 135	
	13C-2,3,4,7,8-PeCDF	104	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	83.1	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	86.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	84.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	86.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	86.8	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	92.7	40 - 135	
	13C-OCDF	98.2	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	85.8	40 - 135	

Totals			
Total TCDD	ND	0.506	UX
Total PeCDD	2.12	3.91	J
Total HxCDD	26.7	30.5	
Total HpCDD	226		
Total TCDF	0.775	1.09	
Total PeCDF	3.13	4.98	
Total HxCDF	7.98	8.61	
Total HpCDF	25.9		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **3.27**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A6-6 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-012	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	8.33 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	60.3	Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0915						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.468			J
1,2,3,7,8-PeCDD	1.87			J
1,2,3,4,7,8-HxCDD	3.72			J
1,2,3,6,7,8-HxCDD	10.7			
1,2,3,7,8,9-HxCDD	7.00			
1,2,3,4,6,7,8-HpCDD	358			
OCDD	11500			E J
2,3,7,8-TCDF	ND		0.299	U X
1,2,3,7,8-PeCDF	0.311			J
2,3,4,7,8-PeCDF	2.34			J
1,2,3,4,7,8-HxCDF	1.87			J
1,2,3,6,7,8-HxCDF	ND		1.14	U X
2,3,4,6,7,8-HxCDF	2.46			J
1,2,3,7,8,9-HxCDF	ND	0.666		
1,2,3,4,6,7,8-HpCDF	42.6			
1,2,3,4,7,8,9-HpCDF	2.60			J
OCDF	175			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	94.1	40 - 135	
	13C-1,2,3,7,8-PeCDD	94.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	93.2	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	94.2	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	92.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	77.9	40 - 135	
	13C-OCDD	89.0	40 - 135	
	13C-2,3,7,8-TCDF	92.2	40 - 135	
	13C-1,2,3,7,8-PeCDF	95.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	98.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	89.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	92.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	87.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	83.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	75.4	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	73.6	40 - 135	
	13C-OCDF	70.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	88.9	40 - 135	

Totals		
Total TCDD	2.96	4.67
Total PeCDD	14.2	16.6
Total HxCDD	104	
Total HpCDD	809	
Total TCDF	6.31	6.93
Total PeCDF	21.9	22.8
Total HxCDF	52.8	53.9
Total HpCDF	176	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **13.2**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors (WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A6-7 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-013	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.14 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	70.2	Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0920						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.321			J
1,2,3,7,8-PeCDD	0.761			J
1,2,3,4,7,8-HxCDD	1.74			J
1,2,3,6,7,8-HxCDD	4.18			J
1,2,3,7,8,9-HxCDD	2.95			J
1,2,3,4,6,7,8-HpCDD	136			
OCDD	3600			
2,3,7,8-TCDF	ND	0.339		
1,2,3,7,8-PeCDF	ND	0.683		
2,3,4,7,8-PeCDF	2.47			J
1,2,3,4,7,8-HxCDF	1.05			J
1,2,3,6,7,8-HxCDF	ND		0.701	UX
2,3,4,6,7,8-HxCDF	1.34			J
1,2,3,7,8,9-HxCDF	ND	0.562		
1,2,3,4,6,7,8-HpCDF	19.0			
1,2,3,4,7,8,9-HpCDF	1.40			J
OCDF	79.1			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	85.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	86.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	87.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	90.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	86.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	74.2	40 - 135	
	13C-OCDD	73.4	40 - 135	
	13C-2,3,7,8-TCDF	83.4	40 - 135	
	13C-1,2,3,7,8-PeCDF	87.9	40 - 135	
	13C-2,3,4,7,8-PeCDF	91.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	79.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	82.7	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	80.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	78.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	70.5	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	68.9	40 - 135	
	13C-OCDF	65.0	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	85.3	40 - 135	

Totals			
Total TCDD	3.65	4.68	
Total PeCDD	7.20	9.26	
Total HxCDD	40.7	41.6	
Total HpCDD	297		
Total TCDF	7.91	8.93	P J
Total PeCDF	17.1		P J
Total HxCDF	30.7	31.4	
Total HpCDF	80.0		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 5.62

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: A6-8 (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Sediment	Lab Sample:	32551-014	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	6.69 g	QC Batch No.:	2954	Date Extracted:	18-Apr-10
Date Collected:	31-Mar-10	%Solids:	76.7	Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	0925						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.196	UX
1,2,3,7,8-PeCDD	ND		0.750	UX
1,2,3,4,7,8-HxCDD	1.46			J
1,2,3,6,7,8-HxCDD	2.16			J
1,2,3,7,8,9-HxCDD	2.62			J
1,2,3,4,6,7,8-HpCDD	84.7			
OCDD	3360			
2,3,7,8-TCDF	ND	0.250		
1,2,3,7,8-PeCDF	ND	0.421		
2,3,4,7,8-PeCDF	ND	0.373		
1,2,3,4,7,8-HxCDF	ND	0.207		
1,2,3,6,7,8-HxCDF	ND	0.207		
2,3,4,6,7,8-HxCDF	ND	0.245		
1,2,3,7,8,9-HxCDF	ND	0.329		
1,2,3,4,6,7,8-HpCDF	1.30			J
1,2,3,4,7,8,9-HpCDF	ND	0.229		
OCDF	3.96			J

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	88.9	40 - 135	
	13C-1,2,3,7,8-PeCDD	81.4	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	86.8	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	89.8	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	84.2	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	71.5	40 - 135	
	13C-OCDD	73.8	40 - 135	
	13C-2,3,7,8-TCDF	85.0	40 - 135	
	13C-1,2,3,7,8-PeCDF	81.8	40 - 135	
	13C-2,3,4,7,8-PeCDF	84.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	84.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	87.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	81.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	77.9	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	68.4	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	67.9	40 - 135	
	13C-OCDF	64.3	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	83.3	40 - 135	

Totals		
Total TCDD	1.32	1.51
Total PeCDD	4.29	6.88
Total HxCDD	37.6	
Total HpCDD	216	
Total TCDF	0.374	0.566
Total PeCDF	0.299	0.644
Total HxCDF	ND	1.27
Total HpCDF	1.30	3.85

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 2.50

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 23-Apr-2010 08:24

Sample ID: NPL (0-6")

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Soil	Lab Sample:	32549-012	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	7.83 g	QC Batch No.:	2967	Date Extracted:	21-Apr-10
Date Collected:	29-Mar-10	%Solids:	64.4	Date Analyzed DB-5:	24-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	1600						

Analyte	Conc. (pg/g)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	0.630			J
1,2,3,7,8-PeCDD	2.44			J
1,2,3,4,7,8-HxCDD	4.75			J
1,2,3,6,7,8-HxCDD	11.4			
1,2,3,7,8,9-HxCDD	7.23			
1,2,3,4,6,7,8-HpCDD	413			
OCDD	12600			E 5
2,3,7,8-TCDF	0.928			J
1,2,3,7,8-PeCDF	0.808			J
2,3,4,7,8-PeCDF	3.28			J
1,2,3,4,7,8-HxCDF	3.55			J
1,2,3,6,7,8-HxCDF	1.95			J
2,3,4,6,7,8-HxCDF	3.48			J
1,2,3,7,8,9-HxCDF	ND	1.01		
1,2,3,4,6,7,8-HpCDF	51.8			
1,2,3,4,7,8,9-HpCDF	4.00			J
OCDF	215			

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	92.8	40 - 135	
	13C-1,2,3,7,8-PeCDD	91.7	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	96.6	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	101	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	98.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	91.6	40 - 135	
	13C-OCDD	112	40 - 135	
	13C-2,3,7,8-TCDF	88.9	40 - 135	
	13C-1,2,3,7,8-PeCDF	86.1	40 - 135	
	13C-2,3,4,7,8-PeCDF	90.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	86.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	89.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	90.6	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	89.3	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	82.7	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	84.2	40 - 135	
	13C-OCDF	90.2	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	89.2	40 - 135	

Totals		
Total TCDD	31.9	32.4
Total PeCDD	38.1	45.2
Total HxCDD	120	
Total HpCDD	854	
Total TCDF	20.1	21.5
Total PeCDF	22.9	
Total HxCDF	61.4	
Total HpCDF	212	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 15.9

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

The results are reported in dry weight. The sample size is reported in wet weight.

Analyst: MAS

Approved By: Martha M. Maier 28-Apr-2010 14:28

Sample ID: **RB032910** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	ARCADIS	Matrix:	Aqueous	Lab Sample:	32549-002	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	1.00 L	QC Batch No.:	2946	Date Extracted:	14-Apr-10
Date Collected:	29-Mar-10			Date Analyzed DB-5:	20-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	1730						

Analyte	Conc. (pg/L)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.231		
1,2,3,7,8-PeCDD	ND	0.299		
1,2,3,4,7,8-HxCDD	ND	0.321		
1,2,3,6,7,8-HxCDD	ND	0.332		
1,2,3,7,8,9-HxCDD	ND	0.324		
1,2,3,4,6,7,8-HpCDD	0.531			J,B
OCDD	2.82			J,B
2,3,7,8-TCDF	ND	0.218		
1,2,3,7,8-PeCDF	ND	0.248		
2,3,4,7,8-PeCDF	ND	0.226		
1,2,3,4,7,8-HxCDF	ND	0.163		
1,2,3,6,7,8-HxCDF	ND	0.156		
2,3,4,6,7,8-HxCDF	ND	0.170		
1,2,3,7,8,9-HxCDF	ND	0.238		
1,2,3,4,6,7,8-HpCDF	ND	0.215		
1,2,3,4,7,8,9-HpCDF	ND	0.246		
OCDF	ND	0.622		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	83.4	40 - 135	
	13C-1,2,3,7,8-PeCDD	61.3	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	85.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	87.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	82.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	72.9	40 - 135	
	13C-OCDD	51.2	40 - 135	
	13C-2,3,7,8-TCDF	87.9	40 - 135	
	13C-1,2,3,7,8-PeCDF	70.7	40 - 135	
	13C-2,3,4,7,8-PeCDF	68.9	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	64.5	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	76.6	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	78.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	75.6	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	72.7	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	66.4	40 - 135	
	13C-OCDF	50.1	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	87.9	40 - 135	

Totals			
Total TCDD	ND	0.231	
Total PeCDD	ND	0.299	
Total HxCDD	ND	0.326	
Total HpCDD	1.55		B
Total TCDF	ND	0.218	
Total PeCDF	ND	0.237	
Total HxCDF	ND	0.182	
Total HpCDF	ND	0.230	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): 0.00616

a. Sample specific estimated detection limit.
b. Estimated maximum possible concentration.
c. Method detection limit.
d. Lower control limit - upper control limit.
e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

Analyst: TEH

Approved By: Martha M. Maier 22-Apr-2010 12:38

Sample ID: **RB033010**

EPA Method 8290

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Aqueous	Lab Sample:	32550-001	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	0.992 L	QC Batch No.:	2946	Date Extracted:	14-Apr-10
Date Collected:	30-Mar-10			Date Analyzed DB-5:	21-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	1800						

Analyte	Conc. (pg/L)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND	0.233		
1,2,3,7,8-PeCDD	ND	0.211		
1,2,3,4,7,8-HxCDD	ND	0.284		
1,2,3,6,7,8-HxCDD	ND	0.282		
1,2,3,7,8,9-HxCDD	ND	0.294		
1,2,3,4,6,7,8-HpCDD	ND	0.335		
OCDD	4.49			J,B
2,3,7,8-TCDF	ND	0.183		
1,2,3,7,8-PeCDF	ND	0.225		
2,3,4,7,8-PeCDF	ND	0.217		
1,2,3,4,7,8-HxCDF	ND	0.158		
1,2,3,6,7,8-HxCDF	ND	0.150		
2,3,4,6,7,8-HxCDF	ND	0.166		
1,2,3,7,8,9-HxCDF	ND	0.222		
1,2,3,4,6,7,8-HpCDF	ND	0.232		
1,2,3,4,7,8,9-HpCDF	ND	0.238		
OCDF	ND	0.455		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	86.6	40 - 135	
	13C-1,2,3,7,8-PeCDD	66.2	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	91.3	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	94.4	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	88.1	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	82.3	40 - 135	
	13C-OCDD	66.0	40 - 135	
	13C-2,3,7,8-TCDF	93.1	40 - 135	
	13C-1,2,3,7,8-PeCDF	78.2	40 - 135	
	13C-2,3,4,7,8-PeCDF	76.1	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	68.9	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	83.2	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	84.7	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	82.4	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	79.1	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	77.9	40 - 135	
	13C-OCDF	65.6	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	86.2	40 - 135	

Totals			
Total TCDD	ND	0.233	
Total PeCDD	ND	0.211	
Total HxCDD	ND	0.287	
Total HpCDD	ND		0.801
Total TCDF	ND	0.183	
Total PeCDF	ND	0.221	
Total HxCDF	ND	0.174	
Total HpCDF	ND	0.235	

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **0.00135**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

Analyst: TEH

Approved By: Martha M. Maier 21-Apr-2010 14:07

Sample ID: **RB033110** **EPA Method 8290**

Client Data		Sample Data		Laboratory Data			
Name:	Arcadis	Matrix:	Aqueous	Lab Sample:	32550-002	Date Received:	2-Apr-10
Project:	Beazer-Carbondale, IL	Sample Size:	1.01 L	QC Batch No.:	2946	Date Extracted:	14-Apr-10
Date Collected:	31-Mar-10			Date Analyzed DB-5:	21-Apr-10	Date Analyzed DB-225:	NA
Time Collected:	1200						

Analyte	Conc. (pg/L)	DL [a]	EMPC[b]	Qualifiers
2,3,7,8-TCDD	ND		0.201	
1,2,3,7,8-PeCDD	ND	0.192		
1,2,3,4,7,8-HxCDD	ND	0.310		
1,2,3,6,7,8-HxCDD	ND	0.328		
1,2,3,7,8,9-HxCDD	ND	0.312		
1,2,3,4,6,7,8-HpCDD	0.529			J,B
OCDD	2.51			J,B
2,3,7,8-TCDF	ND	0.201		
1,2,3,7,8-PeCDF	ND	0.247		
2,3,4,7,8-PeCDF	ND	0.236		
1,2,3,4,7,8-HxCDF	ND	0.159		
1,2,3,6,7,8-HxCDF	ND	0.155		
2,3,4,6,7,8-HxCDF	ND	0.171		
1,2,3,7,8,9-HxCDF	ND	0.220		
1,2,3,4,6,7,8-HpCDF	ND	0.252		
1,2,3,4,7,8,9-HpCDF	ND	0.258		
OCDF	ND	0.497		

	Labeled Standard	%R	LCL-UCL[d]	Qualifiers
IS	13C-2,3,7,8-TCDD	83.1	40 - 135	
	13C-1,2,3,7,8-PeCDD	62.8	40 - 135	
	13C-1,2,3,4,7,8-HxCDD	86.0	40 - 135	
	13C-1,2,3,6,7,8-HxCDD	87.9	40 - 135	
	13C-1,2,3,7,8,9-HxCDD	82.8	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDD	81.7	40 - 135	
	13C-OCDD	66.4	40 - 135	
	13C-2,3,7,8-TCDF	88.5	40 - 135	
	13C-1,2,3,7,8-PeCDF	73.7	40 - 135	
	13C-2,3,4,7,8-PeCDF	71.5	40 - 135	
	13C-1,2,3,4,7,8-HxCDF	64.4	40 - 135	
	13C-1,2,3,6,7,8-HxCDF	78.4	40 - 135	
	13C-2,3,4,6,7,8-HxCDF	79.1	40 - 135	
	13C-1,2,3,7,8,9-HxCDF	77.5	40 - 135	
	13C-1,2,3,4,6,7,8-HpCDF	76.4	40 - 135	
	13C-1,2,3,4,7,8,9-HpCDF	73.8	40 - 135	
	13C-OCDF	63.5	40 - 135	
CRS	37Cl-2,3,7,8-TCDD	87.7	40 - 135	

Totals				
Total TCDD	0.637		0.839	
Total PeCDD	ND	0.192		
Total HxCDD	ND	0.317		
Total HpCDD	1.46			B
Total TCDF	ND	0.201		
Total PeCDF	ND	0.242		
Total HxCDF	ND	0.176		
Total HpCDF	ND	0.255		

Toxic Equivalent Quotient (TEQ) Data [e]

TEQ (Min): **0.00604**

a. Sample specific estimated detection limit.

b. Estimated maximum possible concentration.

c. Method detection limit.

d. Lower control limit - upper control limit.

e. TEQ based on (2005) World Health Organization Toxic Equivalent Factors.(WHO)

Analyst: TEH

Approved By: Martha M. Maier 21-Apr-2010 14:07

ARCADIS U.S., Inc.

Client Sample ID: A1-35 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-021	Work Order #...:	LXGQR1AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0095277
Prep Date.....:	04/05/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0095430	Analysis Time..:	21:22		
Dilution Factor:	1	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	31	Analyst ID.....:	003200	Instrument ID..:	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	48	ug/kg	4.3
Naphthalene	7.7 J	9.7	ug/kg	0.83
Acenaphthylene	19	9.7	ug/kg	1.1
Acenaphthene	3.0 J	9.7	ug/kg	0.92
Fluorene	ND	9.7	ug/kg	1.3
Phenanthrene	29	9.7	ug/kg	1.5
Anthracene	20	9.7	ug/kg	0.94
Fluoranthene	47	9.7	ug/kg	1.0
Pyrene	40	9.7	ug/kg	0.97
Benzo(a)anthracene	32	9.7	ug/kg	1.2
Chrysene	56	9.7	ug/kg	1.1
Benzo(b)fluoranthene	73	9.7	ug/kg	1.5
Benzo(k)fluoranthene	37	9.7	ug/kg	1.9
Benzo(a)pyrene	40	9.7	ug/kg	0.96
Indeno(1,2,3-cd)pyrene	32	9.7	ug/kg	0.99
Dibenzo(a,h)anthracene	9.4 J	9.7	ug/kg	1.1
Benzo(ghi)perylene	36	9.7	ug/kg	0.96

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	65	(27 - 110)
Terphenyl-d14	68	(21 - 130)
2-Fluorobiphenyl	72	(28 - 108)
2-Fluorophenol	60	(28 - 107)
Phenol-d5	62	(30 - 112)
2,4,6-Tribromophenol	81	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A1-36 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-018	**Work Order #...:**	LXGQM1AC	**Matrix.....:**	SOLID
Date Sampled...:	03/30/10 08:45	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095277
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095430	**Analysis Time..:**	20:16		
Dilution Factor:	0.99	**Initial Wgt/Vol:**	15.2 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	31	**Analyst ID.....:**	003200	**Instrument ID..:**	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	**22 J**	**47**	**ug/kg**	**4.3**
Naphthalene	**7.2 J**	**9.6**	**ug/kg**	**0.82**
Acenaphthylene	**23**	**9.6**	**ug/kg**	**1.1**
Acenaphthene	**4.2 J**	**9.6**	**ug/kg**	**0.92**
Fluorene	**3.0 J**	**9.6**	**ug/kg**	**1.3**
Phenanthrene	**27**	**9.6**	**ug/kg**	**1.5**
Anthracene	**34**	**9.6**	**ug/kg**	**0.93**
Fluoranthene	**56**	**9.6**	**ug/kg**	**1.0**
Pyrene	**53**	**9.6**	**ug/kg**	**0.96**
Benzo(a)anthracene	**46**	**9.6**	**ug/kg**	**1.2**
Chrysene	**74**	**9.6**	**ug/kg**	**1.1**
Benzo(b)fluoranthene	**130**	**9.6**	**ug/kg**	**1.5**
Benzo(k)fluoranthene	**57**	**9.6**	**ug/kg**	**1.9**
Benzo(a)pyrene	**45**	**9.6**	**ug/kg**	**0.95**
Indeno(1,2,3-cd)pyrene	**53**	**9.6**	**ug/kg**	**0.98**
Dibenzo(a,h)anthracene	**18**	**9.6**	**ug/kg**	**1.1**
Benzo(ghi)perylene	**48**	**9.6**	**ug/kg**	**0.95**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	66	(27 - 110)
Terphenyl-d14	65	(21 - 130)
2-Fluorobiphenyl	69	(28 - 108)
2-Fluorophenol	62	(28 - 107)
Phenol-d5	61	(30 - 112)
2,4,6-Tribromophenol	76	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A1-37 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-017	**Work Order #...:**	LXGQK1AC	**Matrix.....:**	SOLID
Date Sampled...:	03/30/10 08:40	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095277
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095430	**Analysis Time..:**	19:54		
Dilution Factor:	20	**Initial Wgt/Vol:**	15 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	38	**Analyst ID.....:**	003200	**Instrument ID..:**	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT		REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	**8000**	DJ	**1100**	**ug/kg**	**96**
Naphthalene	**840**		**220**	**ug/kg**	**19**
Acenaphthylene	**6400**		**220**	**ug/kg**	**25**
Acenaphthene	**280**		**220**	**ug/kg**	**21**
Fluorene	**590**		**220**	**ug/kg**	**28**
Phenanthrene	**12000**		**220**	**ug/kg**	**34**
Anthracene	**9600**		**220**	**ug/kg**	**21**
Fluoranthene	~~**60000 E**~~		**220**	**ug/kg**	**23**
Pyrene	~~**49000 E**~~		**220**	**ug/kg**	**22**
Benzo(a)anthracene	**31000**		**220**	**ug/kg**	**27**
Chrysene	**37000**		**220**	**ug/kg**	**26**
Benzo(b)fluoranthene	~~**51000 E**~~		**220**	**ug/kg**	**34**
Benzo(k)fluoranthene	~~ND~~		220	ug/kg	44
Benzo(a)pyrene	**17000**		**220**	**ug/kg**	**22**
Indeno(1,2,3-cd)pyrene	**14000**		**220**	**ug/kg**	**22**
Dibenzo(a,h)anthracene	**5200**		**220**	**ug/kg**	**24**
Benzo(ghi)perylene	**14000**		**220**	**ug/kg**	**21**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

ARCADIS U.S., Inc.

Client Sample ID: A1-37 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-017	Work Order #...:	LXGQK2AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10 08:40	Date Received..:	04/02/10 10:15	MS Run #.....:	0095277
Prep Date.....:	04/05/10	Analysis Date..:	04/07/10		
Prep Batch #...:	0095430	Analysis Time..:	19:49		
Dilution Factor:	100	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	38	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	~~8200~~	5300	ug/kg	480
Naphthalene	~~830 J~~	1100	ug/kg	93
Acenaphthylene	~~5400~~	1100	ug/kg	120
Acenaphthene	~~230 J~~	1100	ug/kg	100
Fluorene	~~ND~~	1100	ug/kg	140
Phenanthrene	~~12000~~	1100	ug/kg	170
Anthracene	~~6500~~	1100	ug/kg	110
Fluoranthene	85000 DJ	1100	ug/kg	120
Pyrene	58000 DJ	1100	ug/kg	110
Benzo(a)anthracene	~~30000~~	1100	ug/kg	140
Chrysene	~~42000~~	1100	ug/kg	130
Benzo(b)fluoranthene	52000 DJY	1100	ug/kg	170
Benzo(k)fluoranthene	~~ND~~ 46000 DYJ	1100	ug/kg	220
Benzo(a)pyrene	~~17000~~	1100	ug/kg	110
Indeno(1,2,3-cd)pyrene	~~14000~~	1100	ug/kg	110
Dibenzo(a,h)anthracene	~~4300~~	1100	ug/kg	120
Benzo(ghi)perylene	~~12000~~	1100	ug/kg	110

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A1-38 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-019	**Work Order #...:**	LXGQP1AC	**Matrix.....:**	SOLID
Date Sampled...:	03/30/10 08:50	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095277
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095430	**Analysis Time..:**	20:38		
Dilution Factor:	2	**Initial Wgt/Vol:**	15 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	35	**Analyst ID.....:**	003200	**Instrument ID..:**	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	**33 J**	**100**	**ug/kg**	**9.2**
Naphthalene	**44**	**21**	**ug/kg**	**1.8**
Acenaphthylene	**330**	**21**	**ug/kg**	**2.4**
Acenaphthene	**19 J**	**21**	**ug/kg**	**2.0**
Fluorene	**31**	**21**	**ug/kg**	**2.7**
Phenanthrene	**220**	**21**	**ug/kg**	**3.3**
Anthracene	**420**	**21**	**ug/kg**	**2.0**
Fluoranthene	**1800**	**21**	**ug/kg**	**2.2**
Pyrene	**1800**	**21**	**ug/kg**	**2.1**
Benzo(a)anthracene	**1300**	**21**	**ug/kg**	**2.6**
Chrysene	**1900**	**21**	**ug/kg**	**2.4**
Benzo(b)fluoranthene	**2900** JY	**21**	**ug/kg**	**3.2**
Benzo(k)fluoranthene	~~ND~~ 2700 JY	21	ug/kg	4.2
Benzo(a)pyrene	**1100**	**21**	**ug/kg**	**2.1**
Indeno(1,2,3-cd)pyrene	**800**	**21**	**ug/kg**	**2.1**
Dibenzo(a,h)anthracene	**240**	**21**	**ug/kg**	**2.3**
Benzo(ghi)perylene	**830**	**21**	**ug/kg**	**2.0**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	62	(27 - 110)
Terphenyl-d14	77	(21 - 130)
2-Fluorobiphenyl	77	(28 - 108)
2-Fluorophenol	62	(28 - 107)
Phenol-d5	64	(30 - 112)
2,4,6-Tribromophenol	87	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A1-39 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-020	**Work Order #...:**	LXGQQ1AC	**Matrix.....:**	SOLID
Date Sampled...:	03/30/10 08:55	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095277
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095430	**Analysis Time..:**	21:00		
Dilution Factor:	4	**Initial Wgt/Vol:**	15 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	33	**Analyst ID.....:**	003200	**Instrument ID..:**	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT		REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	**260**		**200**	**ug/kg**	**18**
Naphthalene	**190**		**40**	**ug/kg**	**3.4**
Acenaphthylene	**130**		**40**	**ug/kg**	**4.5**
Acenaphthene	**300**		**40**	**ug/kg**	**3.8**
Fluorene	ND		40	ug/kg	5.2
Phenanthrene	**3700**		**40**	**ug/kg**	**6.3**
Anthracene	**200**		**40**	**ug/kg**	**3.9**
Fluoranthene	**1500**		**40**	**ug/kg**	**4.2**
Pyrene	**780**		**40**	**ug/kg**	**4.0**
Benzo(a)anthracene	**1000**		**40**	**ug/kg**	**5.0**
Chrysene	**1500**		**40**	**ug/kg**	**4.7**
Benzo(b)fluoranthene	**510**	JY	**40**	**ug/kg**	**6.2**
Benzo(k)fluoranthene	~~ND~~ 460	JY	40	ug/kg	8.0
Benzo(a)pyrene	**290**		**40**	**ug/kg**	**4.0**
Indeno(1,2,3-cd)pyrene	**77**		**40**	**ug/kg**	**4.1**
Dibenzo(a,h)anthracene	**120**		**40**	**ug/kg**	**4.4**
Benzo(ghi)perylene	**110**		**40**	**ug/kg**	**3.9**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	89	(27 - 110)
Terphenyl-d14	70	(21 - 130)
2-Fluorobiphenyl	84	(28 - 108)
2-Fluorophenol	71	(28 - 107)
Phenol-d5	69	(30 - 112)
2,4,6-Tribromophenol	84	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-40 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-022	Work Order #...:	LXGQT1AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	16:08		
Dilution Factor:	2	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	41	Analyst ID.....:	430261	Instrument ID..:	732
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	23 J	110	ug/kg	10
Naphthalene	34	23	ug/kg	2.0
Acenaphthylene	150	23	ug/kg	2.6
Acenaphthene	9.8 J	23	ug/kg	2.2
Fluorene	18 J	23	ug/kg	3.0
Phenanthrene	94	23	ug/kg	3.6
Anthracene	150	23	ug/kg	2.2
Fluoranthene	750	23	ug/kg	2.4
Pyrene	600	23	ug/kg	2.3
Benzo(a)anthracene	400	23	ug/kg	2.8
Chrysene	560	23	ug/kg	2.7
Benzo(b)fluoranthene	560	23	ug/kg	3.6
Benzo(k)fluoranthene	560	23	ug/kg	4.6
Benzo(a)pyrene	300	23	ug/kg	2.3
Indeno(1,2,3-cd)pyrene	200	23	ug/kg	2.3
Dibenzo(a,h)anthracene	70	23	ug/kg	2.5
Benzo(ghi)perylene	200	23	ug/kg	2.3

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	35	(27 - 110)
Terphenyl-d14	33	(21 - 130)
2-Fluorobiphenyl	33	(28 - 108)
2-Fluorophenol	37	(28 - 107)
Phenol-d5	32	(30 - 112)
2,4,6-Tribromophenol	41	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A1-41 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-023	Work Order #...:	LXGQV1AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	16:31		
Dilution Factor:	19.61	Initial Wgt/Vol:	15.3 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	18	Analyst ID.....:	430261	Instrument ID..:	732
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND DJ	790	ug/kg	71
Naphthalene	120 J	160	ug/kg	14
Acenaphthylene	56 J	160	ug/kg	18
Acenaphthene	900	160	ug/kg	15
Fluorene	520	160	ug/kg	21
Phenanthrene	12000	160	ug/kg	25
Anthracene	1800	160	ug/kg	16
Fluoranthene	25000	160	ug/kg	17
Pyrene	13000	160	ug/kg	16
Benzo(a)anthracene	6400	160	ug/kg	20
Chrysene	7200	160	ug/kg	19
Benzo(b)fluoranthene	7500	160	ug/kg	25
Benzo(k)fluoranthene	4900	160	ug/kg	32
Benzo(a)pyrene	6400	160	ug/kg	16
Indeno(1,2,3-cd)pyrene	4400	160	ug/kg	16
Dibenzo(a,h)anthracene	1100	160	ug/kg	18
Benzo(ghi)perylene	4800	160	ug/kg	16

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A1-42 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-024	Work Order #...:	LXGQ01AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	16:54		
Dilution Factor:	1.99	Initial Wgt/Vol:	15.1 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	29	Analyst ID.....:	430261	Instrument ID..:	732
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	93	ug/kg	8.4
Naphthalene	2.5 J	19	ug/kg	1.6
Acenaphthylene	3.9 J	19	ug/kg	2.2
Acenaphthene	ND	19	ug/kg	1.8
Fluorene	3.0 J	19	ug/kg	2.5
Phenanthrene	15 J	19	ug/kg	3.0
Anthracene	4.5 J	19	ug/kg	1.8
Fluoranthene	19	19	ug/kg	2.0
Pyrene	13 J	19	ug/kg	1.9
Benzo(a)anthracene	11 J	19	ug/kg	2.4
Chrysene	12 J	19	ug/kg	2.2
Benzo(b)fluoranthene	19	19	ug/kg	3.0
Benzo(k)fluoranthene	7.9 J	19	ug/kg	3.8
Benzo(a)pyrene	9.6 J	19	ug/kg	1.9
Indeno(1,2,3-cd)pyrene	8.9 J	19	ug/kg	1.9
Dibenzo(a,h)anthracene	ND	19	ug/kg	2.1
Benzo(ghi)perylene	7.9 J	19	ug/kg	1.9

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	36	(27 - 110)
Terphenyl-d14	35	(21 - 130)
2-Fluorobiphenyl	34	(28 - 108)
2-Fluorophenol	37	(28 - 107)
Phenol-d5	31	(30 - 112)
2,4,6-Tribromophenol	38	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A1-43 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-025	Work Order #...:	LXGQ11AE	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	17:17		
Dilution Factor:	3.9	Initial Wgt/Vol:	15.4 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	36	Analyst ID.....:	430261	Instrument ID..:	732
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	200	ug/kg	18
Naphthalene	ND	41	ug/kg	3.5
Acenaphthylene	16 J	41	ug/kg	4.7
Acenaphthene	8.3 J	41	ug/kg	3.9
Fluorene	9.7 J	41	ug/kg	5.4
Phenanthrene	210	41	ug/kg	6.5
Anthracene	13 J	41	ug/kg	4.0
Fluoranthene	260	41	ug/kg	4.3
Pyrene	120 J	41	ug/kg	4.1
Benzo(a)anthracene	29 J	41	ug/kg	5.1
Chrysene	63	41	ug/kg	4.8
Benzo(b)fluoranthene	71	41	ug/kg	6.4
Benzo(k)fluoranthene	35 J	41	ug/kg	8.2
Benzo(a)pyrene	27 J	41	ug/kg	4.1
Indeno(1,2,3-cd)pyrene	26 J	41	ug/kg	4.2
Dibenzo(a,h)anthracene	ND	41	ug/kg	4.5
Benzo(ghi)perylene	28 J	41	ug/kg	4.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	77	(27 - 110)
Terphenyl-d14	72	(21 - 130)
2-Fluorobiphenyl	74	(28 - 108)
2-Fluorophenol	79	(28 - 107)
Phenol-d5	70	(30 - 112)
2,4,6-Tribromophenol	81	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A1-44 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-026	Work Order #...:	LXGQ21AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	17:40		
Dilution Factor:	2	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	38	Analyst ID.....:	430261	Instrument ID..:	732
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	21 J	110	ug/kg	9.6
Naphthalene	120	22	ug/kg	1.8
Acenaphthylene	62	22	ug/kg	2.5
Acenaphthene	9.7 J	22	ug/kg	2.1
Fluorene	8.6 J	22	ug/kg	2.8
Phenanthrene	480	22	ug/kg	3.4
Anthracene	110	22	ug/kg	2.1
Fluoranthene	630	22	ug/kg	2.3
Pyrene	380	22	ug/kg	2.2
Benzo(a)anthracene	240	22	ug/kg	2.7
Chrysene	280	22	ug/kg	2.6
Benzo(b)fluoranthene	310	22	ug/kg	3.4
Benzo(k)fluoranthene	140	22	ug/kg	4.3
Benzo(a)pyrene	170	22	ug/kg	2.1
Indeno(1,2,3-cd)pyrene	120	22	ug/kg	2.2
Dibenzo(a,h)anthracene	41	22	ug/kg	2.4
Benzo(ghi)perylene	120	22	ug/kg	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	32	(27 - 110)
Terphenyl-d14	31	(21 - 130)
2-Fluorobiphenyl	30	(28 - 108)
2-Fluorophenol	33	(28 - 107)
Phenol-d5	28 *	(30 - 112)
2,4,6-Tribromophenol	38	(21 - 116)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: FIELD DUPLICATE #4

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-027	Work Order #...:	LXGQ41AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	18:03		
Dilution Factor:	1.97	Initial Wgt/Vol:	15.2 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	34	Analyst ID.....:	430261	Instrument ID..:	732
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	40 J	98	ug/kg	8.9
Naphthalene	86	20	ug/kg	1.7
Acenaphthylene	67	20	ug/kg	2.3
Acenaphthene	6.9 J	20	ug/kg	1.9
Fluorene	8.6 J	20	ug/kg	2.6
Phenanthrene	230	20	ug/kg	3.2
Anthracene	87	20	ug/kg	1.9
Fluoranthene	390	20	ug/kg	2.1
Pyrene	260	20	ug/kg	2.0
Benzo(a)anthracene	170	20	ug/kg	2.5
Chrysene	240	20	ug/kg	2.4
Benzo(b)fluoranthene	290	20	ug/kg	3.1
Benzo(k)fluoranthene	180	20	ug/kg	4.0
Benzo(a)pyrene	160	20	ug/kg	2.0
Indeno(1,2,3-cd)pyrene	140	20	ug/kg	2.0
Dibenzo(a,h)anthracene	46	20	ug/kg	2.2
Benzo(ghi)perylene	140	20	ug/kg	2.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	47	(27 - 110)
Terphenyl-d14	49	(21 - 130)
2-Fluorobiphenyl	47	(28 - 108)
2-Fluorophenol	50	(28 - 107)
Phenol-d5	45	(30 - 112)
2,4,6-Tribromophenol	59	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A1-45 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-029	Work Order #...:	LXGQ71AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	18:49		
Dilution Factor:	0.99	Initial Wgt/Vol:	15.1 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	28	Analyst ID.....:	430261	Instrument ID..:	732
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	46	ug/kg	4.1
Naphthalene	8.0 J	9.2	ug/kg	0.79
Acenaphthylene	2.8 J	9.2	ug/kg	1.1
Acenaphthene	ND	9.2	ug/kg	0.88
Fluorene	ND	9.2	ug/kg	1.2
Phenanthrene	9.7	9.2	ug/kg	1.5
Anthracene	3.4 J	9.2	ug/kg	0.90
Fluoranthene	23	9.2	ug/kg	0.98
Pyrene	16	9.2	ug/kg	0.93
Benzo(a)anthracene	9.0 J	9.2	ug/kg	1.2
Chrysene	15	9.2	ug/kg	1.1
Benzo(b)fluoranthene	13	9.2	ug/kg	1.4
Benzo(k)fluoranthene	6.0 J	9.2	ug/kg	1.9
Benzo(a)pyrene	8.0 J	9.2	ug/kg	0.92
Indeno(1,2,3-cd)pyrene	6.1 J	9.2	ug/kg	0.95
Dibenzo(a,h)anthracene	ND	9.2	ug/kg	1.0
Benzo(ghi)perylene	6.0 J	9.2	ug/kg	0.92

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	51	(27 - 110)
Terphenyl-d14	50	(21 - 130)
2-Fluorobiphenyl	48	(28 - 108)
2-Fluorophenol	51	(28 - 107)
Phenol-d5	45	(30 - 112)
2,4,6-Tribromophenol	52	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A1-46 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-030	Work Order #...:	LXGQ81AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	19:12		
Dilution Factor:	2	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	40	Analyst ID.....:	430261	Instrument ID..:	732
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	110	ug/kg	9.9
Naphthalene	10 J	22	ug/kg	1.9
Acenaphthylene	15 J	22	ug/kg	2.5
Acenaphthene	2.2 J	22	ug/kg	2.1
Fluorene	3.4 J	22	ug/kg	2.9
Phenanthrene	31	22	ug/kg	3.5
Anthracene	17 J	22	ug/kg	2.2
Fluoranthene	73	22	ug/kg	2.4
Pyrene	56	22	ug/kg	2.2
Benzo(a)anthracene	39	22	ug/kg	2.8
Chrysene	55	22	ug/kg	2.6
Benzo(b)fluoranthene	76 J	22	ug/kg	3.5
Benzo(k)fluoranthene	26	22	ug/kg	4.5
Benzo(a)pyrene	45	22	ug/kg	2.2
Indeno(1,2,3-cd)pyrene	34	22	ug/kg	2.3
Dibenzo(a,h)anthracene	8.2 J	22	ug/kg	2.5
Benzo(ghi)perylene	35 J	22	ug/kg	2.2

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	40	(27 - 110)
Terphenyl-d14	39	(21 - 130)
2-Fluorobiphenyl	37	(28 - 108)
2-Fluorophenol	40	(28 - 107)
Phenol-d5	35	(30 - 112)
2,4,6-Tribromophenol	44	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A1-47 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-028	Work Order #...:	LXGQ51AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	18:26		
Dilution Factor:	1.97	Initial Wgt/Vol:	15.2 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	35	Analyst ID.....:	430261	Instrument ID..:	732
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	22 J	100	ug/kg	9.0
Naphthalene	49	20	ug/kg	1.7
Acenaphthylene	36	20	ug/kg	2.3
Acenaphthene	3.3 J	20	ug/kg	1.9
Fluorene	5.7 J	20	ug/kg	2.7
Phenanthrene	100	20	ug/kg	3.2
Anthracene	43	20	ug/kg	2.0
Fluoranthene	160	20	ug/kg	2.2
Pyrene	120	20	ug/kg	2.0
Benzo(a)anthracene	90	20	ug/kg	2.5
Chrysene	120	20	ug/kg	2.4
Benzo(b)fluoranthene	160	20	ug/kg	3.2
Benzo(k)fluoranthene	72	20	ug/kg	4.1
Benzo(a)pyrene	91	20	ug/kg	2.0
Indeno(1,2,3-cd)pyrene	72	20	ug/kg	2.1
Dibenzo(a,h)anthracene	23	20	ug/kg	2.2
Benzo(ghi)perylene	69	20	ug/kg	2.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	34	(27 - 110)
Terphenyl-d14	31	(21 - 130)
2-Fluorobiphenyl	31	(28 - 108)
2-Fluorophenol	34	(28 - 107)
Phenol-d5	31	(30 - 112)
2,4,6-Tribromophenol	33	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A1-48 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-031	Work Order #...:	LXGQ91AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10 10:50	Date Received..:	04/02/10 10:15	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/07/10		
Prep Batch #...:	0096045	Analysis Time..:	20:13		
Dilution Factor:	3	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	23	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	130	ug/kg	12
Naphthalene	20 J	26	ug/kg	2.2
Acenaphthylene	18 J	26	ug/kg	3.0
Acenaphthene	7.1 J	26	ug/kg	2.5
Fluorene	5.8 J	26	ug/kg	3.4
Phenanthrene	100	26	ug/kg	4.1
Anthracene	30	26	ug/kg	2.5
Fluoranthene	200	26	ug/kg	2.8
Pyrene	130	26	ug/kg	2.6
Benzo(a)anthracene	89	26	ug/kg	3.3
Chrysene	110	26	ug/kg	3.1
Benzo(b)fluoranthene	150	26	ug/kg	4.1
Benzo(k)fluoranthene	46	26	ug/kg	5.3
Benzo(a)pyrene	89	26	ug/kg	2.6
Indeno(1,2,3-cd)pyrene	76	26	ug/kg	2.7
Dibenzo(a,h)anthracene	21 J	26	ug/kg	2.9
Benzo(ghi)perylene	82	26	ug/kg	2.6

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	71	(27 - 110)
Terphenyl-d14	56	(21 - 130)
2-Fluorobiphenyl	57	(28 - 108)
2-Fluorophenol	62	(28 - 107)
Phenol-d5	64	(30 - 112)
2,4,6-Tribromophenol	65	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A2-11 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-003	**Work Order #...:**	LXGP01AC	**Matrix.....:**	SOLID
Date Sampled...:	03/29/10 15:50	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095277
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095430	**Analysis Time..:**	13:43		
Dilution Factor:	10	**Initial Wgt/Vol:**	15 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	38	**Analyst ID.....:**	003200	**Instrument ID..:**	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	**3100**	**530**	**ug/kg**	**48**
Naphthalene	**180**	**110**	**ug/kg**	**9.3**
Acenaphthylene	**1600**	**110**	**ug/kg**	**12**
Acenaphthene	**93 J**	**110**	**ug/kg**	**10**
Fluorene	**110**	**110**	**ug/kg**	**14**
Phenanthrene	**540**	**110**	**ug/kg**	**17**
Anthracene	**1900**	**110**	**ug/kg**	**11**
Fluoranthene	**4100**	**110**	**ug/kg**	**11**
Pyrene	**4500**	**110**	**ug/kg**	**11**
Benzo(a)anthracene	**3100**	**110**	**ug/kg**	**13**
Chrysene	**4300**	**110**	**ug/kg**	**13**
Benzo(b)fluoranthene	**9700** J4	**110**	**ug/kg**	**17**
Benzo(k)fluoranthene	~~ND~~ 8800 J4	110	ug/kg	22
Benzo(a)pyrene	**4200**	**110**	**ug/kg**	**11**
Indeno(1,2,3-cd)pyrene	**3300**	**110**	**ug/kg**	**11**
Dibenzo(a,h)anthracene	**1000**	**110**	**ug/kg**	**12**
Benzo(ghi)perylene	**3400**	**110**	**ug/kg**	**11**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	73	(27 - 110)
Terphenyl-d14	78	(21 - 130)
2-Fluorobiphenyl	82	(28 - 108)
2-Fluorophenol	76	(28 - 107)
Phenol-d5	68	(30 - 112)
2,4,6-Tribromophenol	80	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A2-12 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-001	Work Order #...:	LXGPP1AC	Matrix.....:	SOLID
Date Sampled...:	03/29/10	Date Received..:	04/02/10	MS Run #.....:	0095277
Prep Date.....:	04/05/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0095430	Analysis Time..:	13:21		
Dilution Factor:	50	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	32	Analyst ID.....:	003200	Instrument ID..:	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	14000 DJ	2400	ug/kg	220
Naphthalene	910	500	ug/kg	42
Acenaphthylene	8900	500	ug/kg	56
Acenaphthene	350 J	500	ug/kg	47
Fluorene	370 J	500	ug/kg	65
Phenanthrene	1600	500	ug/kg	78
Anthracene	11000	500	ug/kg	48
Fluoranthene	14000	500	ug/kg	53
Pyrene	19000	500	ug/kg	50
Benzo(a)anthracene	19000	500	ug/kg	62
Chrysene	28000	500	ug/kg	59
Benzo(b)fluoranthene	47000	500	ug/kg	77
Benzo(k)fluoranthene	22000	500	ug/kg	100
Benzo(a)pyrene	28000	500	ug/kg	49
Indeno(1,2,3-cd)pyrene	21000	500	ug/kg	51
Dibenzo(a,h)anthracene	6800	500	ug/kg	55
Benzo(ghi)perylene	21000	500	ug/kg	49

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A2-13 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-004	**Work Order #...:**	LXGP21AC	**Matrix.....:**	SOLID
Date Sampled...:	03/29/10 15:20	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095277
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095430	**Analysis Time..:**	14:06		
Dilution Factor:	2	**Initial Wgt/Vol:**	15 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	29	**Analyst ID.....:**	003200	**Instrument ID..:**	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT		REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	**78 J**		**94**	**ug/kg**	**8.5**
Naphthalene	**20**	J	**19**	**ug/kg**	**1.6**
Acenaphthylene	**81**	J	**19**	**ug/kg**	**2.2**
Acenaphthene	**6.4 J**		**19**	**ug/kg**	**1.8**
Fluorene	ND	UJ	19	ug/kg	2.5
Phenanthrene	**86**	J	**19**	**ug/kg**	**3.0**
Anthracene	**91**		**19**	**ug/kg**	**1.9**
Fluoranthene	**260**	J	**19**	**ug/kg**	**2.0**
Pyrene	**230**	J	**19**	**ug/kg**	**1.9**
Benzo(a)anthracene	**140**	J	**19**	**ug/kg**	**2.4**
Chrysene	**220**		**19**	**ug/kg**	**2.3**
Benzo(b)fluoranthene	**400**	JY	**19**	**ug/kg**	**3.0**
Benzo(k)fluoranthene	~~ND~~ 370	JY	19	ug/kg	3.8
Benzo(a)pyrene	**180**	J	**19**	**ug/kg**	**1.9**
Indeno(1,2,3-cd)pyrene	**130**	J	**19**	**ug/kg**	**1.9**
Dibenzo(a,h)anthracene	**44**		**19**	**ug/kg**	**2.1**
Benzo(ghi)perylene	**150**	J	**19**	**ug/kg**	**1.9**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	71	(27 - 110)
Terphenyl-d14	70	(21 - 130)
2-Fluorobiphenyl	75	(28 - 108)
2-Fluorophenol	67	(28 - 107)
Phenol-d5	66	(30 - 112)
2,4,6-Tribromophenol	74	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: FIELD DUPLICATE #1

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-005	Work Order #...:	LXGP31AC	Matrix.....:	SOLID
Date Sampled...:	03/29/10	Date Received..:	04/02/10	MS Run #.....:	0095277
Prep Date.....:	04/05/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0095430	Analysis Time..:	14:28		
Dilution Factor:	1.97	Initial Wgt/Vol:	15.2 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	34	Analyst ID.....:	003200	Instrument ID..:	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	61 J	99	ug/kg	8.9
Naphthalene	160 J	20	ug/kg	1.7
Acenaphthylene	280 J	20	ug/kg	2.3
Acenaphthene	33	20	ug/kg	1.9
Fluorene	81 J	20	ug/kg	2.6
Phenanthrene	1200 J	20	ug/kg	3.2
Anthracene	170	20	ug/kg	2.0
Fluoranthene	1400 J	20	ug/kg	2.1
Pyrene	1100 J	20	ug/kg	2.0
Benzo(a)anthracene	440 J	20	ug/kg	2.5
Chrysene	620	20	ug/kg	2.4
Benzo(b)fluoranthene	720	20	ug/kg	3.1
Benzo(k)fluoranthene	280	20	ug/kg	4.0
Benzo(a)pyrene	570 J	20	ug/kg	2.0
Indeno(1,2,3-cd)pyrene	400 J	20	ug/kg	2.1
Dibenzo(a,h)anthracene	100	20	ug/kg	2.2
Benzo(ghi)perylene	490 J	20	ug/kg	2.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	57	(27 - 110)
Terphenyl-d14	68	(21 - 130)
2-Fluorobiphenyl	66	(28 - 108)
2-Fluorophenol	55	(28 - 107)
Phenol-d5	59	(30 - 112)
2,4,6-Tribromophenol	73	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A2-14 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-006	Work Order #...:	LXGP41AC	Matrix.....:	SOLID
Date Sampled...:	03/29/10	Date Received..:	04/02/10	MS Run #.....:	0095277
Prep Date.....:	04/05/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0095430	Analysis Time..:	14:51		
Dilution Factor:	49.34	Initial Wgt/Vol:	15.2 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	20	Analyst ID.....:	003200	Instrument ID..:	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	71000 DJ	2000	ug/kg	180
Naphthalene	940	420	ug/kg	36
Acenaphthylene	6100	420	ug/kg	47
Acenaphthene	260 J	420	ug/kg	40
Fluorene	390 J	420	ug/kg	54
Phenanthrene	2900	420	ug/kg	66
Anthracene	8400	420	ug/kg	40
Fluoranthene	18000	420	ug/kg	44
Pyrene	23000	420	ug/kg	42
Benzo(a)anthracene	17000	420	ug/kg	52
Chrysene	24000	420	ug/kg	49
Benzo(b)fluoranthene	38000	420	ug/kg	65
Benzo(k)fluoranthene	18000	420	ug/kg	84
Benzo(a)pyrene	16000	420	ug/kg	41
Indeno(1,2,3-cd)pyrene	13000	420	ug/kg	43
Dibenzo(a,h)anthracene	4900	420	ug/kg	46
Benzo(ghi)perylene	12000	420	ug/kg	41

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A2-15 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-007	**Work Order #...:**	LXGP51AC	**Matrix.....:**	SOLID
Date Sampled...:	03/29/10 15:10	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095277
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095430	**Analysis Time..:**	15:14		
Dilution Factor:	50	**Initial Wgt/Vol:**	15 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	29	**Analyst ID.....:**	003200	**Instrument ID..:**	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT		REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	**21000**	DJ	**2300**	**ug/kg**	**210**
Naphthalene	**2300**		**470**	**ug/kg**	**41**
Acenaphthylene	**17000**		**470**	**ug/kg**	**54**
Acenaphthene	**960**		**470**	**ug/kg**	**45**
Fluorene	**1400**		**470**	**ug/kg**	**62**
Phenanthrene	**4100**		**470**	**ug/kg**	**75**
Anthracene	**24000**		**470**	**ug/kg**	**46**
Fluoranthene	**23000**		**470**	**ug/kg**	**50**
Pyrene	**23000**		**470**	**ug/kg**	**48**
Benzo(a)anthracene	**20000**		**470**	**ug/kg**	**59**
Chrysene	**27000**		**470**	**ug/kg**	**56**
Benzo(b)fluoranthene	**91000**	Y	**470**	**ug/kg**	**74**
Benzo(k)fluoranthene	~~ND~~ 83000	Y	470	ug/kg	95
Benzo(a)pyrene	**39000**		**470**	**ug/kg**	**47**
Indeno(1,2,3-cd)pyrene	**36000**		**470**	**ug/kg**	**48**
Dibenzo(a,h)anthracene	**13000**		**470**	**ug/kg**	**52**
Benzo(ghi)perylene	**34000**		**470**	**ug/kg**	**47**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A2-16 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-008	**Work Order #...:**	LXGP61AC	**Matrix.....:**	SOLID
Date Sampled...:	03/29/10 15:00	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095277
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095430	**Analysis Time..:**	15:37		
Dilution Factor:	50	**Initial Wgt/Vol:**	15 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	43	**Analyst ID.....:**	003200	**Instrument ID..:**	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT		REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	**27000**	DS	**2900**	**ug/kg**	**260**
Naphthalene	**2000**		**590**	**ug/kg**	**51**
Acenaphthylene	**15000**		**590**	**ug/kg**	**67**
Acenaphthene	**690**		**590**	**ug/kg**	**56**
Fluorene	**1200**		**590**	**ug/kg**	**77**
Phenanthrene	**3100**		**590**	**ug/kg**	**93**
Anthracene	**27000**		**590**	**ug/kg**	**57**
Fluoranthene	**16000**		**590**	**ug/kg**	**63**
Pyrene	**18000**		**590**	**ug/kg**	**59**
Benzo(a)anthracene	**16000**		**590**	**ug/kg**	**73**
Chrysene	**23000**		**590**	**ug/kg**	**70**
Benzo(b)fluoranthene	**79000**	Y	**590**	**ug/kg**	**92**
Benzo(k)fluoranthene	~~ND~~ 72000	Y	590	ug/kg	120
Benzo(a)pyrene	**28000**		**590**	**ug/kg**	**59**
Indeno(1,2,3-cd)pyrene	**30000**		**590**	**ug/kg**	**60**
Dibenzo(a,h)anthracene	**8700**		**590**	**ug/kg**	**65**
Benzo(ghi)perylene	**29000**		**590**	**ug/kg**	**58**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A2-17 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-009	**Work Order #...:**	LXGP81AE	**Matrix.....:**	SOLID
Date Sampled...:	03/29/10 14:40	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095277
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095430	**Analysis Time..:**	16:01		
Dilution Factor:	40	**Initial Wgt/Vol:**	15 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	40	**Analyst ID.....:**	003200	**Instrument ID..:**	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT		REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	**40000**	DJ	**2200**	**ug/kg**	**200**
Naphthalene	**1400**		**440**	**ug/kg**	**38**
Acenaphthylene	**7800**		**440**	**ug/kg**	**51**
Acenaphthene	**470**		**440**	**ug/kg**	**42**
Fluorene	**610**		**440**	**ug/kg**	**58**
Phenanthrene	**2800**		**440**	**ug/kg**	**70**
Anthracene	**12000**		**440**	**ug/kg**	**43**
Fluoranthene	**19000**		**440**	**ug/kg**	**47**
Pyrene	**19000**		**440**	**ug/kg**	**45**
Benzo(a)anthracene	**12000**		**440**	**ug/kg**	**55**
Chrysene	**16000**		**440**	**ug/kg**	**53**
Benzo(b)fluoranthene	**41000**	Y	**440**	**ug/kg**	**69**
Benzo(k)fluoranthene	~~ND~~ 37000	Y	440	ug/kg	89
Benzo(a)pyrene	**15000**		**440**	**ug/kg**	**44**
Indeno(1,2,3-cd)pyrene	**15000**		**440**	**ug/kg**	**46**
Dibenzo(a,h)anthracene	**4800**		**440**	**ug/kg**	**49**
Benzo(ghi)perylene	**15000**		**440**	**ug/kg**	**44**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A2-18 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-010	**Work Order #...:**	LXGP91AC	**Matrix.....:**	SOLID
Date Sampled...:	03/29/10 14:30	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095277
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095430	**Analysis Time..:**	17:12		
Dilution Factor:	4	**Initial Wgt/Vol:**	15 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	28	**Analyst ID.....:**	003200	**Instrument ID..:**	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	**2300**	**180**	**ug/kg**	**16**
Naphthalene	**100**	**37**	**ug/kg**	**3.2**
Acenaphthylene	**1300**	**37**	**ug/kg**	**4.2**
Acenaphthene	**51**	**37**	**ug/kg**	**3.5**
Fluorene	**81**	**37**	**ug/kg**	**4.9**
Phenanthrene	**550**	**37**	**ug/kg**	**5.9**
Anthracene	**1400**	**37**	**ug/kg**	**3.6**
Fluoranthene	**4200**	**37**	**ug/kg**	**3.9**
Pyrene	**4100**	**37**	**ug/kg**	**3.7**
Benzo(a)anthracene	**2800**	**37**	**ug/kg**	**4.6**
Chrysene	**4400**	**37**	**ug/kg**	**4.4**
Benzo(b)fluoranthene	**6000**	**37**	**ug/kg**	**5.8**
Benzo(k)fluoranthene	**2600**	**37**	**ug/kg**	**7.4**
Benzo(a)pyrene	**3200**	**37**	**ug/kg**	**3.7**
Indeno(1,2,3-cd)pyrene	**2700**	**37**	**ug/kg**	**3.8**
Dibenzo(a,h)anthracene	**960**	**37**	**ug/kg**	**4.1**
Benzo(ghi)perylene	**2700**	**37**	**ug/kg**	**3.7**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	83	(27 - 110)
Terphenyl-d14	87	(21 - 130)
2-Fluorobiphenyl	91	(28 - 108)
2-Fluorophenol	79	(28 - 107)
Phenol-d5	80	(30 - 112)
2,4,6-Tribromophenol	94	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A2-19 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-011	Work Order #...:	LXGQA1AC	Matrix.....:	SOLID
Date Sampled...:	03/29/10 15:40	Date Received..:	04/02/10 10:15	MS Run #.....:	0095277
Prep Date.....:	04/05/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0095430	Analysis Time..:	17:36		
Dilution Factor:	49.34	Initial Wgt/Vol:	15.2 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	37	Analyst ID.....:	003200	Instrument ID..:	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT		REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	22000	DJ	2600	ug/kg	230
Naphthalene	1200		520	ug/kg	45
Acenaphthylene	8900		520	ug/kg	60
Acenaphthene	570		520	ug/kg	50
Fluorene	3100		520	ug/kg	69
Phenanthrene	6000		520	ug/kg	83
Anthracene	32000		520	ug/kg	51
Fluoranthene	11000		520	ug/kg	56
Pyrene	11000		520	ug/kg	53
Benzo(a)anthracene	8000		520	ug/kg	65
Chrysene	21000		520	ug/kg	62
Benzo(b)fluoranthene	35000		520	ug/kg	82
Benzo(k)fluoranthene	13000		520	ug/kg	110
Benzo(a)pyrene	17000		520	ug/kg	52
Indeno(1,2,3-cd)pyrene	16000		520	ug/kg	54
Dibenzo(a,h)anthracene	5700		520	ug/kg	58
Benzo(ghi)perylene	15000		520	ug/kg	52

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: FIELD DUPLICATE #2

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-012	Work Order #...:	LXGQC1AC	Matrix.....:	SOLID
Date Sampled...:	03/29/10	Date Received..:	04/02/10 10:15	MS Run #.....:	0095277
Prep Date.....:	04/05/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0095430	Analysis Time..:	17:59		
Dilution Factor:	39.73	Initial Wgt/Vol:	15.1 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	37	Analyst ID.....:	003200	Instrument ID..:	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	20000 DS	2100	ug/kg	190
Naphthalene	1100	420	ug/kg	36
Acenaphthylene	9200	420	ug/kg	48
Acenaphthene	570	420	ug/kg	40
Fluorene	1500	420	ug/kg	55
Phenanthrene	3000	420	ug/kg	67
Anthracene	26000	420	ug/kg	41
Fluoranthene	11000	420	ug/kg	45
Pyrene	11000	420	ug/kg	43
Benzo(a)anthracene	7600	420	ug/kg	53
Chrysene	17000	420	ug/kg	50
Benzo(b)fluoranthene	43000 Y	420	ug/kg	66
Benzo(k)fluoranthene	~~ND~~ 39000 Y	420	ug/kg	85
Benzo(a)pyrene	17000	420	ug/kg	42
Indeno(1,2,3-cd)pyrene	16000	420	ug/kg	43
Dibenzo(a,h)anthracene	5100	420	ug/kg	47
Benzo(ghi)perylene	16000	420	ug/kg	42

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A3-18 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-036	Work Order #...:	LXGRG1AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	20:39		
Dilution Factor:	0.97	Initial Wgt/Vol:	15.4 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	26	Analyst ID.....:	430261	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	44	ug/kg	3.9
Naphthalene	1.6 J	8.8	ug/kg	0.76
Acenaphthylene	4.7 J	8.8	ug/kg	1.0
Acenaphthene	1.3 J	8.8	ug/kg	0.84
Fluorene	1.6 J	8.8	ug/kg	1.2
Phenanthrene	9.3	8.8	ug/kg	1.4
Anthracene	5.8 J	8.8	ug/kg	0.86
Fluoranthene	22	8.8	ug/kg	0.94
Pyrene	16	8.8	ug/kg	0.89
Benzo(a)anthracene	11	8.8	ug/kg	1.1
Chrysene	13	8.8	ug/kg	1.0
Benzo(b)fluoranthene	22	8.8	ug/kg	1.4
Benzo(k)fluoranthene	7.4 J	8.8	ug/kg	1.8
Benzo(a)pyrene	12	8.8	ug/kg	0.88
Indeno(1,2,3-cd)pyrene	12	8.8	ug/kg	0.91
Dibenzo(a,h)anthracene	3.1 J	8.8	ug/kg	0.98
Benzo(ghi)perylene	14	8.8	ug/kg	0.87

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	46	(27 - 110)
Terphenyl-d14	44	(21 - 130)
2-Fluorobiphenyl	42	(28 - 108)
2-Fluorophenol	47	(28 - 107)
Phenol-d5	43	(30 - 112)
2,4,6-Tribromophenol	44	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A3-19 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-037	Work Order #...:	LXGRH1AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	21:01		
Dilution Factor:	2	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	37	Analyst ID.....:	430261	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	67 J	110	ug/kg	9.5
Naphthalene	9.3 J	21	ug/kg	1.8
Acenaphthylene	120	21	ug/kg	2.4
Acenaphthene	7.8 J	21	ug/kg	2.0
Fluorene	13 J	21	ug/kg	2.8
Phenanthrene	46	21	ug/kg	3.4
Anthracene	170	21	ug/kg	2.1
Fluoranthene	210	21	ug/kg	2.3
Pyrene	190	21	ug/kg	2.2
Benzo(a)anthracene	160	21	ug/kg	2.7
Chrysene	180	21	ug/kg	2.5
Benzo(b)fluoranthene	290 J	21	ug/kg	3.3
Benzo(k)fluoranthene	100	21	ug/kg	4.3
Benzo(a)pyrene	150	21	ug/kg	2.1
Indeno(1,2,3-cd)pyrene	190	21	ug/kg	2.2
Dibenzo(a,h)anthracene	56	21	ug/kg	2.4
Benzo(ghi)perylene	180	21	ug/kg	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	41	(27 - 110)
Terphenyl-d14	33	(21 - 130)
2-Fluorobiphenyl	37	(28 - 108)
2-Fluorophenol	43	(28 - 107)
Phenol-d5	39	(30 - 112)
2,4,6-Tribromophenol	39	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A3-20 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-034	Work Order #...:	LXGRD1AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	19:56	Final Wgt/Vol..:	0.5 mL
Dilution Factor:	2	Initial Wgt/Vol:	15 g	Instrument ID..:	731
% Moisture.....:	43	Analyst ID.....:	430261		
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	37 J	120	ug/kg	11
Naphthalene	18 J	24	ug/kg	2.0
Acenaphthylene	64	24	ug/kg	2.7
Acenaphthene	8.1 J	24	ug/kg	2.3
Fluorene	9.7 J	24	ug/kg	3.1
Phenanthrene	74	24	ug/kg	3.7
Anthracene	74	24	ug/kg	2.3
Fluoranthene	220	24	ug/kg	2.5
Pyrene	150 J	24	ug/kg	2.4
Benzo(a)anthracene	110	24	ug/kg	3.0
Chrysene	130	24	ug/kg	2.8
Benzo(b)fluoranthene	210	24	ug/kg	3.7
Benzo(k)fluoranthene	97	24	ug/kg	4.8
Benzo(a)pyrene	120	24	ug/kg	2.4
Indeno(1,2,3-cd)pyrene	130	24	ug/kg	2.4
Dibenzo(a,h)anthracene	35	24	ug/kg	2.6
Benzo(ghi)perylene	150	24	ug/kg	2.3

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	54	(27 - 110)
Terphenyl-d14	46	(21 - 130)
2-Fluorobiphenyl	51	(28 - 108)
2-Fluorophenol	55	(28 - 107)
Phenol-d5	51	(30 - 112)
2,4,6-Tribromophenol	55	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: FIELD DUPLICATE #5

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-035	Work Order #...:	LXGRF1AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	20:17		
Dilution Factor:	1.95	Initial Wgt/Vol:	15.4 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	46	Analyst ID.....:	430261	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	53 J	120	ug/kg	11
Naphthalene	16 J	24	ug/kg	2.1
Acenaphthylene	70	24	ug/kg	2.7
Acenaphthene	7.9 J	24	ug/kg	2.3
Fluorene	11 J	24	ug/kg	3.2
Phenanthrene	73	24	ug/kg	3.8
Anthracene	82	24	ug/kg	2.3
Fluoranthene	230	24	ug/kg	2.6
Pyrene	160 J	24	ug/kg	2.4
Benzo(a)anthracene	110	24	ug/kg	3.0
Chrysene	150	24	ug/kg	2.9
Benzo(b)fluoranthene	250	24	ug/kg	3.8
Benzo(k)fluoranthene	84	24	ug/kg	4.8
Benzo(a)pyrene	130	24	ug/kg	2.4
Indeno(1,2,3-cd)pyrene	160	24	ug/kg	2.5
Dibenzo(a,h)anthracene	35	24	ug/kg	2.7
Benzo(ghi)perylene	180	24	ug/kg	2.4

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	40	(27 - 110)
Terphenyl-d14	33	(21 - 130)
2-Fluorobiphenyl	39	(28 - 108)
2-Fluorophenol	41	(28 - 107)
Phenol-d5	38	(30 - 112)
2,4,6-Tribromophenol	43	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A3-21 (0-6)

GC/MS Semivolatiles

Lot-Sample #...: C0D020489-040
Date Sampled...: 03/30/10
Prep Date.....: 04/06/10
Prep Batch #...: 0096045
Dilution Factor: 20
% Moisture.....: 36

Work Order #...: LXGRN1AC
Date Received..: 04/02/10
Analysis Date..: 04/06/10
Analysis Time..: 22:05
Initial Wgt/Vol: 15 g
Analyst ID.....: 430261
Method.....: SW846 8270C

Matrix.....: SOLID
MS Run #.....: 0096021

Final Wgt/Vol..: 0.5 mL
Instrument ID..: 731

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	18000 DJ	1000	ug/kg	93
Naphthalene	3800	210	ug/kg	18
Acenaphthylene	4400	210	ug/kg	24
Acenaphthene	860	210	ug/kg	20
Fluorene	920	210	ug/kg	28
Phenanthrene	15000	210	ug/kg	33
Anthracene	9200	210	ug/kg	20
Fluoranthene	25000	210	ug/kg	22
Pyrene	13000	210	ug/kg	21
Benzo(a)anthracene	9400	210	ug/kg	26
Chrysene	11000	210	ug/kg	25
Benzo(b)fluoranthene	21000	210	ug/kg	33
Benzo(k)fluoranthene	6100	210	ug/kg	42
Benzo(a)pyrene	5100	210	ug/kg	21
Indeno(1,2,3-cd)pyrene	10000	210	ug/kg	22
Dibenzo(a,h)anthracene	ND	210	ug/kg	23
Benzo(ghi)perylene	8600	210	ug/kg	21

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A3-22 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-039	Work Order #...:	LXGRM1AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	21:44		
Dilution Factor:	19.87	Initial Wgt/Vol:	15.1 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	59	Analyst ID.....:	430261	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	1200 J DJ	1600	ug/kg	150
Naphthalene	110 J	330	ug/kg	28
Acenaphthylene	1500	330	ug/kg	37
Acenaphthene	120 J	330	ug/kg	31
Fluorene	160 J	330	ug/kg	43
Phenanthrene	610	330	ug/kg	52
Anthracene	2200	330	ug/kg	32
Fluoranthene	2400	330	ug/kg	35
Pyrene	1800	330	ug/kg	33
Benzo(a)anthracene	1300	330	ug/kg	41
Chrysene	1500	330	ug/kg	39
Benzo(b)fluoranthene	2700	330	ug/kg	51
Benzo(k)fluoranthene	1000	330	ug/kg	66
Benzo(a)pyrene	1100	330	ug/kg	33
Indeno(1,2,3-cd)pyrene	2400	330	ug/kg	34
Dibenzo(a,h)anthracene	600	330	ug/kg	36
Benzo(ghi)perylene	2600	330	ug/kg	32

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A3-23 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-038	Work Order #...:	LXGRK1AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10 11:25	Date Received..:	04/02/10 10:15	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/07/10		
Prep Batch #...:	0096045	Analysis Time..:	20:36		
Dilution Factor:	4.9	Initial Wgt/Vol:	15.3 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	38	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	570	260	ug/kg	24
Naphthalene	120	53	ug/kg	4.5
Acenaphthylene	1100	53	ug/kg	6.0
Acenaphthene	47 J	53	ug/kg	5.0
Fluorene	79	53	ug/kg	6.9
Phenanthrene	570	53	ug/kg	8.4
Anthracene	1200	53	ug/kg	5.1
Fluoranthene	1800	53	ug/kg	5.6
Pyrene	1400	53	ug/kg	5.3
Benzo(a)anthracene	1000	53	ug/kg	6.6
Chrysene	1800	53	ug/kg	6.3
Benzo(b)fluoranthene	4100 JY	53	ug/kg	8.3
Benzo(k)fluoranthene	~~ND~~ 3600 JY	53	ug/kg	11
Benzo(a)pyrene	1600	53	ug/kg	5.3
Indeno(1,2,3-cd)pyrene	2000	53	ug/kg	5.4
Dibenzo(a,h)anthracene	470	53	ug/kg	5.8
Benzo(ghi)perylene	1900	53	ug/kg	5.2

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	74	(27 - 110)
Terphenyl-d14	61	(21 - 130)
2-Fluorobiphenyl	66	(28 - 108)
2-Fluorophenol	69	(28 - 107)
Phenol-d5	72	(30 - 112)
2,4,6-Tribromophenol	75	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A3-24 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-041	Work Order #...:	LXGRP1AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0096021
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096045	Analysis Time..:	22:26		
Dilution Factor:	19.74	Initial Wgt/Vol:	15.2 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	48	Analyst ID.....:	430261	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	2600 DI	1300	ug/kg	110
Naphthalene	700	260	ug/kg	22
Acenaphthylene	10000	260	ug/kg	29
Acenaphthene	420	260	ug/kg	24
Fluorene	570	260	ug/kg	33
Phenanthrene	3200	260	ug/kg	40
Anthracene	7800	260	ug/kg	25
Fluoranthene	25000	260	ug/kg	27
Pyrene	15000	260	ug/kg	26
Benzo(a)anthracene	17000	260	ug/kg	32
Chrysene	19000	260	ug/kg	30
Benzo(b)fluoranthene	45000	260	ug/kg	40
Benzo(k)fluoranthene	25000	260	ug/kg	51
Benzo(a)pyrene	28000	260	ug/kg	25
Indeno(1,2,3-cd)pyrene	26000	260	ug/kg	26
Dibenzo(a,h)anthracene	ND	260	ug/kg	28
Benzo(ghi)perylene	24000	260	ug/kg	25

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A4-1 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-058	Work Order #...:	LXGTL1AC	Matrix.....:	SOLID
Date Sampled...:	03/31/10 10:50	Date Received..:	04/02/10 10:15	MS Run #.....:	0096022
Prep Date.....:	04/06/10	Analysis Date..:	04/07/10		
Prep Batch #...:	0096048	Analysis Time..:	18:37		
Dilution Factor:	5	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	33	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	250	ug/kg	22
Naphthalene	ND	50	ug/kg	4.3
Acenaphthylene	35 J	50	ug/kg	5.7
Acenaphthene	20 J	50	ug/kg	4.8
Fluorene	14 J	50	ug/kg	6.6
Phenanthrene	190	50	ug/kg	7.9
Anthracene	62	50	ug/kg	4.9
Fluoranthene	560	50	ug/kg	5.3
Pyrene	360	50	ug/kg	5.0
Benzo(a)anthracene	240	50	ug/kg	6.2
Chrysene	310	50	ug/kg	5.9
Benzo(b)fluoranthene	~~540~~ 420	50	ug/kg	7.8
Benzo(k)fluoranthene	~~ND~~ 140	50	ug/kg	10
Benzo(a)pyrene	260	50	ug/kg	5.0
Indeno(1,2,3-cd)pyrene	240	50	ug/kg	5.1
Dibenzo(a,h)anthracene	58	50	ug/kg	5.5
Benzo(ghi)perylene	240	50	ug/kg	4.9

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	61	(27 - 110)
Terphenyl-d14	50	(21 - 130)
2-Fluorobiphenyl	56	(28 - 108)
2-Fluorophenol	57	(28 - 107)
Phenol-d5	62	(30 - 112)
2,4,6-Tribromophenol	58	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A4-2 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-059	**Work Order #...:**	LXGTM1AC	**Matrix.....:**	SOLID
Date Sampled...:	03/31/10 10:55	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0096022
Prep Date.....:	04/06/10	**Analysis Date..:**	04/07/10		
Prep Batch #...:	0096048	**Analysis Time..:**	19:01		
Dilution Factor:	0.97	**Initial Wgt/Vol:**	15.4 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	29	**Analyst ID.....:**	003200	**Instrument ID..:**	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	45	ug/kg	4.1
Naphthalene	**56**	**9.2**	**ug/kg**	**0.79**
Acenaphthylene	**35**	**9.2**	**ug/kg**	**1.0**
Acenaphthene	**10**	**9.2**	**ug/kg**	**0.88**
Fluorene	**7.6 J**	**9.2**	**ug/kg**	**1.2**
Phenanthrene	**150**	**9.2**	**ug/kg**	**1.5**
Anthracene	**36**	**9.2**	**ug/kg**	**0.89**
Fluoranthene	**220**	**9.2**	**ug/kg**	**0.98**
Pyrene	**120**	**9.2**	**ug/kg**	**0.92**
Benzo(a)anthracene	**77**	**9.2**	**ug/kg**	**1.1**
Chrysene	**110**	**9.2**	**ug/kg**	**1.1**
Benzo(b)fluoranthene	~~160~~ 140	**9.2**	**ug/kg**	**1.4**
Benzo(k)fluoranthene	~~ND~~ 36	9.2	ug/kg	1.8
Benzo(a)pyrene	**85**	**9.2**	**ug/kg**	**0.91**
Indeno(1,2,3-cd)pyrene	**84**	**9.2**	**ug/kg**	**0.94**
Dibenzo(a,h)anthracene	**22**	**9.2**	**ug/kg**	**1.0**
Benzo(ghi)perylene	**92**	**9.2**	**ug/kg**	**0.91**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	81	(27 - 110)
Terphenyl-d14	64	(21 - 130)
2-Fluorobiphenyl	74	(28 - 108)
2-Fluorophenol	71	(28 - 107)
Phenol-d5	72	(30 - 112)
2,4,6-Tribromophenol	84	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A4-3 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-060	**Work Order #...:**	LXGTN1AC	**Matrix.....:**	SOLID
Date Sampled...:	03/31/10 11:00	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0096022
Prep Date.....:	04/06/10	**Analysis Date..:**	04/07/10		
Prep Batch #...:	0096048	**Analysis Time..:**	19:25		
Dilution Factor:	1	**Initial Wgt/Vol:**	15 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	28	**Analyst ID.....:**	003200	**Instrument ID..:**	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	46	ug/kg	4.1
Naphthalene	ND	9.3	ug/kg	0.79
Acenaphthylene	**3.2 J**	**9.3**	**ug/kg**	**1.1**
Acenaphthene	ND	9.3	ug/kg	0.89
Fluorene	ND	9.3	ug/kg	1.2
Phenanthrene	**15**	**9.3**	**ug/kg**	**1.5**
Anthracene	**4.3 J**	**9.3**	**ug/kg**	**0.90**
Fluoranthene	**20**	**9.3**	**ug/kg**	**0.99**
Pyrene	**12**	**9.3**	**ug/kg**	**0.93**
Benzo(a)anthracene	**11**	**9.3**	**ug/kg**	**1.2**
Chrysene	**13**	**9.3**	**ug/kg**	**1.1**
Benzo(b)fluoranthene	**16**	**9.3**	**ug/kg**	**1.4**
Benzo(k)fluoranthene	**6.2 J**	**9.3**	**ug/kg**	**1.9**
Benzo(a)pyrene	**11**	**9.3**	**ug/kg**	**0.92**
Indeno(1,2,3-cd)pyrene	**9.3**	**9.3**	**ug/kg**	**0.95**
Dibenzo(a,h)anthracene	**2.1 J**	**9.3**	**ug/kg**	**1.0**
Benzo(ghi)perylene	**12**	**9.3**	**ug/kg**	**0.92**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(27 - 110)
Terphenyl-d14	41	(21 - 130)
2-Fluorobiphenyl	49	(28 - 108)
2-Fluorophenol	50	(28 - 107)
Phenol-d5	53	(30 - 112)
2,4,6-Tribromophenol	57	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A4-4 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-057	**Work Order #...:**	LXGTK1AC	**Matrix.....:**	SOLID
Date Sampled...:	03/31/10 10:20	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0096022
Prep Date.....:	04/06/10	**Analysis Date..:**	04/07/10		
Prep Batch #...:	0096048	**Analysis Time..:**	18:12		
Dilution Factor:	4.9	**Initial Wgt/Vol:**	15.3 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	48	**Analyst ID.....:**	003200	**Instrument ID..:**	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	310	ug/kg	28
Naphthalene	ND	63	ug/kg	5.4
Acenaphthylene	**45 J**	**63**	**ug/kg**	**7.2**
Acenaphthene	**22 J**	**63**	**ug/kg**	**6.1**
Fluorene	**25 J**	**63**	**ug/kg**	**8.3**
Phenanthrene	**170**	**63**	**ug/kg**	**10**
Anthracene	**60 J**	**63**	**ug/kg**	**6.2**
Fluoranthene	**560**	**63**	**ug/kg**	**6.7**
Pyrene	**370**	**63**	**ug/kg**	**6.4**
Benzo(a)anthracene	**220**	**63**	**ug/kg**	**7.9**
Chrysene	**370**	**63**	**ug/kg**	**7.5**
Benzo(b)fluoranthene	~~660~~ 430	**63**	**ug/kg**	**9.9**
Benzo(k)fluoranthene	~~ND~~ 260	63	ug/kg	13
Benzo(a)pyrene	**300**	**63**	**ug/kg**	**6.3**
Indeno(1,2,3-cd)pyrene	**280**	**63**	**ug/kg**	**6.5**
Dibenzo(a,h)anthracene	**68**	**63**	**ug/kg**	**7.0**
Benzo(ghi)perylene	**330**	**63**	**ug/kg**	**6.3**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	44	(27 - 110)
Terphenyl-d14	34	(21 - 130)
2-Fluorobiphenyl	41	(28 - 108)
2-Fluorophenol	38	(28 - 107)
Phenol-d5	40	(30 - 112)
2,4,6-Tribromophenol	38	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A4-5 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-055	Work Order #...:	LXGTG1AC	Matrix.....:	SOLID
Date Sampled...:	03/31/10 10:10	Date Received..:	04/02/10 10:15	MS Run #.....:	0096022
Prep Date.....:	04/06/10	Analysis Date..:	04/07/10		
Prep Batch #...:	0096048	Analysis Time..:	17:22		
Dilution Factor:	9.8	Initial Wgt/Vol:	15.3 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	33	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	490	ug/kg	44
Naphthalene	560	99	ug/kg	8.5
Acenaphthylene	580	99	ug/kg	11
Acenaphthene	240	99	ug/kg	9.4
Fluorene	230	99	ug/kg	13
Phenanthrene	2500	99	ug/kg	16
Anthracene	860	99	ug/kg	9.6
Fluoranthene	3200	99	ug/kg	11
Pyrene	1800	99	ug/kg	9.9
Benzo(a)anthracene	1100	99	ug/kg	12
Chrysene	1300	99	ug/kg	12
Benzo(b)fluoranthene	2000 JY	99	ug/kg	15
Benzo(k)fluoranthene	~~ND~~ 1700 JY	99	ug/kg	20
Benzo(a)pyrene	1100	99	ug/kg	9.8
Indeno(1,2,3-cd)pyrene	1100	99	ug/kg	10
Dibenzo(a,h)anthracene	190	99	ug/kg	11
Benzo(ghi)perylene	1400	99	ug/kg	9.8

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	79	(27 - 110)
Terphenyl-d14	60	(21 - 130)
2-Fluorobiphenyl	65	(28 - 108)
2-Fluorophenol	75	(28 - 107)
Phenol-d5	75	(30 - 112)
2,4,6-Tribromophenol	67	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A4-6 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-056	Work Order #...:	LXGTJ1AC	Matrix.....:	SOLID
Date Sampled...:	03/31/10 10:15	Date Received..:	04/02/10 10:15	MS Run #.....:	0096022
Prep Date.....:	04/06/10	Analysis Date..:	04/07/10		
Prep Batch #...:	0096048	Analysis Time..:	17:47		
Dilution Factor:	4.93	Initial Wgt/Vol:	15.2 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	47	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	310	ug/kg	28
Naphthalene	190	62	ug/kg	5.3
Acenaphthylene	290	62	ug/kg	7.1
Acenaphthene	54 J	62	ug/kg	5.9
Fluorene	ND	62	ug/kg	8.2
Phenanthrene	740	62	ug/kg	9.8
Anthracene	350	62	ug/kg	6.1
Fluoranthene	1400	62	ug/kg	6.6
Pyrene	890	62	ug/kg	6.3
Benzo(a)anthracene	760	62	ug/kg	7.8
Chrysene	1100	62	ug/kg	7.4
Benzo(b)fluoranthene	~~2000~~ 1600	62	ug/kg	9.7
Benzo(k)fluoranthene	~~ND~~ 500	62	ug/kg	13
Benzo(a)pyrene	800	62	ug/kg	6.2
Indeno(1,2,3-cd)pyrene	800	62	ug/kg	6.4
Dibenzo(a,h)anthracene	220	62	ug/kg	6.9
Benzo(ghi)perylene	770	62	ug/kg	6.2

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	51	(27 - 110)
Terphenyl-d14	41	(21 - 130)
2-Fluorobiphenyl	43	(28 - 108)
2-Fluorophenol	44	(28 - 107)
Phenol-d5	46	(30 - 112)
2,4,6-Tribromophenol	48	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A4-7 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-047	**Work Order #...:**	LXGR31AC	**Matrix.....:**	SOLID
Date Sampled...:	03/31/10 08:30	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0096022
Prep Date.....:	04/06/10	**Analysis Date..:**	04/07/10		
Prep Batch #...:	0096048	**Analysis Time..:**	14:01		
Dilution Factor:	0.98	**Initial Wgt/Vol:**	15.3 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	35	**Analyst ID.....:**	003200	**Instrument ID..:**	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	50	ug/kg	4.5
Naphthalene	**16**	**10**	**ug/kg**	**0.87**
Acenaphthylene	**11**	**10**	**ug/kg**	**1.2**
Acenaphthene	**8.0 J**	**10**	**ug/kg**	**0.97**
Fluorene	**7.9 J**	**10**	**ug/kg**	**1.3**
Phenanthrene	**51**	**10**	**ug/kg**	**1.6**
Anthracene	**13**	**10**	**ug/kg**	**0.99**
Fluoranthene	**87**	**10**	**ug/kg**	**1.1**
Pyrene	**69**	**10**	**ug/kg**	**1.0**
Benzo(a)anthracene	**46**	**10**	**ug/kg**	**1.3**
Chrysene	**64**	**10**	**ug/kg**	**1.2**
Benzo(b)fluoranthene	**100** JY	**10**	**ug/kg**	**1.6**
Benzo(k)fluoranthene	~~ND~~ 88 JY	10	ug/kg	2.0
Benzo(a)pyrene	**47**	**10**	**ug/kg**	**1.0**
Indeno(1,2,3-cd)pyrene	**37**	**10**	**ug/kg**	**1.0**
Dibenzo(a,h)anthracene	**8.0 J**	**10**	**ug/kg**	**1.1**
Benzo(ghi)perylene	**39**	**10**	**ug/kg**	**1.0**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	70	(27 - 110)
Terphenyl-d14	55	(21 - 130)
2-Fluorobiphenyl	62	(28 - 108)
2-Fluorophenol	58	(28 - 107)
Phenol-d5	57	(30 - 112)
2,4,6-Tribromophenol	59	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A4-8 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-048	Work Order #...:	LXGR51AC	Matrix.....:	SOLID
Date Sampled...:	03/31/10 08:35	Date Received..:	04/02/10 10:15	MS Run #.....:	0096022
Prep Date.....:	04/06/10	Analysis Date..:	04/07/10		
Prep Batch #...:	0096048	Analysis Time..:	14:26		
Dilution Factor:	0.99	Initial Wgt/Vol:	15.2 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	30	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	47	ug/kg	4.2
Naphthalene	23	9.5	ug/kg	0.81
Acenaphthylene	35	9.5	ug/kg	1.1
Acenaphthene	8.9 J	9.5	ug/kg	0.91
Fluorene	6.0 J	9.5	ug/kg	1.2
Phenanthrene	110	9.5	ug/kg	1.5
Anthracene	38	9.5	ug/kg	0.92
Fluoranthene	260	9.5	ug/kg	1.0
Pyrene	170	9.5	ug/kg	0.95
Benzo(a)anthracene	110	9.5	ug/kg	1.2
Chrysene	180	9.5	ug/kg	1.1
Benzo(b)fluoranthene	300 JY	9.5	ug/kg	1.5
Benzo(k)fluoranthene	~~ND~~ 260 JY	9.5	ug/kg	1.9
Benzo(a)pyrene	130	9.5	ug/kg	0.94
Indeno(1,2,3-cd)pyrene	130	9.5	ug/kg	0.97
Dibenzo(a,h)anthracene	30	9.5	ug/kg	1.0
Benzo(ghi)perylene	140	9.5	ug/kg	0.94

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	71	(27 - 110)
Terphenyl-d14	65	(21 - 130)
2-Fluorobiphenyl	65	(28 - 108)
2-Fluorophenol	64	(28 - 107)
Phenol-d5	69	(30 - 112)
2,4,6-Tribromophenol	82	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: FIELD DUPLICATE #6

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-049	Work Order #...:	LXGR71AC	Matrix.....:	SOLID
Date Sampled...:	03/31/10	Date Received..:	04/02/10 10:15	MS Run #.....:	0096022
Prep Date.....:	04/06/10	Analysis Date..:	04/07/10		
Prep Batch #...:	0096048	Analysis Time..:	14:50		
Dilution Factor:	2	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	32	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	97	ug/kg	8.8
Naphthalene	11 J	20	ug/kg	1.7
Acenaphthylene	20	20	ug/kg	2.2
Acenaphthene	ND	20	ug/kg	1.9
Fluorene	6.6 J	20	ug/kg	2.6
Phenanthrene	87	20	ug/kg	3.1
Anthracene	26	20	ug/kg	1.9
Fluoranthene	230	20	ug/kg	2.1
Pyrene	140	20	ug/kg	2.0
Benzo(a)anthracene	81	20	ug/kg	2.5
Chrysene	160	20	ug/kg	2.3
Benzo(b)fluoranthene	250 JY	20	ug/kg	3.1
Benzo(k)fluoranthene	~~ND~~ 220 JY	20	ug/kg	4.0
Benzo(a)pyrene	110	20	ug/kg	2.0
Indeno(1,2,3-cd)pyrene	120	20	ug/kg	2.0
Dibenzo(a,h)anthracene	29	20	ug/kg	2.2
Benzo(ghi)perylene	120	20	ug/kg	2.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(27 - 110)
Terphenyl-d14	50	(21 - 130)
2-Fluorobiphenyl	51	(28 - 108)
2-Fluorophenol	49	(28 - 107)
Phenol-d5	54	(30 - 112)
2,4,6-Tribromophenol	65	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A4-9 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-050	Work Order #...:	LXGR81AC	Matrix.....:	SOLID
Date Sampled...:	03/31/10	Date Received..:	04/02/10	MS Run #.....:	0096022
Prep Date.....:	04/06/10	Analysis Date..:	04/07/10		
Prep Batch #...:	0096048	Analysis Time..:	15:16		
Dilution Factor:	0.99	Initial Wgt/Vol:	15.1 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	36	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	51	ug/kg	4.6
Naphthalene	ND	10	ug/kg	0.89
Acenaphthylene	**4.6 J**	**10**	**ug/kg**	**1.2**
Acenaphthene	ND	10	ug/kg	0.99
Fluorene	ND	10	ug/kg	1.4
Phenanthrene	**15**	**10**	**ug/kg**	**1.6**
Anthracene	**4.3 J**	**10**	**ug/kg**	**1.0**
Fluoranthene	**25**	**10**	**ug/kg**	**1.1**
Pyrene	**16**	**10**	**ug/kg**	**1.0**
Benzo(a)anthracene	**9.8 J**	**10**	**ug/kg**	**1.3**
Chrysene	**17**	**10**	**ug/kg**	**1.2**
Benzo(b)fluoranthene	**27**	**10**	**ug/kg**	**1.6**
Benzo(k)fluoranthene	**8.9 J**	**10**	**ug/kg**	**2.1**
Benzo(a)pyrene	**14**	**10**	**ug/kg**	**1.0**
Indeno(1,2,3-cd)pyrene	**14**	**10**	**ug/kg**	**1.1**
Dibenzo(a,h)anthracene	ND	10	ug/kg	1.1
Benzo(ghi)perylene	**16**	**10**	**ug/kg**	**1.0**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	58	(27 - 110)
Terphenyl-d14	46	(21 - 130)
2-Fluorobiphenyl	49	(28 - 108)
2-Fluorophenol	53	(28 - 107)
Phenol-d5	55	(30 - 112)
2,4,6-Tribromophenol	68	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A4-10 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-051	**Work Order #...:**	LXGR91AC	**Matrix.....:**	SOLID
Date Sampled...:	03/31/10	**Date Received..:**	04/02/10	**MS Run #.....:**	0096022
Prep Date.....:	04/06/10	**Analysis Date..:**	04/07/10		
Prep Batch #...:	0096048	**Analysis Time..:**	15:41		
Dilution Factor:	0.99	**Initial Wgt/Vol:**	15.1 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	24	**Analyst ID.....:**	003200	**Instrument ID..:**	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	43	ug/kg	3.9
Naphthalene	ND	8.8	ug/kg	0.75
Acenaphthylene	ND	8.8	ug/kg	1.0
Acenaphthene	ND	8.8	ug/kg	0.84
Fluorene	ND	8.8	ug/kg	1.2
Phenanthrene	**7.6 J**	**8.8**	**ug/kg**	**1.4**
Anthracene	ND	8.8	ug/kg	0.86
Fluoranthene	**6.6 J**	**8.8**	**ug/kg**	**0.94**
Pyrene	**5.2 J**	**8.8**	**ug/kg**	**0.88**
Benzo(a)anthracene	ND	8.8	ug/kg	1.1
Chrysene	ND	8.8	ug/kg	1.0
Benzo(b)fluoranthene	**3.5 J**	**8.8**	**ug/kg**	**1.4**
Benzo(k)fluoranthene	ND	8.8	ug/kg	1.8
Benzo(a)pyrene	**2.7 J**	**8.8**	**ug/kg**	**0.88**
Indeno(1,2,3-cd)pyrene	ND	8.8	ug/kg	0.90
Dibenzo(a,h)anthracene	ND	8.8	ug/kg	0.97
Benzo(ghi)perylene	ND	8.8	ug/kg	0.87

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	59	(27 - 110)
Terphenyl-d14	42	(21 - 130)
2-Fluorobiphenyl	48	(28 - 108)
2-Fluorophenol	50	(28 - 107)
Phenol-d5	52	(30 - 112)
2,4,6-Tribromophenol	48	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A5-6 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-014	Work Order #...:	LXGQF1AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0095277
Prep Date.....:	04/05/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0095430	Analysis Time..:	18:46		
Dilution Factor:	10	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	42	Analyst ID.....:	003200	Instrument ID..:	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	400 J	570	ug/kg	52
Naphthalene	89 J	120	ug/kg	10
Acenaphthylene	1800	120	ug/kg	13
Acenaphthene	130	120	ug/kg	11
Fluorene	200	120	ug/kg	15
Phenanthrene	350	120	ug/kg	18
Anthracene	2200	120	ug/kg	11
Fluoranthene	1500	120	ug/kg	12
Pyrene	1700	120	ug/kg	12
Benzo(a)anthracene	1200	120	ug/kg	15
Chrysene	1700	120	ug/kg	14
Benzo(b)fluoranthene	3300	120	ug/kg	18
Benzo(k)fluoranthene	1500	120	ug/kg	23
Benzo(a)pyrene	2300	120	ug/kg	12
Indeno(1,2,3-cd)pyrene	2400	120	ug/kg	12
Dibenzo(a,h)anthracene	670	120	ug/kg	13
Benzo(ghi)perylene	2900	120	ug/kg	12

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	68	(27 - 110)
Terphenyl-d14	70	(21 - 130)
2-Fluorobiphenyl	75	(28 - 108)
2-Fluorophenol	63	(28 - 107)
Phenol-d5	64	(30 - 112)
2,4,6-Tribromophenol	80	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: FIELD DUPLICATE #3

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-015	Work Order #...:	LXGQG1AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10 10:15	MS Run #.....:	0095277
Prep Date.....:	04/05/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0095430	Analysis Time..:	19:09		
Dilution Factor:	10	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	45	Analyst ID.....:	003200	Instrument ID..:	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	530 J	600	ug/kg	54
Naphthalene	140	120	ug/kg	10
Acenaphthylene	2600	120	ug/kg	14
Acenaphthene	180	120	ug/kg	12
Fluorene	270	120	ug/kg	16
Phenanthrene	500	120	ug/kg	19
Anthracene	3000	120	ug/kg	12
Fluoranthene	2200	120	ug/kg	13
Pyrene	2500	120	ug/kg	12
Benzo(a)anthracene	1700	120	ug/kg	15
Chrysene	3000	120	ug/kg	14
Benzo(b)fluoranthene	5500	120	ug/kg	19
Benzo(k)fluoranthene	1900	120	ug/kg	25
Benzo(a)pyrene	3600	120	ug/kg	12
Indeno(1,2,3-cd)pyrene	3600	120	ug/kg	13
Dibenzo(a,h)anthracene	1100	120	ug/kg	14
Benzo(ghi)perylene	4200	120	ug/kg	12

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	68	(27 - 110)
Terphenyl-d14	73	(21 - 130)
2-Fluorobiphenyl	79	(28 - 108)
2-Fluorophenol	64	(28 - 107)
Phenol-d5	66	(30 - 112)
2,4,6-Tribromophenol	80	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A5-7 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-016	Work Order #...:	LXGQH1AC	Matrix.....:	SOLID
Date Sampled...:	03/30/10	Date Received..:	04/02/10	MS Run #.....:	0095277
Prep Date.....:	04/05/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0095430	Analysis Time..:	19:32		
Dilution Factor:	20	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	39	Analyst ID.....:	003200	Instrument ID..:	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	2100 DJ	1100	ug/kg	97
Naphthalene	680	220	ug/kg	19
Acenaphthylene	4600	220	ug/kg	25
Acenaphthene	400	220	ug/kg	21
Fluorene	530	220	ug/kg	29
Phenanthrene	2500	220	ug/kg	35
Anthracene	5600	220	ug/kg	21
Fluoranthene	4500	220	ug/kg	23
Pyrene	3400	220	ug/kg	22
Benzo(a)anthracene	2100	220	ug/kg	27
Chrysene	3700	220	ug/kg	26
Benzo(b)fluoranthene	9000	220	ug/kg	34
Benzo(k)fluoranthene	2000	220	ug/kg	44
Benzo(a)pyrene	5600	220	ug/kg	22
Indeno(1,2,3-cd)pyrene	7500	220	ug/kg	22
Dibenzo(a,h)anthracene	2000	220	ug/kg	24
Benzo(ghi)perylene	8600	220	ug/kg	22

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	NC,DIL	(27 - 110)
Terphenyl-d14	NC,DIL	(21 - 130)
2-Fluorobiphenyl	NC,DIL	(28 - 108)
2-Fluorophenol	NC,DIL	(28 - 107)
Phenol-d5	NC,DIL	(30 - 112)
2,4,6-Tribromophenol	NC,DIL	(21 - 116)

NOTE(S):

NC The recovery and/or RPD were not calculated.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A6-1 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-042	Work Order #...:	LXGRQ1AE	Matrix.....:	SOLID
Date Sampled...:	03/31/10	Date Received..:	04/02/10	MS Run #.....:	0096022
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096048	Analysis Time..:	22:19		
Dilution Factor:	1.96	Initial Wgt/Vol:	15.3 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	41	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	190	110	ug/kg	10
Naphthalene	17 J	22	ug/kg	1.9
Acenaphthylene	140	22	ug/kg	2.5
Acenaphthene	9.4 J	22	ug/kg	2.1
Fluorene	14 J	22	ug/kg	2.9
Phenanthrene	68	22	ug/kg	3.5
Anthracene	210	22	ug/kg	2.2
Fluoranthene	190	22	ug/kg	2.4
Pyrene	180	22	ug/kg	2.3
Benzo(a)anthracene	120	22	ug/kg	2.8
Chrysene	200	22	ug/kg	2.7
Benzo(b)fluoranthene	370	22	ug/kg	3.5
Benzo(k)fluoranthene	110	22	ug/kg	4.5
Benzo(a)pyrene	180	22	ug/kg	2.2
Indeno(1,2,3-cd)pyrene	230	22	ug/kg	2.3
Dibenzo(a,h)anthracene	51	22	ug/kg	2.5
Benzo(ghi)perylene	190	22	ug/kg	2.2

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	51	(27 - 110)
Terphenyl-d14	42	(21 - 130)
2-Fluorobiphenyl	48	(28 - 108)
2-Fluorophenol	46	(28 - 107)
Phenol-d5	47	(30 - 112)
2,4,6-Tribromophenol	48	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A6-2 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-043	Work Order #...:	LXGRV1AC	Matrix.....:	SOLID
Date Sampled...:	03/31/10	Date Received..:	04/02/10	MS Run #.....:	0096022
Prep Date.....:	04/06/10	Analysis Date..:	04/06/10		
Prep Batch #...:	0096048	Analysis Time..:	23:27		
Dilution Factor:	2	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	34	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	130	100	ug/kg	9.1
Naphthalene	8.1 J	20	ug/kg	1.8
Acenaphthylene	180	20	ug/kg	2.3
Acenaphthene	9.4 J	20	ug/kg	2.0
Fluorene	20	20	ug/kg	2.7
Phenanthrene	67	20	ug/kg	3.2
Anthracene	190	20	ug/kg	2.0
Fluoranthene	290	20	ug/kg	2.2
Pyrene	340	20	ug/kg	2.1
Benzo(a)anthracene	410	20	ug/kg	2.6
Chrysene	580	20	ug/kg	2.4
Benzo(b)fluoranthene	1100	20	ug/kg	3.2
Benzo(k)fluoranthene	350	20	ug/kg	4.1
Benzo(a)pyrene	610	20	ug/kg	2.0
Indeno(1,2,3-cd)pyrene	400	20	ug/kg	2.1
Dibenzo(a,h)anthracene	130	20	ug/kg	2.3
Benzo(ghi)perylene	380	20	ug/kg	2.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	56	(27 - 110)
Terphenyl-d14	45	(21 - 130)
2-Fluorobiphenyl	51	(28 - 108)
2-Fluorophenol	51	(28 - 107)
Phenol-d5	52	(30 - 112)
2,4,6-Tribromophenol	53	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A6-3 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-044	**Work Order #...:**	LXGRX1AC	**Matrix.....:**	SOLID
Date Sampled...:	03/31/10 08:15	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0096022
Prep Date.....:	04/06/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0096048	**Analysis Time..:**	23:50		
Dilution Factor:	4	**Initial Wgt/Vol:**	15 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	42	**Analyst ID.....:**	003200	**Instrument ID..:**	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	230	ug/kg	21
Naphthalene	**2000**	**46**	**ug/kg**	**4.0**
Acenaphthylene	**340**	**46**	**ug/kg**	**5.3**
Acenaphthene	**1200**	**46**	**ug/kg**	**4.4**
Fluorene	**990**	**46**	**ug/kg**	**6.1**
Phenanthrene	**2100**	**46**	**ug/kg**	**7.3**
Anthracene	**460**	**46**	**ug/kg**	**4.5**
Fluoranthene	**1600**	**46**	**ug/kg**	**4.9**
Pyrene	**1100**	**46**	**ug/kg**	**4.6**
Benzo(a)anthracene	**500**	**46**	**ug/kg**	**5.8**
Chrysene	**530**	**46**	**ug/kg**	**5.5**
Benzo(b)fluoranthene	**1100** JY	**46**	**ug/kg**	**7.2**
Benzo(k)fluoranthene	~~ND~~ 970 JY	46	ug/kg	9.3
Benzo(a)pyrene	**560**	**46**	**ug/kg**	**4.6**
Indeno(1,2,3-cd)pyrene	**850**	**46**	**ug/kg**	**4.7**
Dibenzo(a,h)anthracene	**110**	**46**	**ug/kg**	**5.1**
Benzo(ghi)perylene	**900**	**46**	**ug/kg**	**4.6**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	89	(27 - 110)
Terphenyl-d14	71	(21 - 130)
2-Fluorobiphenyl	88	(28 - 108)
2-Fluorophenol	80	(28 - 107)
Phenol-d5	81	(30 - 112)
2,4,6-Tribromophenol	101	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A6-4 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-045	Work Order #...:	LXGR11AC	Matrix.....:	SOLID
Date Sampled...:	03/31/10	Date Received..:	04/02/10	MS Run #.....:	0096022
Prep Date.....:	04/06/10	Analysis Date..:	04/07/10		
Prep Batch #...:	0096048	Analysis Time..:	00:12		
Dilution Factor:	2	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	27	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	90	ug/kg	8.1
Naphthalene	57	18	ug/kg	1.6
Acenaphthylene	98	18	ug/kg	2.1
Acenaphthene	19	18	ug/kg	1.7
Fluorene	21	18	ug/kg	2.4
Phenanthrene	190	18	ug/kg	2.9
Anthracene	93	18	ug/kg	1.8
Fluoranthene	340	18	ug/kg	1.9
Pyrene	230	18	ug/kg	1.8
Benzo(a)anthracene	200	18	ug/kg	2.3
Chrysene	260	18	ug/kg	2.2
Benzo(b)fluoranthene	350	18	ug/kg	2.9
Benzo(k)fluoranthene	110	18	ug/kg	3.7
Benzo(a)pyrene	220	18	ug/kg	1.8
Indeno(1,2,3-cd)pyrene	200	18	ug/kg	1.9
Dibenzo(a,h)anthracene	42	18	ug/kg	2.0
Benzo(ghi)perylene	210	18	ug/kg	1.8

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	54	(27 - 110)
Terphenyl-d14	50	(21 - 130)
2-Fluorobiphenyl	52	(28 - 108)
2-Fluorophenol	47	(28 - 107)
Phenol-d5	50	(30 - 112)
2,4,6-Tribromophenol	66	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A6-5 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-046	Work Order #...:	LXGR21AC	Matrix.....:	SOLID
Date Sampled...:	03/31/10	Date Received..:	04/02/10	MS Run #.....:	0096022
Prep Date.....:	04/06/10	Analysis Date..:	04/07/10		
Prep Batch #...:	0096048	Analysis Time..:	00:34		
Dilution Factor:	0.99	Initial Wgt/Vol:	15.2 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	33	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	49	ug/kg	4.4
Naphthalene	5.4 J	9.9	ug/kg	0.85
Acenaphthylene	12	9.9	ug/kg	1.1
Acenaphthene	ND	9.9	ug/kg	0.94
Fluorene	ND	9.9	ug/kg	1.3
Phenanthrene	21	9.9	ug/kg	1.6
Anthracene	11	9.9	ug/kg	0.96
Fluoranthene	45	9.9	ug/kg	1.1
Pyrene	33	9.9	ug/kg	0.99
Benzo(a)anthracene	24	9.9	ug/kg	1.2
Chrysene	32	9.9	ug/kg	1.2
Benzo(b)fluoranthene	51	9.9	ug/kg	1.5
Benzo(k)fluoranthene	13	9.9	ug/kg	2.0
Benzo(a)pyrene	30	9.9	ug/kg	0.98
Indeno(1,2,3-cd)pyrene	28	9.9	ug/kg	1.0
Dibenzo(a,h)anthracene	7.0 J	9.9	ug/kg	1.1
Benzo(ghi)perylene	29	9.9	ug/kg	0.98

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	73	(27 - 110)
Terphenyl-d14	57	(21 - 130)
2-Fluorobiphenyl	66	(28 - 108)
2-Fluorophenol	66	(28 - 107)
Phenol-d5	65	(30 - 112)
2,4,6-Tribromophenol	79	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: A6-6 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-052	Work Order #...:	LXGTA1AC	Matrix.....:	SOLID
Date Sampled...:	03/31/10	Date Received..:	04/02/10	MS Run #.....:	0096022
Prep Date.....:	04/06/10	Analysis Date..:	04/07/10		
Prep Batch #...:	0096048	Analysis Time..:	16:06		
Dilution Factor:	0.97	Initial Wgt/Vol:	15.4 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	40	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	54	ug/kg	4.9
Naphthalene	28	11	ug/kg	0.94
Acenaphthylene	79	11	ug/kg	1.2
Acenaphthene	11	11	ug/kg	1.0
Fluorene	17	11	ug/kg	1.4
Phenanthrene	59	11	ug/kg	1.7
Anthracene	71	11	ug/kg	1.1
Fluoranthene	110	11	ug/kg	1.2
Pyrene	81	11	ug/kg	1.1
Benzo(a)anthracene	79	11	ug/kg	1.4
Chrysene	130	11	ug/kg	1.3
Benzo(b)fluoranthene	270	11	ug/kg	1.7
Benzo(k)fluoranthene	81	11	ug/kg	2.2
Benzo(a)pyrene	160	11	ug/kg	1.1
Indeno(1,2,3-cd)pyrene	150	11	ug/kg	1.1
Dibenzo(a,h)anthracene	42	11	ug/kg	1.2
Benzo(ghi)perylene	150	11	ug/kg	1.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	62	(27 - 110)
Terphenyl-d14	53	(21 - 130)
2-Fluorobiphenyl	56	(28 - 108)
2-Fluorophenol	56	(28 - 107)
Phenol-d5	60	(30 - 112)
2,4,6-Tribromophenol	74	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A6-7 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-053	Work Order #...:	LXGTC1AC	Matrix.....:	SOLID
Date Sampled...:	03/31/10	Date Received..:	04/02/10	MS Run #.....:	0096022
Prep Date.....:	04/06/10	Analysis Date..:	04/07/10		
Prep Batch #...:	0096048	Analysis Time..:	16:31		
Dilution Factor:	1	Initial Wgt/Vol:	15 g	Final Wgt/Vol..:	0.5 mL
% Moisture.....:	30	Analyst ID.....:	003200	Instrument ID..:	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	47	ug/kg	4.3
Naphthalene	43	9.6	ug/kg	0.83
Acenaphthylene	53	9.6	ug/kg	1.1
Acenaphthene	11	9.6	ug/kg	0.92
Fluorene	12	9.6	ug/kg	1.3
Phenanthrene	120	9.6	ug/kg	1.5
Anthracene	51	9.6	ug/kg	0.94
Fluoranthene	150	9.6	ug/kg	1.0
Pyrene	87	9.6	ug/kg	0.97
Benzo(a)anthracene	89	9.6	ug/kg	1.2
Chrysene	100	9.6	ug/kg	1.1
Benzo(b)fluoranthene	200	9.6	ug/kg	1.5
Benzo(k)fluoranthene	71	9.6	ug/kg	1.9
Benzo(a)pyrene	120	9.6	ug/kg	0.96
Indeno(1,2,3-cd)pyrene	110	9.6	ug/kg	0.99
Dibenzo(a,h)anthracene	28	9.6	ug/kg	1.1
Benzo(ghi)perylene	110	9.6	ug/kg	0.95

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	64	(27 - 110)
Terphenyl-d14	47	(21 - 130)
2-Fluorobiphenyl	56	(28 - 108)
2-Fluorophenol	55	(28 - 107)
Phenol-d5	57	(30 - 112)
2,4,6-Tribromophenol	43	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A6-8 (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-054	**Work Order #...:**	LXGTE1AC	**Matrix.....:**	SOLID
Date Sampled...:	03/31/10	**Date Received..:**	04/02/10	**MS Run #.....:**	0096022
Prep Date.....:	04/06/10	**Analysis Date..:**	04/07/10		
Prep Batch #...:	0096048	**Analysis Time..:**	16:56		
Dilution Factor:	0.99	**Initial Wgt/Vol:**	15.1 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	21	**Analyst ID.....:**	003200	**Instrument ID..:**	731
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	41	ug/kg	3.7
Naphthalene	ND	8.4	ug/kg	0.72
Acenaphthylene	ND	8.4	ug/kg	0.95
Acenaphthene	ND	8.4	ug/kg	0.80
Fluorene	ND	8.4	ug/kg	1.1
Phenanthrene	**6.8 J**	**8.4**	**ug/kg**	**1.3**
Anthracene	**1.3 J**	**8.4**	**ug/kg**	**0.81**
Fluoranthene	**5.5 J**	**8.4**	**ug/kg**	**0.89**
Pyrene	**3.8 J**	**8.4**	**ug/kg**	**0.84**
Benzo(a)anthracene	ND	8.4	ug/kg	1.0
Chrysene	ND	8.4	ug/kg	0.99
Benzo(b)fluoranthene	**2.4 J**	**8.4**	**ug/kg**	**1.3**
Benzo(k)fluoranthene	**3.5 J**	**8.4**	**ug/kg**	**1.7**
Benzo(a)pyrene	ND	8.4	ug/kg	0.83
Indeno(1,2,3-cd)pyrene	ND	8.4	ug/kg	0.86
Dibenzo(a,h)anthracene	ND	8.4	ug/kg	0.93
Benzo(ghi)perylene	ND	8.4	ug/kg	0.83

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	55	(27 - 110)
Terphenyl-d14	41	(21 - 130)
2-Fluorobiphenyl	45	(28 - 108)
2-Fluorophenol	46	(28 - 107)
Phenol-d5	47	(30 - 112)
2,4,6-Tribromophenol	49	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: NPL (0-6)

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-013	**Work Order #...:**	LXGQD1AC	**Matrix.....:**	SOLID
Date Sampled...:	03/29/10 16:00	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095277
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095430	**Analysis Time..:**	18:23		
Dilution Factor:	2	**Initial Wgt/Vol:**	15 g	**Final Wgt/Vol..:**	0.5 mL
% Moisture.....:	36	**Analyst ID.....:**	003200	**Instrument ID..:**	733
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	**16 J**	**100**	**ug/kg**	**9.4**
Naphthalene	**43**	**21**	**ug/kg**	**1.8**
Acenaphthylene	**39**	**21**	**ug/kg**	**2.4**
Acenaphthene	**11 J**	**21**	**ug/kg**	**2.0**
Fluorene	**8.6 J**	**21**	**ug/kg**	**2.8**
Phenanthrene	**190**	**21**	**ug/kg**	**3.3**
Anthracene	**58**	**21**	**ug/kg**	**2.1**
Fluoranthene	**290**	**21**	**ug/kg**	**2.2**
Pyrene	**240**	**21**	**ug/kg**	**2.1**
Benzo(a)anthracene	**140**	**21**	**ug/kg**	**2.6**
Chrysene	**150**	**21**	**ug/kg**	**2.5**
Benzo(b)fluoranthene	**160**	**21**	**ug/kg**	**3.3**
Benzo(k)fluoranthene	**69**	**21**	**ug/kg**	**4.2**
Benzo(a)pyrene	**140**	**21**	**ug/kg**	**2.1**
Indeno(1,2,3-cd)pyrene	**94**	**21**	**ug/kg**	**2.2**
Dibenzo(a,h)anthracene	**15 J**	**21**	**ug/kg**	**2.3**
Benzo(ghi)perylene	**120**	**21**	**ug/kg**	**2.1**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	71	(27 - 110)
Terphenyl-d14	68	(21 - 130)
2-Fluorobiphenyl	77	(28 - 108)
2-Fluorophenol	66	(28 - 107)
Phenol-d5	66	(30 - 112)
2,4,6-Tribromophenol	75	(21 - 116)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: RB032910

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-002	**Work Order #...:**	LXGPW1AA	**Matrix.....:**	WATER
Date Sampled...:	03/29/10 17:30	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095222
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095331	**Analysis Time..:**	19:58		
Dilution Factor:	0.97	**Initial Wgt/Vol:**	1030 mL	**Final Wgt/Vol..:**	1 mL
Analyst ID.....:	003200	**Instrument ID..:**	731		
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	0.97	ug/L	0.064
Naphthalene	ND	0.19	ug/L	0.014
Acenaphthylene	ND	0.19	ug/L	0.015
Acenaphthene	ND	0.19	ug/L	0.014
Fluorene	ND	0.19	ug/L	0.021
Phenanthrene	ND	0.19	ug/L	0.041
Anthracene	ND	0.19	ug/L	0.015
Fluoranthene	ND	0.19	ug/L	0.016
Pyrene	ND	0.19	ug/L	0.015
Benzo(a)anthracene	ND	0.19	ug/L	0.014
Chrysene	ND	0.19	ug/L	0.014
Benzo(b)fluoranthene	ND	0.19	ug/L	0.015
Benzo(k)fluoranthene	ND	0.19	ug/L	0.053
Benzo(a)pyrene	ND	0.19	ug/L	0.013
Indeno(1,2,3-cd)pyrene	ND	0.19	ug/L	0.019
Dibenzo(a,h)anthracene	ND	0.19	ug/L	0.015
Benzo(ghi)perylene	ND	0.19	ug/L	0.015

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	85	(23 - 112)
Terphenyl-d14	83	(10 - 132)
2-Fluorobiphenyl	78	(19 - 107)
2-Fluorophenol	81	(10 - 111)
Phenol-d5	83	(15 - 112)
2,4,6-Tribromophenol	86	(16 - 122)

ARCADIS U.S., Inc.

Client Sample ID: RB033010

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-032	**Work Order #...:**	LXGRA1AA	**Matrix.....:**	WATER
Date Sampled...:	03/30/10 18:00	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095222
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095331	**Analysis Time..:**	20:22		
Dilution Factor:	1.05	**Initial Wgt/Vol:**	950 mL	**Final Wgt/Vol..:**	1 mL
Analyst ID.....:	003200	**Instrument ID..:**	731		
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	1.0	ug/L	0.070
Naphthalene	ND	0.21	ug/L	0.015
Acenaphthylene	ND	0.21	ug/L	0.016
Acenaphthene	ND	0.21	ug/L	0.015
Fluorene	ND	0.21	ug/L	0.023
Phenanthrene	ND	0.21	ug/L	0.045
Anthracene	ND	0.21	ug/L	0.016
Fluoranthene	ND	0.21	ug/L	0.017
Pyrene	ND	0.21	ug/L	0.016
Benzo(a)anthracene	ND	0.21	ug/L	0.015
Chrysene	ND	0.21	ug/L	0.015
Benzo(b)fluoranthene	ND	0.21	ug/L	0.016
Benzo(k)fluoranthene	ND	0.21	ug/L	0.057
Benzo(a)pyrene	ND	0.21	ug/L	0.014
Indeno(1,2,3-cd)pyrene	ND	0.21	ug/L	0.021
Dibenzo(a,h)anthracene	ND	0.21	ug/L	0.016
Benzo(ghi)perylene	ND	0.21	ug/L	0.016

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	84	(23 - 112)
Terphenyl-d14	78	(10 - 132)
2-Fluorobiphenyl	71	(19 - 107)
2-Fluorophenol	76	(10 - 111)
Phenol-d5	78	(15 - 112)
2,4,6-Tribromophenol	81	(16 - 122)

ARCADIS U.S., Inc.

Client Sample ID: RB033110

GC/MS Semivolatiles

Lot-Sample #...:	C0D020489-033	**Work Order #...:**	LXGRC1AA	**Matrix.....:**	WATER
Date Sampled...:	03/31/10 12:00	**Date Received..:**	04/02/10 10:15	**MS Run #.....:**	0095222
Prep Date.....:	04/05/10	**Analysis Date..:**	04/06/10		
Prep Batch #...:	0095331	**Analysis Time..:**	20:46		
Dilution Factor:	0.96	**Initial Wgt/Vol:**	1040 mL	**Final Wgt/Vol..:**	1 mL
Analyst ID.....:	003200	**Instrument ID..:**	731		
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Pentachlorophenol	ND	0.96	ug/L	0.064
Naphthalene	ND	0.19	ug/L	0.013
Acenaphthylene	ND	0.19	ug/L	0.015
Acenaphthene	ND	0.19	ug/L	0.014
Fluorene	ND	0.19	ug/L	0.021
Phenanthrene	ND	0.19	ug/L	0.041
Anthracene	ND	0.19	ug/L	0.015
Fluoranthene	ND	0.19	ug/L	0.016
Pyrene	ND	0.19	ug/L	0.015
Benzo(a)anthracene	ND	0.19	ug/L	0.014
Chrysene	ND	0.19	ug/L	0.013
Benzo(b)fluoranthene	ND	0.19	ug/L	0.015
Benzo(k)fluoranthene	ND	0.19	ug/L	0.053
Benzo(a)pyrene	ND	0.19	ug/L	0.013
Indeno(1,2,3-cd)pyrene	ND	0.19	ug/L	0.019
Dibenzo(a,h)anthracene	ND	0.19	ug/L	0.015
Benzo(ghi)perylene	ND	0.19	ug/L	0.014

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	88	(23 - 112)
Terphenyl-d14	79	(10 - 132)
2-Fluorobiphenyl	75	(19 - 107)
2-Fluorophenol	80	(10 - 111)
Phenol-d5	82	(15 - 112)
2,4,6-Tribromophenol	85	(16 - 122)

ARCADIS U.S., Inc.

Client Sample ID: A1-35 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-021
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 31
Matrix.....: SOLID

PARAMETER	RESULT		REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431							
Arsenic	10.5		1.4	mg/kg	SW846 6010B	04/07-04/09/10	LXGQR1AD
			Dilution Factor: 1		Analysis Time..: 15:23	Analyst ID.....: 22952	
			Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.32	
Chromium	15.5	J	0.72	mg/kg	SW846 6010B	04/07-04/09/10	LXGQR1AE
			Dilution Factor: 1		Analysis Time..: 15:23	Analyst ID.....: 22952	
			Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.12	
Copper	18.4		3.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGQR1AF
			Dilution Factor: 1		Analysis Time..: 15:23	Analyst ID.....: 22952	
			Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.49	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-36 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-018
Date Sampled...: 03/30/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 31

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	13.5	1.4	mg/kg	SW846 6010B	04/07-04/09/10	LXGQM1AD
		Dilution Factor: 1		Analysis Time..: 15:11	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.32	
Chromium	19.4 J	0.72	mg/kg	SW846 6010B	04/07-04/09/10	LXGQM1AE
		Dilution Factor: 1		Analysis Time..: 15:11	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.12	
Copper	21.3	3.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGQM1AF
		Dilution Factor: 1		Analysis Time..: 15:11	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.49	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-37 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-017
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 38
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	9.0	1.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGQK1AD
		Dilution Factor: 1		Analysis Time..: 15:06	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.36	
Chromium	15.3 J	0.81	mg/kg	SW846 6010B	04/07-04/09/10	LXGQK1AE
		Dilution Factor: 1		Analysis Time..: 15:06	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.14	
Copper	17.6	4.0	mg/kg	SW846 6010B	04/07-04/09/10	LXGQK1AF
		Dilution Factor: 1		Analysis Time..: 15:06	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.55	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-38 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-019
Date Sampled...: 03/30/10 **Date Received..:** 04/02/10 **Matrix.....:** SOLID
% Moisture.....: 35

PARAMETER	RESULT		REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431							
Arsenic	**9.3**		**1.5**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQP1AD**
			Dilution Factor: 1		Analysis Time..: 15:15	Analyst ID.....: 22952	
			Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.34	
Chromium	**15.8**	J	**0.77**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQP1AE**
			Dilution Factor: 1		Analysis Time..: 15:15	Analyst ID.....: 22952	
			Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.13	
Copper	**19.0**		**3.8**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQP1AF**
			Dilution Factor: 1		Analysis Time..: 15:15	Analyst ID.....: 22952	
			Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.53	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-39 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-020
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 33
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	5.2	1.5	mg/kg	SW846 6010B	04/07-04/09/10	LXGQQ1AD
		Dilution Factor: 1		Analysis Time..: 15:19	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.33	
Chromium	11.9 J	0.74	mg/kg	SW846 6010B	04/07-04/09/10	LXGQQ1AE
		Dilution Factor: 1		Analysis Time..: 15:19	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.13	
Copper	12.5	3.7	mg/kg	SW846 6010B	04/07-04/09/10	LXGQQ1AF
		Dilution Factor: 1		Analysis Time..: 15:19	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.51	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-40 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-022
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 41
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	10.3	1.7	mg/kg	SW846 6010B	04/07-04/09/10	LXGQT1AD
		Dilution Factor: 1		Analysis Time..: 16:41	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.38	
Chromium	17.8	0.85	mg/kg	SW846 6010B	04/07-04/09/10	LXGQT1AE
		Dilution Factor: 1		Analysis Time..: 16:41	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.14	
Copper	40.1	4.3	mg/kg	SW846 6010B	04/07-04/09/10	LXGQT1AF
		Dilution Factor: 1		Analysis Time..: 16:41	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.58	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-41 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-023
Date Sampled...: 03/30/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 18

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	11.5	1.2	mg/kg	SW846 6010B	04/07-04/09/10	LXGQV1AD
		Dilution Factor: 1		Analysis Time..: 16:45	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.27	
Chromium	19.6	0.61	mg/kg	SW846 6010B	04/07-04/09/10	LXGQV1AE
		Dilution Factor: 1		Analysis Time..: 16:45	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.10	
Copper	17.0	3.0	mg/kg	SW846 6010B	04/07-04/09/10	LXGQV1AF
		Dilution Factor: 1		Analysis Time..: 16:45	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.42	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-42 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-024
Date Sampled...: 03/30/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 29

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	8.7	1.4	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ01AD
		Dilution Factor: 1		Analysis Time..: 15:36	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.32	
Chromium	17.1	0.71	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ01AE
		Dilution Factor: 1		Analysis Time..: 15:36	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.12	
Copper	17.9	3.5	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ01AF
		Dilution Factor: 1		Analysis Time..: 15:36	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.48	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-43 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-025
Date Sampled...: 03/30/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 36

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	14.8	1.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ11AH
		Dilution Factor: 1		Analysis Time..: 15:50	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.35	
Chromium	21.9	0.78	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ11AL
		Dilution Factor: 1		Analysis Time..: 15:50	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.13	
Copper	20.9	3.9	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ11AP
		Dilution Factor: 1		Analysis Time..: 15:50	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.53	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-44 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-026
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 38
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	11.6	1.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ21AD
		Dilution Factor: 1		Analysis Time..: 16:07	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.36	
Chromium	18.6	0.80	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ21AE
		Dilution Factor: 1		Analysis Time..: 16:07	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.14	
Copper	12.5	4.0	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ21AF
		Dilution Factor: 1		Analysis Time..: 16:07	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.55	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: FIELD DUPLICATE #4

TOTAL Metals

Lot-Sample #...: C0D020489-027
Date Sampled...: 03/30/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 34

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	14.1	1.5	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ41AD
		Dilution Factor: 1		Analysis Time..: 16:11	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.34	
Chromium	14.5	0.76	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ41AE
		Dilution Factor: 1		Analysis Time..: 16:11	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.13	
Copper	12.2	3.8	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ41AF
		Dilution Factor: 1		Analysis Time..: 16:11	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.52	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-45 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-029
Date Sampled...: 03/30/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 28

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	12.0	1.4	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ71AD
		Dilution Factor: 1		Analysis Time..: 16:20	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.31	
Chromium	20.7	0.70	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ71AE
		Dilution Factor: 1		Analysis Time..: 16:20	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.12	
Copper	23.4	3.5	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ71AF
		Dilution Factor: 1		Analysis Time..: 16:20	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.48	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-46 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-030 Matrix.....: SOLID
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 40

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	6.5	1.7	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ81AD
		Dilution Factor: 1		Analysis Time..: 16:24	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.37	
Chromium	20.1	0.83	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ81AE
		Dilution Factor: 1		Analysis Time..: 16:24	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.14	
Copper	18.6	4.2	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ81AF
		Dilution Factor: 1		Analysis Time..: 16:24	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.57	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-47 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-028
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 35
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	17.6	1.5	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ51AD
		Dilution Factor: 1		Analysis Time..: 16:15	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.34	
Chromium	18.8	1.5	mg/kg	SW846 6010B	04/07-04/12/10	LXGQ51AE
		Dilution Factor: 2		Analysis Time..: 09:42	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.26	
Copper	22.8	3.8	mg/kg	SW846 6010B	04/07-04/09/10	LXGQ51AF
		Dilution Factor: 1		Analysis Time..: 16:15	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.53	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A1-48 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-031
Date Sampled...: 03/30/10 **Date Received..:** 04/02/10
% Moisture.....: 23
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	**8.4**	**1.3**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQ91AD**
		Dilution Factor: 1		Analysis Time..: 16:28	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.29	
Chromium	**18.5**	**0.65**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQ91AE**
		Dilution Factor: 1		Analysis Time..: 16:28	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.11	
Copper	**23.8**	**3.3**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQ91AF**
		Dilution Factor: 1		Analysis Time..: 16:28	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.45	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A2-11 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-003 Matrix.....: SOLID
Date Sampled...: 03/29/10 Date Received..: 04/02/10
% Moisture.....: 38

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	21.2	1.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGP01AD
		Dilution Factor: 1		Analysis Time..: 13:32	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.36	
Chromium	48.9 J	0.81	mg/kg	SW846 6010B	04/07-04/09/10	LXGP01AE
		Dilution Factor: 1		Analysis Time..: 13:32	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.14	
Copper	26.8	4.0	mg/kg	SW846 6010B	04/07-04/09/10	LXGP01AF
		Dilution Factor: 1		Analysis Time..: 13:32	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.55	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A2-12 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-001
Date Sampled...: 03/29/10 Date Received..: 04/02/10
% Moisture.....: 32
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	44.3	1.5	mg/kg	SW846 6010B	04/07-04/12/10	LXGPP1AD
		Dilution Factor: 1		Analysis Time..: 09:38	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.33	
Chromium	118 J	0.74	mg/kg	SW846 6010B	04/07-04/12/10	LXGPP1AE
		Dilution Factor: 1		Analysis Time..: 09:38	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.13	
Copper	32.6	3.7	mg/kg	SW846 6010B	04/07-04/12/10	LXGPP1AF
		Dilution Factor: 1		Analysis Time..: 09:38	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.51	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A2-13 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-004
Date Sampled...: 03/29/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 29

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	12.1	1.4	mg/kg	SW846 6010B	04/07-04/09/10	LXGP21AD
		Dilution Factor: 1		Analysis Time..: 13:36	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.32	
Chromium	17.1 J	1.4	mg/kg	SW846 6010B	04/07-04/12/10	LXGP21AE
		Dilution Factor: 2		Analysis Time..: 09:33	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.24	
Copper	45.8	3.5	mg/kg	SW846 6010B	04/07-04/09/10	LXGP21AF
		Dilution Factor: 1		Analysis Time..: 13:36	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.48	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: FIELD DUPLICATE #1

TOTAL Metals

Lot-Sample #...: C0D020489-005
Date Sampled...: 03/29/10 Date Received..: 04/02/10
% Moisture.....: 34
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	12.6	1.5	mg/kg	SW846 6010B	04/07-04/09/10	LXGP31AD
		Dilution Factor: 1		Analysis Time..: 13:41	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.34	
Chromium	19.2 J	0.76	mg/kg	SW846 6010B	04/07-04/09/10	LXGP31AE
		Dilution Factor: 1		Analysis Time..: 13:41	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.13	
Copper	65.0	3.8	mg/kg	SW846 6010B	04/07-04/09/10	LXGP31AF
		Dilution Factor: 1		Analysis Time..: 13:41	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.52	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A2-14 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-006
Date Sampled...: 03/29/10 Date Received..: 04/02/10
% Moisture.....: 20
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	14.8	1.3	mg/kg	SW846 6010B	04/07-04/09/10	LXGP41AD
		Dilution Factor: 1		Analysis Time..: 13:45	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.28	
Chromium	32.9 J	0.63	mg/kg	SW846 6010B	04/07-04/09/10	LXGP41AE
		Dilution Factor: 1		Analysis Time..: 13:45	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.11	
Copper	19.9	3.1	mg/kg	SW846 6010B	04/07-04/09/10	LXGP41AF
		Dilution Factor: 1		Analysis Time..: 13:45	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.43	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A2-15 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-007
Date Sampled...: 03/29/10 **Date Received..:** 04/02/10
% Moisture.....: 29
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	**63.8**	**1.4**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGP51AD**
		Dilution Factor: 1		Analysis Time..: 13:49	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.31	
Chromium	**138** J	**0.71**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGP51AE**
		Dilution Factor: 1		Analysis Time..: 13:49	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.12	
Copper	**36.8**	**3.5**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGP51AF**
		Dilution Factor: 1		Analysis Time..: 13:49	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.48	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A2-16 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-008
Date Sampled...: 03/29/10 Date Received..: 04/02/10
% Moisture.....: 43
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	44.4	1.8	mg/kg	SW846 6010B	04/07-04/09/10	LXGP61AD
		Dilution Factor: 1		Analysis Time..: 13:53	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.39	
Chromium	155 J	0.88	mg/kg	SW846 6010B	04/07-04/09/10	LXGP61AE
		Dilution Factor: 1		Analysis Time..: 13:53	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.15	
Copper	41.3	4.4	mg/kg	SW846 6010B	04/07-04/09/10	LXGP61AF
		Dilution Factor: 1		Analysis Time..: 13:53	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.60	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A2-17 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-009
Date Sampled...: 03/29/10 Date Received..: 04/02/10
% Moisture.....: 40
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	25.2	1.7	mg/kg	SW846 6010B	04/07-04/09/10	LXGP81AH
		Dilution Factor: 1		Analysis Time..: 14:06	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.37	
Chromium	78.3 J	0.83	mg/kg	SW846 6010B	04/07-04/09/10	LXGP81AL
		Dilution Factor: 1		Analysis Time..: 14:06	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.14	
Copper	27.2	4.1	mg/kg	SW846 6010B	04/07-04/09/10	LXGP81AP
		Dilution Factor: 1		Analysis Time..: 14:06	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.57	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A2-18 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-010
Date Sampled...: 03/29/10 Date Received..: 04/02/10
% Moisture.....: 28
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	13.8	1.4	mg/kg	SW846 6010B	04/07-04/09/10	LXGP91AD
		Dilution Factor: 1		Analysis Time..: 14:23	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.31	
Chromium	42.4 J	0.69	mg/kg	SW846 6010B	04/07-04/09/10	LXGP91AE
		Dilution Factor: 1		Analysis Time..: 14:23	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.12	
Copper	34.0	3.5	mg/kg	SW846 6010B	04/07-04/09/10	LXGP91AF
		Dilution Factor: 1		Analysis Time..: 14:23	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.47	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A2-19 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-011 **Matrix.....:** SOLID
Date Sampled...: 03/29/10 **Date Received..:** 04/02/10
% Moisture.....: 37

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	**50.4**	**1.6**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQA1AD**
		Dilution Factor: 1		Analysis Time..: 14:32	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.35	
Chromium	**154** J	**0.79**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQA1AE**
		Dilution Factor: 1		Analysis Time..: 14:32	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.13	
Copper	**39.0**	**4.0**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQA1AF**
		Dilution Factor: 1		Analysis Time..: 14:32	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.54	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: FIELD DUPLICATE #2

TOTAL Metals

Lot-Sample #...: C0D020489-012
Date Sampled...: 03/29/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 37

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	35.8	1.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGQC1AD
		Dilution Factor: 1		Analysis Time..: 14:36	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.35	
Chromium	153 J	0.79	mg/kg	SW846 6010B	04/07-04/09/10	LXGQC1AE
		Dilution Factor: 1		Analysis Time..: 14:36	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.14	
Copper	42.1	4.0	mg/kg	SW846 6010B	04/07-04/09/10	LXGQC1AF
		Dilution Factor: 1		Analysis Time..: 14:36	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.54	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A3-18 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-036
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 26
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	6.0	1.4	mg/kg	SW846 6010B	04/07-04/09/10	LXGRG1AD
		Dilution Factor: 1		Analysis Time..: 16:58	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.30	
Chromium	18.1	0.68	mg/kg	SW846 6010B	04/07-04/09/10	LXGRG1AE
		Dilution Factor: 1		Analysis Time..: 16:58	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.12	
Copper	17.4	3.4	mg/kg	SW846 6010B	04/07-04/09/10	LXGRG1AF
		Dilution Factor: 1		Analysis Time..: 16:58	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.46	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A3-19 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-037
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 37
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	14.2	1.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGRH1AD
		Dilution Factor: 1		Analysis Time..: 17:02	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.36	
Chromium	22.5	0.80	mg/kg	SW846 6010B	04/07-04/09/10	LXGRH1AE
		Dilution Factor: 1		Analysis Time..: 17:02	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.14	
Copper	22.9	4.0	mg/kg	SW846 6010B	04/07-04/09/10	LXGRH1AF
		Dilution Factor: 1		Analysis Time..: 17:02	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.55	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A3-20 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-034
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 43
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	11.0	1.8	mg/kg	SW846 6010B	04/07-04/09/10	LXGRD1AD
		Dilution Factor: 1		Analysis Time..: 16:50	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.39	
Chromium	25.4	0.88	mg/kg	SW846 6010B	04/07-04/09/10	LXGRD1AE
		Dilution Factor: 1		Analysis Time..: 16:50	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.15	
Copper	34.1	4.4	mg/kg	SW846 6010B	04/07-04/09/10	LXGRD1AF
		Dilution Factor: 1		Analysis Time..: 16:50	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.60	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: FIELD DUPLICATE #5

TOTAL Metals

Lot-Sample #...: C0D020489-035
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 46
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	10.8	1.8	mg/kg	SW846 6010B	04/07-04/09/10	LXGRF1AD
		Dilution Factor: 1		Analysis Time..: 16:54	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.41	
Chromium	23.6	0.92	mg/kg	SW846 6010B	04/07-04/09/10	LXGRF1AE
		Dilution Factor: 1		Analysis Time..: 16:54	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.16	
Copper	32.4	4.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGRF1AF
		Dilution Factor: 1		Analysis Time..: 16:54	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.63	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A3-21 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-040
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 36
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	43.2	1.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGRN1AD
		Dilution Factor: 1		Analysis Time..: 17:15	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.35	
Chromium	53.4	0.78	mg/kg	SW846 6010B	04/07-04/09/10	LXGRN1AE
		Dilution Factor: 1		Analysis Time..: 17:15	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.13	
Copper	40.0	3.9	mg/kg	SW846 6010B	04/07-04/09/10	LXGRN1AF
		Dilution Factor: 1		Analysis Time..: 17:15	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.54	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A3-22 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-039
Date Sampled...: 03/30/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 59

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	9.9	2.5	mg/kg	SW846 6010B	04/07-04/09/10	LXGRM1AD
		Dilution Factor: 1		Analysis Time..: 17:11	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.55	
Chromium	26.7	1.2	mg/kg	SW846 6010B	04/07-04/09/10	LXGRM1AE
		Dilution Factor: 1		Analysis Time..: 17:11	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.21	
Copper	41.7	6.1	mg/kg	SW846 6010B	04/07-04/09/10	LXGRM1AF
		Dilution Factor: 1		Analysis Time..: 17:11	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.84	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A3-23 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-038
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 38
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	14.1	1.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGRK1AD
		Dilution Factor: 1		Analysis Time..: 17:07	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.36	
Chromium	21.6	0.80	mg/kg	SW846 6010B	04/07-04/09/10	LXGRK1AE
		Dilution Factor: 1		Analysis Time..: 17:07	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.14	
Copper	21.9	4.0	mg/kg	SW846 6010B	04/07-04/09/10	LXGRK1AF
		Dilution Factor: 1		Analysis Time..: 17:07	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.55	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A3-24 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-041
Date Sampled...: 03/30/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 48

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097450						
Arsenic	19.0	1.9	mg/kg	SW846 6010B	04/07-04/09/10	LXGRP1AD
		Dilution Factor: 1		Analysis Time..: 17:20	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.43	
Chromium	41.1	0.96	mg/kg	SW846 6010B	04/07-04/09/10	LXGRP1AE
		Dilution Factor: 1		Analysis Time..: 17:20	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.16	
Copper	28.0	4.8	mg/kg	SW846 6010B	04/07-04/09/10	LXGRP1AF
		Dilution Factor: 1		Analysis Time..: 17:20	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097236	MDL.....: 0.66	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A4-1 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-058
Date Sampled...: 03/31/10 Date Received..: 04/02/10
% Moisture.....: 33
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	8.3	1.5	mg/kg	SW846 6010B	04/07-04/09/10	LXGTL1AD
		Dilution Factor: 1		Analysis Time..: 19:20	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.33	
Chromium	60.5	0.75	mg/kg	SW846 6010B	04/07-04/09/10	LXGTL1AE
		Dilution Factor: 1		Analysis Time..: 19:20	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.13	
Copper	27.1	3.7	mg/kg	SW846 6010B	04/07-04/09/10	LXGTL1AF
		Dilution Factor: 1		Analysis Time..: 19:20	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.51	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A4-2 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-059
Date Sampled...: 03/31/10 **Date Received..:** 04/02/10
% Moisture.....: 29
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	**10.5**	**1.4**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGTM1AD**
		Dilution Factor: 1		Analysis Time..: 19:25	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.31	
Chromium	**21.0**	**0.71**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGTM1AE**
		Dilution Factor: 1		Analysis Time..: 19:25	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.12	
Copper	**38.1**	**3.5**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGTM1AF**
		Dilution Factor: 1		Analysis Time..: 19:25	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.48	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A4-3 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-060
Date Sampled...: 03/31/10 Date Received..: 04/02/10
% Moisture.....: 28
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	11.9	1.4	mg/kg	SW846 6010B	04/07-04/09/10	LXGTN1AD
		Dilution Factor: 1		Analysis Time..: 19:29	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.31	
Chromium	20.6	0.69	mg/kg	SW846 6010B	04/07-04/09/10	LXGTN1AE
		Dilution Factor: 1		Analysis Time..: 19:29	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.12	
Copper	20.7	3.5	mg/kg	SW846 6010B	04/07-04/09/10	LXGTN1AF
		Dilution Factor: 1		Analysis Time..: 19:29	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.47	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A4-4 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-057
Date Sampled...: 03/31/10 Date Received..: 04/02/10
% Moisture.....: 48
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	7.0	1.9	mg/kg	SW846 6010B	04/07-04/09/10	LXGTK1AD
		Dilution Factor: 1		Analysis Time..: 19:16	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.43	
Chromium	20.6	0.97	mg/kg	SW846 6010B	04/07-04/09/10	LXGTK1AE
		Dilution Factor: 1		Analysis Time..: 19:16	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.16	
Copper	36.8	4.8	mg/kg	SW846 6010B	04/07-04/09/10	LXGTK1AF
		Dilution Factor: 1		Analysis Time..: 19:16	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.66	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A4-5 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-055
Date Sampled...: 03/31/10 **Date Received..:** 04/02/10
% Moisture.....: 33
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	**11.4**	**1.5**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGTG1AD**
		Dilution Factor: 1		Analysis Time..: 18:59	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.34	
Chromium	**23.9**	**0.75**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGTG1AE**
		Dilution Factor: 1		Analysis Time..: 18:59	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.13	
Copper	**128**	**3.8**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGTG1AF**
		Dilution Factor: 1		Analysis Time..: 18:59	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.51	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A4-6 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-056
Date Sampled...: 03/31/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 47

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	13.0	1.9	mg/kg	SW846 6010B	04/07-04/09/10	LXGTJ1AD
		Dilution Factor: 1		Analysis Time..: 19:03	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.42	
Chromium	28.2	0.94	mg/kg	SW846 6010B	04/07-04/09/10	LXGTJ1AE
		Dilution Factor: 1		Analysis Time..: 19:03	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.16	
Copper	46.7	4.7	mg/kg	SW846 6010B	04/07-04/09/10	LXGTJ1AF
		Dilution Factor: 1		Analysis Time..: 19:03	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.64	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A4-7 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-047
Date Sampled...: 03/31/10 **Date Received..:** 04/02/10
% Moisture.....: 35
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	**9.3**	**1.5**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGR31AD**
		Dilution Factor: 1		Analysis Time..: 17:50	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.34	
Chromium	**18.0**	**0.77**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGR31AE**
		Dilution Factor: 1		Analysis Time..: 17:50	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.13	
Copper	**21.9**	**3.9**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGR31AF**
		Dilution Factor: 1		Analysis Time..: 17:50	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.53	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A4-8 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-048
Date Sampled...: 03/31/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 30

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	7.1	1.4	mg/kg	SW846 6010B	04/07-04/09/10	LXGR51AD
		Dilution Factor: 1		Analysis Time..: 17:54	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.32	
Chromium	18.2	0.71	mg/kg	SW846 6010B	04/07-04/09/10	LXGR51AE
		Dilution Factor: 1		Analysis Time..: 17:54	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.12	
Copper	24.6	3.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGR51AF
		Dilution Factor: 1		Analysis Time..: 17:54	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.49	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: FIELD DUPLICATE #6

TOTAL Metals

Lot-Sample #...: C0D020489-049
Date Sampled...: 03/31/10 **Date Received..:** 04/02/10
% Moisture.....: 32
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	**6.7**	**1.5**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGR71AD**
		Dilution Factor: 1		Analysis Time..: 17:59	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.33	
Chromium	**18.9**	**0.74**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGR71AE**
		Dilution Factor: 1		Analysis Time..: 17:59	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.12	
Copper	**23.8**	**3.7**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGR71AF**
		Dilution Factor: 1		Analysis Time..: 17:59	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.50	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A4-9 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-050
Date Sampled...: 03/31/10 **Date Received..:** 04/02/10
% Moisture.....: 36
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	8.4	1.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGR81AD
		Dilution Factor: 1		Analysis Time..: 18:03	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.35	
Chromium	19.6	0.78	mg/kg	SW846 6010B	04/07-04/09/10	LXGR81AE
		Dilution Factor: 1		Analysis Time..: 18:03	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.13	
Copper	22.9	3.9	mg/kg	SW846 6010B	04/07-04/09/10	LXGR81AF
		Dilution Factor: 1		Analysis Time..: 18:03	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.53	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A4-10 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-051
Date Sampled...: 03/31/10 **Date Received..:** 04/02/10
% Moisture.....: 24
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	**12.8**	**1.3**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGR91AD**
		Dilution Factor: 1		Analysis Time..: 18:07	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.30	
Chromium	**15.0**	**0.66**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGR91AE**
		Dilution Factor: 1		Analysis Time..: 18:07	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.11	
Copper	**16.7**	**3.3**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGR91AF**
		Dilution Factor: 1		Analysis Time..: 18:07	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.45	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A5-6 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-014 **Matrix.....:** SOLID
Date Sampled...: 03/30/10 **Date Received..:** 04/02/10
% Moisture.....: 42

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	6.5	1.7	mg/kg	SW846 6010B	04/07-04/09/10	LXGQF1AD
		Dilution Factor: 1		Analysis Time..: 14:45	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.39	
Chromium	20.2 J	0.87	mg/kg	SW846 6010B	04/07-04/09/10	LXGQF1AE
		Dilution Factor: 1		Analysis Time..: 14:45	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.15	
Copper	24.3	4.3	mg/kg	SW846 6010B	04/07-04/09/10	LXGQF1AF
		Dilution Factor: 1		Analysis Time..: 14:45	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.59	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: FIELD DUPLICATE #3

TOTAL Metals

Lot-Sample #...: C0D020489-015
Date Sampled...: 03/30/10 **Date Received..:** 04/02/10
% Moisture.....: 45
Matrix.....: SOLID

PARAMETER	RESULT		REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431							
Arsenic	**6.4**		**1.8**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQG1AD**
			Dilution Factor: 1		Analysis Time..: 14:58	Analyst ID.....: 22952	
			Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.41	
Chromium	**21.2**	J	**0.91**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQG1AE**
			Dilution Factor: 1		Analysis Time..: 14:58	Analyst ID.....: 22952	
			Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.16	
Copper	**26.8**		**4.6**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQG1AF**
			Dilution Factor: 1		Analysis Time..: 14:58	Analyst ID.....: 22952	
			Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.62	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A5-7 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-016
Date Sampled...: 03/30/10 Date Received..: 04/02/10
% Moisture.....: 39
Matrix.....: SOLID

PARAMETER	RESULT		REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431							
Arsenic	10.4		1.6	mg/kg	SW846 6010B	04/07-04/09/10	LXGQH1AD
			Dilution Factor: 1		Analysis Time..: 15:02	Analyst ID.....: 22952	
			Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.36	
Chromium	21.9	J	0.81	mg/kg	SW846 6010B	04/07-04/09/10	LXGQH1AE
			Dilution Factor: 1		Analysis Time..: 15:02	Analyst ID.....: 22952	
			Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.14	
Copper	26.8		4.1	mg/kg	SW846 6010B	04/07-04/09/10	LXGQH1AF
			Dilution Factor: 1		Analysis Time..: 15:02	Analyst ID.....: 22952	
			Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.56	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A6-1 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-042
Date Sampled...: 03/31/10 Date Received..: 04/02/10
% Moisture.....: 41
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	7.4	1.7	mg/kg	SW846 6010B	04/07-04/09/10	LXGRQ1AH
		Dilution Factor: 1		Analysis Time..: 18:12	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.38	
Chromium	15.4	0.85	mg/kg	SW846 6010B	04/07-04/09/10	LXGRQ1AL
		Dilution Factor: 1		Analysis Time..: 18:12	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.14	
Copper	16.2	4.3	mg/kg	SW846 6010B	04/07-04/09/10	LXGRQ1AP
		Dilution Factor: 1		Analysis Time..: 18:12	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.58	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A6-2 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-043
Date Sampled...: 03/31/10 **Date Received..:** 04/02/10 **Matrix.....:** SOLID
% Moisture.....: 34

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	**11.9**	**1.5**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGRV1AD**
		Dilution Factor: 1		Analysis Time..: 18:37	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.34	
Chromium	**15.1**	**0.76**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGRV1AE**
		Dilution Factor: 1		Analysis Time..: 18:37	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.13	
Copper	**15.6**	**3.8**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGRV1AF**
		Dilution Factor: 1		Analysis Time..: 18:37	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.52	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A6-3 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-044
Date Sampled...: 03/31/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 42

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	16.5	1.7	mg/kg	SW846 6010B	04/07-04/09/10	LXGRX1AD
		Dilution Factor: 1		Analysis Time..: 18:42	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.38	
Chromium	22.2	0.86	mg/kg	SW846 6010B	04/07-04/09/10	LXGRX1AE
		Dilution Factor: 1		Analysis Time..: 18:42	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.15	
Copper	31.2	4.3	mg/kg	SW846 6010B	04/07-04/09/10	LXGRX1AF
		Dilution Factor: 1		Analysis Time..: 18:42	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.59	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A6-4 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-045
Date Sampled...: 03/31/10 **Date Received..:** 04/02/10 **Matrix.....:** SOLID
% Moisture.....: 27

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	**8.2**	**1.4**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGR11AD**
		Dilution Factor: 1		Analysis Time..: 17:41	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.30	
Chromium	**19.0**	**0.68**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGR11AE**
		Dilution Factor: 1		Analysis Time..: 17:41	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.12	
Copper	**38.2**	**3.4**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGR11AF**
		Dilution Factor: 1		Analysis Time..: 17:41	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.47	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A6-5 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-046
Date Sampled...: 03/31/10 Date Received..: 04/02/10 Matrix.....: SOLID
% Moisture.....: 33

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	8.0	1.5	mg/kg	SW846 6010B	04/07-04/09/10	LXGR21AD
		Dilution Factor: 1		Analysis Time..: 17:46	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.33	
Chromium	14.7	0.74	mg/kg	SW846 6010B	04/07-04/09/10	LXGR21AE
		Dilution Factor: 1		Analysis Time..: 17:46	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.13	
Copper	17.2	3.7	mg/kg	SW846 6010B	04/07-04/09/10	LXGR21AF
		Dilution Factor: 1		Analysis Time..: 17:46	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.51	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A6-6 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-052
Date Sampled...: 03/31/10 Date Received..: 04/02/10
% Moisture.....: 40
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	21.5	1.7	mg/kg	SW846 6010B	04/07-04/09/10	LXGTA1AD
		Dilution Factor: 1		Analysis Time..: 18:46	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.37	
Chromium	19.5	0.84	mg/kg	SW846 6010B	04/07-04/09/10	LXGTA1AE
		Dilution Factor: 1		Analysis Time..: 18:46	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.14	
Copper	24.0	4.2	mg/kg	SW846 6010B	04/07-04/09/10	LXGTA1AF
		Dilution Factor: 1		Analysis Time..: 18:46	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.57	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A6-7 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-053
Date Sampled...: 03/31/10 **Date Received..:** 04/02/10
% Moisture.....: 30
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	**8.5**	**1.4**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGTC1AD**
		Dilution Factor: 1		Analysis Time..: 18:50	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.32	
Chromium	**16.8**	**0.72**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGTC1AE**
		Dilution Factor: 1		Analysis Time..: 18:50	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.12	
Copper	**23.6**	**3.6**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGTC1AF**
		Dilution Factor: 1		Analysis Time..: 18:50	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.49	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: A6-8 (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-054
Date Sampled...: 03/31/10 Date Received..: 04/02/10
% Moisture.....: 21
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097451						
Arsenic	10.4	1.3	mg/kg	SW846 6010B	04/07-04/09/10	LXGTE1AD
		Dilution Factor: 1		Analysis Time..: 18:54	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.28	
Chromium	15.0	0.63	mg/kg	SW846 6010B	04/07-04/09/10	LXGTE1AE
		Dilution Factor: 1		Analysis Time..: 18:54	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.11	
Copper	15.3	3.2	mg/kg	SW846 6010B	04/07-04/09/10	LXGTE1AF
		Dilution Factor: 1		Analysis Time..: 18:54	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097237	MDL.....: 0.43	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: NPL (0-6)

TOTAL Metals

Lot-Sample #...: C0D020489-013
Date Sampled...: 03/29/10 **Date Received..:** 04/02/10
% Moisture.....: 36
Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097431						
Arsenic	**9.6**	**1.6**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQD1AD**
		Dilution Factor: 1		Analysis Time..: 14:40	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.35	
Chromium	**12.9** J	**0.79**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQD1AE**
		Dilution Factor: 1		Analysis Time..: 14:40	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.13	
Copper	**21.8**	**3.9**	**mg/kg**	**SW846 6010B**	**04/07-04/09/10**	**LXGQD1AF**
		Dilution Factor: 1		Analysis Time..: 14:40	Analyst ID.....: 22952	
		Instrument ID..: 6500ICP		MS Run #.....: 0097223	MDL.....: 0.54	

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

ARCADIS U.S., Inc.

Client Sample ID: RB032910

TOTAL Metals

Lot-Sample #...: C0D020489-002 **Matrix.....:** WATER
Date Sampled...: 03/29/10 **Date Received..:** 04/02/10

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097428						
Arsenic	**2.8 B**	**10.0**	**ug/L**	**SW846 6010B**	**04/07-04/09/10**	**LXGPW1AC**
		Dilution Factor: 1		Analysis Time..: 22:52	Analyst ID.....: 403938	
		Instrument ID..: TRACEICP		MS Run #.....: 0097219	MDL.....: 2.7	
Chromium	ND	5.0	ug/L	SW846 6010B	04/07-04/09/10	LXGPW1AD
		Dilution Factor: 1		Analysis Time..: 22:52	Analyst ID.....: 403938	
		Instrument ID..: TRACEICP		MS Run #.....: 0097219	MDL.....: 0.57	
Copper	ND	25.0	ug/L	SW846 6010B	04/07-04/09/10	LXGPW1AE
		Dilution Factor: 1		Analysis Time..: 22:52	Analyst ID.....: 403938	
		Instrument ID..: TRACEICP		MS Run #.....: 0097219	MDL.....: 2.7	

NOTE(S):

B Estimated result. Result is less than RL.

ARCADIS U.S., Inc.

Client Sample ID: RB033010

TOTAL Metals

Lot-Sample #...: C0D020489-032
Date Sampled...: 03/30/10 **Date Received..:** 04/02/10 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097428						
Arsenic	ND	10.0	ug/L	SW846 6010B	04/07-04/09/10	LXGRA1AC
		Dilution Factor: 1		Analysis Time..: 22:57	Analyst ID.....: 403938	
		Instrument ID..: TRACEICP		MS Run #.....: 0097219	MDL.....: 2.7	
Chromium	ND	5.0	ug/L	SW846 6010B	04/07-04/09/10	LXGRA1AD
		Dilution Factor: 1		Analysis Time..: 22:57	Analyst ID.....: 403938	
		Instrument ID..: TRACEICP		MS Run #.....: 0097219	MDL.....: 0.57	
Copper	ND	25.0	ug/L	SW846 6010B	04/07-04/09/10	LXGRA1AE
		Dilution Factor: 1		Analysis Time..: 22:57	Analyst ID.....: 403938	
		Instrument ID..: TRACEICP		MS Run #.....: 0097219	MDL.....: 2.7	

ARCADIS U.S., Inc.

Client Sample ID: RB033110

TOTAL Metals

Lot-Sample #...: C0D020489-033
Date Sampled...: 03/31/10 **Date Received..:** 04/02/10 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0097428						
Arsenic	ND	10.0	ug/L	SW846 6010B	04/07-04/09/10	LXGRC1AC
		Dilution Factor: 1		Analysis Time..: 23:03	Analyst ID.....: 403938	
		Instrument ID..: TRACEICP		MS Run #.....: 0097219	MDL.....: 2.7	
Chromium	ND	5.0	ug/L	SW846 6010B	04/07-04/09/10	LXGRC1AD
		Dilution Factor: 1		Analysis Time..: 23:03	Analyst ID.....: 403938	
		Instrument ID..: TRACEICP		MS Run #.....: 0097219	MDL.....: 0.57	
Copper	ND	25.0	ug/L	SW846 6010B	04/07-04/09/10	LXGRC1AE
		Dilution Factor: 1		Analysis Time..: 23:03	Analyst ID.....: 403938	
		Instrument ID..: TRACEICP		MS Run #.....: 0097219	MDL.....: 2.7	

Carbondale, Illinois

TOC

Lab Name: TESTAMERICA PITTSBURGH
Client Name: ARCADIS U.S., Inc.
Matrix: SOLID

Method: MSA WALKLEY-B
Lot Number: C0D020489

Carbon, Total Organic "TOC" Walkley Solids

Client Sample ID	Sample Number	Workorder	Result	Units	Method Detection Limit	Reporting Limit	Dilution Factor	Prep Date - Analysis Date/Time	QC Batch
A2-12 (0-6)	C0D020489 001	LXGPP1AG	20800	mg/kg	99.0	369	1	4/7/2010 - 4/7/2010 12:35	0097268
A2-11 (0-6)	C0D020489 003	LXGP01AG	21700	mg/kg	108	403	1	4/7/2010 - 4/7/2010 12:35	0097268
A2-19 (0-6)	C0D020489 011	LXGQA1AG	31600	mg/kg	106	396	1	4/7/2010 - 4/7/2010 12:35	0097268
FIELD DUPLICATE #2	C0D020489 012	LXGQC1AG	35000	mg/kg	106	397	1	4/7/2010 - 4/7/2010 12:35	0097268
A5-6 (0-6)	C0D020489 014	LXGQF1AG	28400	mg/kg	116	435	1	4/7/2010 - 4/7/2010 12:35	0097268
FIELD DUPLICATE #3	C0D020489 015	LXGQG1AG	27700	mg/kg	122	456	1	4/7/2010 - 4/7/2010 12:35	0097268
A5-7 (0-6)	C0D020489 016	LXGQH1AG	27100	mg/kg	109	407	1	4/7/2010 - 4/7/2010 12:35	0097268
A1-43 (0-6)	C0D020489 025	LXGQ11AT	8960	mg/kg	105	391	1	4/7/2010 - 4/7/2010 12:35	0097268
A1-44 (0-6)	C0D020489 026	LXGQ21AG	24300	mg/kg	108	402	1	4/7/2010 - 4/7/2010 12:35	0097268
FIELD DUPLICATE #4	C0D020489 027	LXGQ41AG	17400	mg/kg	101	378	1	4/7/2010 - 4/7/2010 12:35	0097268
A1-47 (0-6)	C0D020489 028	LXGQ51AG	13700	mg/kg	103	384	1	4/7/2010 - 4/7/2010 12:35	0097268
A1-46 (0-6)	C0D020489 030	LXGQ81AG	23600	mg/kg	111	415	1	4/7/2010 - 4/7/2010 12:35	0097268
A1-48 (0-6)	C0D020489 031	LXGQ91AG	9500	mg/kg	87.2	325	1	4/7/2010 - 4/7/2010 12:35	0097268
A3-20 (0-6)	C0D020489 034	LXGRD1AG	28200	mg/kg	118	441	1	4/7/2010 - 4/7/2010 12:35	0097268
FIELD DUPLICATE #5	C0D020489 035	LXGRF1AG	34900	mg/kg	124	461	1	4/7/2010 - 4/7/2010 12:35	0097268
A3-18 (0-6)	C0D020489 036	LXGRG1AG	5470	mg/kg	91.1	340	1	4/7/2010 - 4/7/2010 12:35	0097268
A3-19 (0-6)	C0D020489 037	LXGRH1AG	16400	mg/kg	107	399	1	4/7/2010 - 4/7/2010 12:35	0097268
A3-23 (0-6)	C0D020489 038	LXGRK1AG	26200	mg/kg	108	402	1	4/7/2010 - 4/7/2010 12:35	0097268

Carbondale, Illinois

TOC

Lab Name: TESTAMERICA PITTSBURGH **Method:** MSA WALKLEY-B

Client Name: ARCADIS U.S., Inc. **Lot Number:** C0D020489

Matrix: SOLID

A3-22 (0-6)	C0D020489 039	LXGRM1AG	64700	mg/kg	164	614	1	4/7/2010 - 4/7/2010 12:35	0097268
A3-21 (0-6)	C0D020489 040	LXGRN1AG	41000	mg/kg	105	391	1	4/7/2010 - 4/7/2010 12:35	0097268
A3-24 (0-6)	C0D020489 041	LXGRP1AG	45800	mg/kg	129	482	1	4/7/2010 - 4/7/2010 13:40	0097269
A6-1 (0-6)	C0D020489 042	LXGRQ1AT	24900	mg/kg	114	426	1	4/7/2010 - 4/7/2010 13:40	0097269
A6-2 (0-6)	C0D020489 043	LXGRV1AG	15300	mg/kg	102	382	1	4/7/2010 - 4/7/2010 13:40	0097269
A6-3 (0-6)	C0D020489 044	LXGRX1AG	20300	mg/kg	115	430	1	4/7/2010 - 4/7/2010 13:40	0097269
A6-5 (0-6)	C0D020489 046	LXGR21AG	13300	mg/kg	99.6	372	1	4/7/2010 - 4/7/2010 13:40	0097269
A4-7 (0-6)	C0D020489 047	LXGR31AG	13900	mg/kg	103	386	1	4/7/2010 - 4/7/2010 13:40	0097269
A6-6 (0-6)	C0D020489 052	LXGTA1AG	12800	mg/kg	113	420	1	4/7/2010 - 4/7/2010 13:40	0097269
A4-6 (0-6)	C0D020489 056	LXGTJ1AG	83300	mg/kg	573	2140	4.55	4/7/2010 - 4/7/2010 13:40	0097269
A4-4 (0-6)	C0D020489 057	LXGTK1AG	34100	mg/kg	129	483	1	4/7/2010 - 4/7/2010 13:40	0097269
A4-1 (0-6)	C0D020489 058	LXGTL1AG	15400	mg/kg	99.9	373	1	4/7/2010 - 4/7/2010 13:40	0097269

Carbondale, Illinois

TOC

Lab Name:	TESTAMERICA PITTSBURGH	**Method:**	SW846 9060
Client Name:	ARCADIS U.S., Inc.	**Lot Number:**	C0D020489
Matrix:	WATER		

Total Organic Carbon

Client Sample ID	Sample Number	Workorder	Result	Units	Method Detection Limit	Reporting Limit	Dilution Factor	Prep Date - Analysis Date/Time	QC Batch
RB032910	C0D020489 002	LXGPW1AF	ND	mg/L	0.19	1.0	1	4/8/2010 - 4/8/2010 18:28	0098269
RB033010	C0D020489 032	LXGRA1AF	ND	mg/L	0.19	1.0	1	4/8/2010 - 4/8/2010 18:36	0098269
RB033110	C0D020489 033	LXGRC1AF	ND	mg/L	0.19	1.0	1	4/8/2010 - 4/8/2010 18:44	0098269