

Thursday, May 5, 2016

Rob Ede
Hahn and Associates
434 NW 6th Ave. Suite 203
Portland, OR 97209

RE: Siltronic RI-Doane Creek / 5237-10dc

Enclosed are the results of analyses for work order A6C1134, which was received by the laboratory on 3/31/2016 at 10:10:00AM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@apex-labs.com, or by phone at 503-718-2323.

Apex Laboratories



Philip Nerenberg, Lab Director

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 Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:
 05/05/16 22:28

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
5237-160330-DC-EMB033G	A6C1134-01	Soil	03/30/16 11:00	03/31/16 10:10
5237-160330-DC-EMB033	A6C1134-02	Soil	03/30/16 11:00	03/31/16 10:10
5237-160330-DC-EMB032G	A6C1134-03	Soil	03/30/16 11:40	03/31/16 10:10
5237-160330-DC-EMB032	A6C1134-04	Soil	03/30/16 11:40	03/31/16 10:10
5237-160330-DC-EMB029G	A6C1134-05	Soil	03/30/16 12:15	03/31/16 10:10
5237-160329-DC-EMB029	A6C1134-06	Soil	03/30/16 12:15	03/31/16 10:10
5237-160330-DC-EMB028G	A6C1134-07	Soil	03/30/16 13:00	03/31/16 10:10
5237-160330-DC-EMB028	A6C1134-08	Soil	03/30/16 13:00	03/31/16 10:10
5237-160330-DC-EMB056G	A6C1134-09	Soil	03/30/16 14:15	03/31/16 10:10
5237-160330-DC-EMB056	A6C1134-10	Soil	03/30/16 14:15	03/31/16 10:10
5237-160330-DC-EMB055G	A6C1134-11	Soil	03/30/16 14:16	03/31/16 10:10
5237-160330-DC-EMB055	A6C1134-12	Soil	03/30/16 14:16	03/31/16 10:10
5237-160330-DC-EMB051G	A6C1134-13	Soil	03/30/16 15:00	03/31/16 10:10
5237-160329-DC-EMB051	A6C1134-14	Soil	03/30/16 15:00	03/31/16 10:10
5237-160330-DC-EMB050G	A6C1134-15	Soil	03/30/16 15:30	03/31/16 10:10
5237-160330-DC-EMB050	A6C1134-16	Soil	03/30/16 15:30	03/31/16 10:10
5237-160330-DC-EMB035G	A6C1134-17	Soil	03/30/16 16:00	03/31/16 10:10
5237-160330-DC-EMB035	A6C1134-18	Soil	03/30/16 16:00	03/31/16 10:10
5237-160330-DC-EMB035GD	A6C1134-19	Soil	03/30/16 16:10	03/31/16 10:10
5237-160330-DC-EMB035D	A6C1134-20	Soil	03/30/16 16:10	03/31/16 10:10

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Project: **Siltronic RI-Doane Creek**
Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL CASE NARRATIVE

Work Order: A6C1134

Amended Report Revision 1:

This report supersedes all previous reports.

Analysis of full list VOCs on sample EMB050G was added after the previous report version had been completed.

Philip Nerenberg
Lab Director
5/5/16

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Project: **Siltronic RI-Doane Creek**

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Reported:

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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit						
5237-160330-DC-EMB033 (A6C1134-02)			Matrix: Soil		Batch: 6040030				
Diesel	ND	13.7	27.4		mg/kg dry	1	04/01/16 22:32	NWTPH-Dx	
Oil	ND	27.4	54.8		"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 70 %</i>	<i>Limits: 50-150 %</i>					
5237-160330-DC-EMB032 (A6C1134-04)			Matrix: Soil		Batch: 6040030				
Diesel	ND	12.7	25.5		mg/kg dry	1	04/01/16 22:54	NWTPH-Dx	
Oil	ND	25.5	50.9		"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 79 %</i>	<i>Limits: 50-150 %</i>					
5237-160329-DC-EMB029 (A6C1134-06)			Matrix: Soil		Batch: 6040030				
Diesel	12.8	12.1	25.0		mg/kg dry	1	04/01/16 23:16	NWTPH-Dx	J
Oil	ND	24.2	50.0		"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 82 %</i>	<i>Limits: 50-150 %</i>					
5237-160330-DC-EMB028 (A6C1134-08)			Matrix: Soil		Batch: 6040030				
Diesel	ND	13.2	26.3		mg/kg dry	1	04/02/16 23:59	NWTPH-Dx	
Oil	ND	26.3	52.7		"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 80 %</i>	<i>Limits: 50-150 %</i>					
5237-160330-DC-EMB056 (A6C1134-10)			Matrix: Soil		Batch: 6040030				
Diesel	ND	13.2	26.4		mg/kg dry	1	04/02/16 00:21	NWTPH-Dx	
Oil	ND	26.4	52.9		"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 77 %</i>	<i>Limits: 50-150 %</i>					
5237-160330-DC-EMB055 (A6C1134-12)			Matrix: Soil		Batch: 6040030				
Diesel	ND	12.0	25.0		mg/kg dry	1	04/02/16 00:44	NWTPH-Dx	
Oil	ND	24.0	50.0		"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 80 %</i>	<i>Limits: 50-150 %</i>					
5237-160329-DC-EMB051 (A6C1134-14)			Matrix: Soil		Batch: 6040015				
Diesel	14.4	12.9	25.8		mg/kg dry	1	04/02/16 03:02	NWTPH-Dx	J
Oil	ND	25.8	51.5		"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 94 %</i>	<i>Limits: 50-150 %</i>					
5237-160330-DC-EMB050 (A6C1134-16)			Matrix: Soil		Batch: 6040015				
Diesel	ND	14.1	28.1		mg/kg dry	1	04/02/16 03:22	NWTPH-Dx	
Oil	92.9	28.1	56.2		"	"	"	"	F-03
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 95 %</i>	<i>Limits: 50-150 %</i>					

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB035 (A6C1134-18)			Matrix: Soil		Batch: 6040015			
Diesel	14.1	11.6	25.0	mg/kg dry	1	04/02/16 04:02	NWTPH-Dx	J
Oil	23.2	23.2	50.0	"	"	"	"	J
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 87 %</i>		<i>Limits: 50-150 %</i>		"	"
5237-160330-DC-EMB035D (A6C1134-20)			Matrix: Soil		Batch: 6040015			
Diesel	ND	12.2	25.0	mg/kg dry	1	04/02/16 04:22	NWTPH-Dx	
Oil	ND	24.5	50.0	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 92 %</i>		<i>Limits: 50-150 %</i>		"	"



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ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB033G (A6C1134-01)			Matrix: Soil		Batch: 6031023			
Gasoline Range Organics	ND	4.00	8.00	mg/kg dry	50	03/31/16 16:57	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 89 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>81 %</i>		<i>Limits: 50-150 %</i>		<i>"</i>	
5237-160330-DC-EMB032G (A6C1134-03)			Matrix: Soil		Batch: 6031023			
Gasoline Range Organics	ND	4.33	8.66	mg/kg dry	50	03/31/16 17:54	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>80 %</i>		<i>Limits: 50-150 %</i>		<i>"</i>	
5237-160330-DC-EMB029G (A6C1134-05)			Matrix: Soil		Batch: 6031023			
Gasoline Range Organics	ND	4.01	8.01	mg/kg dry	50	03/31/16 18:23	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>83 %</i>		<i>Limits: 50-150 %</i>		<i>"</i>	
5237-160330-DC-EMB028G (A6C1134-07)			Matrix: Soil		Batch: 6031023			
Gasoline Range Organics	ND	4.38	8.76	mg/kg dry	50	03/31/16 18:51	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 94 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>85 %</i>		<i>Limits: 50-150 %</i>		<i>"</i>	
5237-160330-DC-EMB056G (A6C1134-09)			Matrix: Soil		Batch: 6031023			
Gasoline Range Organics	ND	4.18	8.36	mg/kg dry	50	03/31/16 19:20	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 94 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>84 %</i>		<i>Limits: 50-150 %</i>		<i>"</i>	
5237-160330-DC-EMB055G (A6C1134-11)			Matrix: Soil		Batch: 6031023			
Gasoline Range Organics	ND	4.08	8.16	mg/kg dry	50	03/31/16 19:49	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 92 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>82 %</i>		<i>Limits: 50-150 %</i>		<i>"</i>	
5237-160330-DC-EMB051G (A6C1134-13RE1)			Matrix: Soil		Batch: 6040011			
Gasoline Range Organics	ND	4.44	8.89	mg/kg dry	50	04/01/16 19:05	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 92 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>88 %</i>		<i>Limits: 50-150 %</i>		<i>"</i>	
5237-160330-DC-EMB050G (A6C1134-15)			Matrix: Soil		Batch: 6031023			
Gasoline Range Organics	ND	4.67	9.33	mg/kg dry	50	03/31/16 20:46	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 96 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>87 %</i>		<i>Limits: 50-150 %</i>		<i>"</i>	

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Project Number: 5237-10dc
 Project Manager: Rob Ede

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 05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
5237-160330-DC-EMB035G (A6C1134-17)			Matrix: Soil		Batch: 6031023			
Gasoline Range Organics	ND	3.85	7.71	mg/kg dry	50	03/31/16 21:14	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 97 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>85 %</i>		<i>Limits: 50-150 %</i>		"	"	"
5237-160330-DC-EMB035GD (A6C1134-19)			Matrix: Soil		Batch: 6031023			
Gasoline Range Organics	ND	3.85	7.70	mg/kg dry	50	03/31/16 21:43	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 94 %</i>		<i>Limits: 50-150 %</i>		1	"	"
<i>1,4-Difluorobenzene (Sur)</i>		<i>85 %</i>		<i>Limits: 50-150 %</i>		"	"	"

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ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB033G (A6C1134-01)			Matrix: Soil		Batch: 6031023			
Benzene	ND	8.00	16.0	ug/kg dry	50	03/31/16 16:57	5035/8260B	
Toluene	ND	40.0	80.0	"	"	"	"	
Ethylbenzene	ND	20.0	40.0	"	"	"	"	
Xylenes, total	ND	80.0	160	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>1,4-Difluorobenzene (Surr)</i>		<i>95 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>102 %</i>		<i>Limits: 70-130 %</i>		"	"	"
5237-160330-DC-EMB032G (A6C1134-03)			Matrix: Soil		Batch: 6031023			
Benzene	ND	8.66	17.3	ug/kg dry	50	03/31/16 17:54	5035/8260B	
Toluene	ND	43.3	86.6	"	"	"	"	
Ethylbenzene	ND	21.7	43.3	"	"	"	"	
Xylenes, total	ND	86.6	173	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>1,4-Difluorobenzene (Surr)</i>		<i>95 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>101 %</i>		<i>Limits: 70-130 %</i>		"	"	"
5237-160330-DC-EMB029G (A6C1134-05)			Matrix: Soil		Batch: 6031023			
Benzene	ND	8.01	16.0	ug/kg dry	50	03/31/16 18:23	5035/8260B	
Toluene	ND	40.1	80.1	"	"	"	"	
Ethylbenzene	ND	20.0	40.1	"	"	"	"	
Xylenes, total	ND	80.1	160	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>1,4-Difluorobenzene (Surr)</i>		<i>97 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>Limits: 70-130 %</i>		"	"	"
5237-160330-DC-EMB028G (A6C1134-07)			Matrix: Soil		Batch: 6031023			
Benzene	ND	8.76	17.5	ug/kg dry	50	03/31/16 18:51	5035/8260B	
Toluene	ND	43.8	87.6	"	"	"	"	
Ethylbenzene	ND	21.9	43.8	"	"	"	"	
Xylenes, total	ND	87.6	175	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 70-130 %</i>		1	"	"
<i>1,4-Difluorobenzene (Surr)</i>		<i>97 %</i>		<i>Limits: 70-130 %</i>		"	"	"
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>Limits: 70-130 %</i>		"	"	"

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ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB028G (A6C1134-07)			Matrix: Soil		Batch: 6031023			
<i>Surrogate: 4-Bromofluorobenzene (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 70-130 %</i>	1	"	5035/8260B	
5237-160330-DC-EMB056G (A6C1134-09)			Matrix: Soil		Batch: 6031023			
Benzene	ND	8.36	16.7	ug/kg dry	50	03/31/16 19:20	5035/8260B	
Toluene	ND	41.8	83.6	"	"	"	"	
Ethylbenzene	ND	20.9	41.8	"	"	"	"	
Xylenes, total	ND	83.6	167	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 109 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>97 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
5237-160330-DC-EMB055G (A6C1134-11)			Matrix: Soil		Batch: 6031023			
Benzene	ND	8.16	16.3	ug/kg dry	50	03/31/16 19:49	5035/8260B	
Toluene	ND	40.8	81.6	"	"	"	"	
Ethylbenzene	ND	20.4	40.8	"	"	"	"	
Xylenes, total	ND	81.6	163	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 109 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>97 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
5237-160330-DC-EMB051G (A6C1134-13RE1)			Matrix: Soil		Batch: 6040011			
Benzene	ND	8.89	17.8	ug/kg dry	50	04/01/16 19:05	5035/8260B	
Toluene	ND	44.4	88.9	"	"	"	"	
Ethylbenzene	ND	22.2	44.4	"	"	"	"	
Xylenes, total	ND	66.7	133	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 94 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>96 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 70-130 %</i>	50	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
5237-160330-DC-EMB050G (A6C1134-15)			Matrix: Soil		Batch: 6031023			
Benzene	ND	9.33	18.7	ug/kg dry	50	03/31/16 20:46	5035/8260B	
Toluene	ND	46.7	93.3	"	"	"	"	
Ethylbenzene	ND	23.3	46.7	"	"	"	"	
Xylenes, total	ND	93.3	187	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 109 %</i>	<i>Limits: 70-130 %</i>	1	"	"	

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Philip Nerenberg, Lab Director

Hahn and Associates

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Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes
			Limit	Units	Dilution			
5237-160330-DC-EMB050G (A6C1134-15)			Matrix: Soil		Batch: 6031023			
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 100 %</i>	<i>Limits: 70-130 %</i>	1	"	5035/8260B	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
5237-160330-DC-EMB035G (A6C1134-17)			Matrix: Soil		Batch: 6031023			
Benzene	ND	7.71	15.4	ug/kg dry	50	03/31/16 21:14	5035/8260B	
Toluene	ND	38.5	77.1	"	"	"	"	
Ethylbenzene	ND	19.3	38.5	"	"	"	"	
Xylenes, total	ND	77.1	154	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 112 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
5237-160330-DC-EMB035GD (A6C1134-19)			Matrix: Soil		Batch: 6031023			
Benzene	ND	7.70	15.4	ug/kg dry	50	03/31/16 21:43	5035/8260B	
Toluene	ND	38.5	77.0	"	"	"	"	
Ethylbenzene	ND	19.3	38.5	"	"	"	"	
Xylenes, total	ND	77.0	154	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 107 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	



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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:
 05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB050G (A6C1134-15)			Matrix: Soil		Batch: 6031023			
Acetone	ND	933	1870	ug/kg dry	50	03/31/16 20:46	5035/8260B	
Benzene	ND	9.33	18.7	"	"	"	"	
Bromobenzene	ND	23.3	46.7	"	"	"	"	
Bromochloromethane	ND	46.7	93.3	"	"	"	"	
Bromodichloromethane	ND	93.3	187	"	"	"	"	
Bromoform	ND	93.3	187	"	"	"	"	
Bromomethane	ND	933	933	"	"	"	"	
2-Butanone (MEK)	ND	467	933	"	"	"	"	
n-Butylbenzene	ND	46.7	93.3	"	"	"	"	
sec-Butylbenzene	ND	46.7	93.3	"	"	"	"	
tert-Butylbenzene	ND	46.7	93.3	"	"	"	"	
Carbon tetrachloride	ND	46.7	93.3	"	"	"	"	
Chlorobenzene	ND	23.3	46.7	"	"	"	"	
Chloroethane	ND	467	933	"	"	"	"	
Chloroform	ND	46.7	93.3	"	"	"	"	
Chloromethane	ND	233	467	"	"	"	"	
2-Chlorotoluene	ND	46.7	93.3	"	"	"	"	
4-Chlorotoluene	ND	46.7	93.3	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	233	467	"	"	"	"	
Dibromochloromethane	ND	93.3	187	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	46.7	93.3	"	"	"	"	
Dibromomethane	ND	46.7	93.3	"	"	"	"	
1,2-Dichlorobenzene	ND	23.3	46.7	"	"	"	"	
1,3-Dichlorobenzene	ND	23.3	46.7	"	"	"	"	
1,4-Dichlorobenzene	ND	23.3	46.7	"	"	"	"	
Dichlorodifluoromethane	ND	93.3	187	"	"	"	"	
1,1-Dichloroethane	ND	23.3	46.7	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	23.3	46.7	"	"	"	"	
1,1-Dichloroethene	ND	23.3	46.7	"	"	"	"	
cis-1,2-Dichloroethene	ND	23.3	46.7	"	"	"	"	
trans-1,2-Dichloroethene	ND	23.3	46.7	"	"	"	"	
1,2-Dichloropropane	ND	23.3	46.7	"	"	"	"	
1,3-Dichloropropane	ND	46.7	93.3	"	"	"	"	
2,2-Dichloropropane	ND	46.7	93.3	"	"	"	"	
1,1-Dichloropropene	ND	46.7	93.3	"	"	"	"	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB050G (A6C1134-15)			Matrix: Soil		Batch: 6031023			
cis-1,3-Dichloropropene	ND	46.7	93.3	ug/kg dry	50	"	5035/8260B	
trans-1,3-Dichloropropene	ND	46.7	93.3	"	"	"	"	
Ethylbenzene	ND	23.3	46.7	"	"	"	"	
Hexachlorobutadiene	ND	93.3	187	"	"	"	"	
2-Hexanone	ND	467	933	"	"	"	"	
Isopropylbenzene	ND	46.7	93.3	"	"	"	"	
4-Isopropyltoluene	ND	46.7	93.3	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	467	933	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	46.7	93.3	"	"	"	"	
Methylene chloride	ND	233	467	"	"	"	"	
Naphthalene	ND	93.3	187	"	"	"	"	
n-Propylbenzene	ND	23.3	46.7	"	"	"	"	
Styrene	ND	46.7	93.3	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	23.3	46.7	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	46.7	93.3	"	"	"	"	
Tetrachloroethene (PCE)	ND	23.3	46.7	"	"	"	"	
Toluene	ND	46.7	93.3	"	"	"	"	
1,2,3-Trichlorobenzene	ND	233	467	"	"	"	"	
1,2,4-Trichlorobenzene	ND	233	467	"	"	"	"	
1,1,1-Trichloroethane	ND	23.3	46.7	"	"	"	"	
1,1,2-Trichloroethane	ND	23.3	46.7	"	"	"	"	
Trichloroethene (TCE)	ND	23.3	46.7	"	"	"	"	
Trichlorofluoromethane	ND	93.3	187	"	"	"	"	
1,2,3-Trichloropropane	ND	46.7	93.3	"	"	"	"	
1,2,4-Trimethylbenzene	ND	46.7	93.3	"	"	"	"	
1,3,5-Trimethylbenzene	ND	46.7	93.3	"	"	"	"	
Vinyl chloride	ND	23.3	46.7	"	"	"	"	
m,p-Xylene	ND	46.7	93.3	"	"	"	"	
o-Xylene	ND	46.7	93.3	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 109 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>		<i>100 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>Limits: 70-130 %</i>	"	"	"	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Anions by EPA 300.0/9056A (Ion Chromatography)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
5237-160330-DC-EMB033 (A6C1134-02)			Matrix: Soil					
Batch: 6040309								
Sulfate	ND	13.8	13.8	mg/kg dry	1	04/12/16 19:05	EPA 9056A	
5237-160330-DC-EMB032 (A6C1134-04)			Matrix: Soil					
Batch: 6040309								
Sulfate	ND	13.9	13.9	mg/kg dry	1	04/12/16 20:09	EPA 9056A	
5237-160329-DC-EMB029 (A6C1134-06)			Matrix: Soil					
Batch: 6040309								
Sulfate	ND	13.8	13.8	mg/kg dry	1	04/12/16 20:31	EPA 9056A	
5237-160330-DC-EMB028 (A6C1134-08)			Matrix: Soil					
Batch: 6040309								
Sulfate	ND	13.6	13.6	mg/kg dry	1	04/12/16 20:52	EPA 9056A	
5237-160330-DC-EMB056 (A6C1134-10)			Matrix: Soil					
Batch: 6040309								
Sulfate	ND	13.7	13.7	mg/kg dry	1	04/12/16 21:14	EPA 9056A	
5237-160330-DC-EMB055 (A6C1134-12)			Matrix: Soil					
Batch: 6040309								
Sulfate	ND	13.5	13.5	mg/kg dry	1	04/12/16 21:36	EPA 9056A	
5237-160329-DC-EMB051 (A6C1134-14)			Matrix: Soil					
Batch: 6040309								
Sulfate	ND	13.9	13.9	mg/kg dry	1	04/12/16 22:40	EPA 9056A	
5237-160330-DC-EMB050 (A6C1134-16)			Matrix: Soil					
Batch: 6040309								
Sulfate	53.7	14.0	14.0	mg/kg dry	1	04/12/16 23:02	EPA 9056A	
5237-160330-DC-EMB035 (A6C1134-18)			Matrix: Soil					
Batch: 6040309								
Sulfate	ND	13.4	13.4	mg/kg dry	1	04/12/16 23:23	EPA 9056A	
5237-160330-DC-EMB035D (A6C1134-20)			Matrix: Soil					
Batch: 6040309								
Sulfate	ND	13.4	13.4	mg/kg dry	1	04/12/16 23:45	EPA 9056A	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Cyanide - Total (Non-aqueous)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
5237-160330-DC-EMB033 (A6C1134-02)			Matrix: Soil		Batch: 6040170			
Cyanide, Total	ND	0.137	0.137	mg/kg dry	1	04/07/16 16:12	EPA 9013M/9014	
5237-160330-DC-EMB032 (A6C1134-04)			Matrix: Soil		Batch: 6040170			
Cyanide, Total	0.168	0.136	0.136	mg/kg dry	1	04/07/16 16:14	EPA 9013M/9014	
5237-160329-DC-EMB029 (A6C1134-06)			Matrix: Soil		Batch: 6040170			
Cyanide, Total	ND	0.136	0.136	mg/kg dry	1	04/07/16 16:16	EPA 9013M/9014	
5237-160330-DC-EMB028 (A6C1134-08)			Matrix: Soil		Batch: 6040170			
Cyanide, Total	ND	0.139	0.139	mg/kg dry	1	04/07/16 16:18	EPA 9013M/9014	
5237-160330-DC-EMB056 (A6C1134-10)			Matrix: Soil		Batch: 6040170			
Cyanide, Total	ND	0.138	0.138	mg/kg dry	1	04/07/16 16:20	EPA 9013M/9014	
5237-160330-DC-EMB055 (A6C1134-12)			Matrix: Soil		Batch: 6040170			
Cyanide, Total	ND	0.138	0.138	mg/kg dry	1	04/07/16 16:22	EPA 9013M/9014	
5237-160329-DC-EMB051 (A6C1134-14)			Matrix: Soil		Batch: 6040170			
Cyanide, Total	ND	0.140	0.140	mg/kg dry	1	04/07/16 16:24	EPA 9013M/9014	
5237-160330-DC-EMB050 (A6C1134-16)			Matrix: Soil		Batch: 6040170			
Cyanide, Total	0.177	0.140	0.140	mg/kg dry	1	04/07/16 16:32	EPA 9013M/9014	
5237-160330-DC-EMB035 (A6C1134-18)			Matrix: Soil		Batch: 6040170			
Cyanide, Total	ND	0.133	0.133	mg/kg dry	1	04/07/16 16:34	EPA 9013M/9014	
5237-160330-DC-EMB035D (A6C1134-20)			Matrix: Soil		Batch: 6040170			
Cyanide, Total	ND	0.135	0.135	mg/kg dry	1	04/07/16 16:36	EPA 9013M/9014	

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Project: **Siltronic RI-Doane Creek**
 Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:
 05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB033 (A6C1134-02RE1)			Matrix: Soil		Batch: 6031018			
Acenaphthene	4.41	1.84	3.70	ug/kg dry	1	04/08/16 17:13	EPA 8270D	
Acenaphthylene	2.29	1.84	3.70	"	"	"	"	J
Anthracene	6.34	1.84	3.70	"	"	"	"	
Benz(a)anthracene	43.1	1.84	3.70	"	"	"	"	
Benzo(a)pyrene	64.4	2.77	5.54	"	"	"	"	
Benzo(b)fluoranthene	84.2	2.77	5.54	"	"	"	"	M-02
Benzo(k)fluoranthene	29.2	2.77	5.54	"	"	"	"	M-02
Benzo(g,h,i)perylene	65.4	1.84	3.70	"	"	"	"	
Chrysene	54.3	1.84	3.70	"	"	"	"	
Dibenz(a,h)anthracene	9.88	1.84	3.70	"	"	"	"	
Fluoranthene	78.0	1.84	3.70	"	"	"	"	
Fluorene	2.51	1.84	3.70	"	"	"	"	J
Indeno(1,2,3-cd)pyrene	56.0	1.84	3.70	"	"	"	"	
1-Methylnaphthalene	ND	3.70	7.38	"	"	"	"	
2-Methylnaphthalene	ND	3.70	7.38	"	"	"	"	
Naphthalene	5.14	3.70	7.38	"	"	"	"	J
Phenanthrene	32.2	1.84	3.70	"	"	"	"	
Pyrene	90.1	1.84	3.70	"	"	"	"	
Carbazole	6.00	2.77	5.54	"	"	"	"	
Dibenzofuran	ND	1.84	3.70	"	"	"	"	
4-Chloro-3-methylphenol	ND	18.4	37.0	"	"	"	"	
2-Chlorophenol	ND	9.23	18.4	"	"	"	"	
2,4-Dichlorophenol	ND	9.23	18.4	"	"	"	"	
2,4-Dimethylphenol	ND	9.23	18.4	"	"	"	"	
2,4-Dinitrophenol	ND	46.1	92.3	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	46.1	92.3	"	"	"	"	
2-Methylphenol	ND	4.61	9.23	"	"	"	"	
3+4-Methylphenol(s)	ND	4.61	9.23	"	"	"	"	
2-Nitrophenol	ND	18.4	37.0	"	"	"	"	
4-Nitrophenol	ND	18.4	37.0	"	"	"	"	
Pentachlorophenol (PCP)	ND	18.4	37.0	"	"	"	"	
Phenol	ND	7.38	7.38	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	9.23	18.4	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	9.23	18.4	"	"	"	"	
2,4,5-Trichlorophenol	ND	9.23	18.4	"	"	"	"	
2,4,6-Trichlorophenol	ND	9.23	18.4	"	"	"	"	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:
 05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit	Matrix: Soil					
5237-160330-DC-EMB033 (A6C1134-02RE1)			Matrix: Soil		Batch: 6031018				
Bis(2-ethylhexyl)phthalate	ND	27.7	55.4		ug/kg dry	1	"	EPA 8270D	
Butyl benzyl phthalate	ND	18.4	37.0		"	"	"	"	
Diethylphthalate	ND	18.4	37.0		"	"	"	"	
Dimethylphthalate	ND	18.4	37.0		"	"	"	"	
Di-n-butylphthalate	ND	18.4	37.0		"	"	"	"	
Di-n-octyl phthalate	ND	18.4	37.0		"	"	"	"	
N-Nitrosodimethylamine	ND	4.61	9.23		"	"	"	"	
N-Nitroso-di-n-propylamine	ND	4.61	9.23		"	"	"	"	
N-Nitrosodiphenylamine	ND	4.61	9.23		"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	4.61	9.23		"	"	"	"	
Bis(2-Chloroethyl) ether	ND	4.61	9.23		"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	4.61	9.23		"	"	"	"	
Hexachlorobenzene	ND	1.84	3.70		"	"	"	"	
Hexachlorobutadiene	ND	4.61	9.23		"	"	"	"	
Hexachlorocyclopentadiene	ND	9.23	18.4		"	"	"	"	
Hexachloroethane	ND	4.61	9.23		"	"	"	"	
2-Chloronaphthalene	ND	1.84	3.70		"	"	"	"	
1,2-Dichlorobenzene	ND	4.61	9.23		"	"	"	"	
1,3-Dichlorobenzene	ND	4.61	9.23		"	"	"	"	
1,4-Dichlorobenzene	ND	4.61	9.23		"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.61	9.23		"	"	"	"	
4-Bromophenyl phenyl ether	ND	4.61	9.23		"	"	"	"	
4-Chlorophenyl phenyl ether	ND	4.61	9.23		"	"	"	"	
Aniline	ND	9.23	18.4		"	"	"	"	
4-Chloroaniline	ND	4.61	9.23		"	"	"	"	
2-Nitroaniline	ND	37.0	73.8		"	"	"	"	
3-Nitroaniline	ND	37.0	73.8		"	"	"	"	
4-Nitroaniline	ND	37.0	73.8		"	"	"	"	
Nitrobenzene	ND	18.4	37.0		"	"	"	"	
2,4-Dinitrotoluene	ND	18.4	37.0		"	"	"	"	
2,6-Dinitrotoluene	ND	18.4	37.0		"	"	"	"	
Benzoic acid	1000	231	461		"	"	"	"	
Benzyl alcohol	ND	9.23	18.4		"	"	"	"	
Isophorone	ND	4.61	9.23		"	"	"	"	
Azobenzene (1,2-DPH)	ND	4.61	9.23		"	"	"	"	

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Philip Nerenberg, Lab Director

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Hahn and Associates

434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting			Dilution	Date Analyzed	Method	Notes
			Limit	Units	Matrix: Soil				
5237-160330-DC-EMB033 (A6C1134-02RE1)			Matrix: Soil			Batch: 6031018			
Bis(2-Ethylhexyl) adipate	ND	46.1	92.3	ug/kg dry	1	"	EPA 8270D		
3,3'-Dichlorobenzidine	ND	18.4	37.0	"	"	"	"		
1,2-Dinitrobenzene	ND	46.1	92.3	"	"	"	"		
1,3-Dinitrobenzene	ND	46.1	92.3	"	"	"	"		
1,4-Dinitrobenzene	ND	46.1	92.3	"	"	"	"		
Pyridine	ND	9.23	18.4	"	"	"	"		
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>			<i>Recovery: 87 %</i>			<i>Limits: 37-122 %</i>			
<i>2-Fluorobiphenyl (Surr)</i>			<i>88 %</i>			<i>Limits: 44-115 %</i>			
<i>Phenol-d6 (Surr)</i>			<i>92 %</i>			<i>Limits: 33-122 %</i>			
<i>p-Terphenyl-d14 (Surr)</i>			<i>94 %</i>			<i>Limits: 54-127 %</i>			
<i>2-Fluorophenol (Surr)</i>			<i>83 %</i>			<i>Limits: 35-115 %</i>			
<i>2,4,6-Tribromophenol (Surr)</i>			<i>102 %</i>			<i>Limits: 39-132 %</i>			
5237-160330-DC-EMB032 (A6C1134-04RE1)			Matrix: Soil			Batch: 6031018			
Acenaphthene	7.47	1.81	3.63	ug/kg dry	1	04/08/16 17:51	EPA 8270D		
Acenaphthylene	13.7	1.81	3.63	"	"	"	"		
Anthracene	10.6	1.81	3.63	"	"	"	"		
Benz(a)anthracene	75.2	1.81	3.63	"	"	"	"		
Benzo(a)pyrene	130	2.72	5.43	"	"	"	"		
Benzo(b)fluoranthene	156	2.72	5.43	"	"	"	"	M-02	
Benzo(k)fluoranthene	48.5	2.72	5.43	"	"	"	"	M-02	
Benzo(g,h,i)perylene	120	1.81	3.63	"	"	"	"		
Chrysene	94.4	1.81	3.63	"	"	"	"		
Dibenz(a,h)anthracene	17.3	1.81	3.63	"	"	"	"		
Fluoranthene	133	1.81	3.63	"	"	"	"		
Fluorene	3.63	1.81	3.63	"	"	"	"		
Indeno(1,2,3-cd)pyrene	103	1.81	3.63	"	"	"	"		
1-Methylnaphthalene	ND	3.63	7.24	"	"	"	"		
2-Methylnaphthalene	ND	3.63	7.24	"	"	"	"		
Naphthalene	8.77	3.63	7.24	"	"	"	"		
Phenanthrene	46.2	1.81	3.63	"	"	"	"		
Pyrene	165	1.81	3.63	"	"	"	"		
Carbazole	8.76	2.72	5.43	"	"	"	"		
Dibenzofuran	ND	1.81	3.63	"	"	"	"		
4-Chloro-3-methylphenol	ND	18.1	36.3	"	"	"	"		
2-Chlorophenol	ND	9.06	18.1	"	"	"	"		

Apex Laboratories



Philip Nerenberg, Lab Director

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Hahn and Associates

434 NW 6th Ave. Suite 203
 Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB032 (A6C1134-04RE1)			Matrix: Soil		Batch: 6031018			
2,4-Dichlorophenol	ND	9.06	18.1	ug/kg dry	1	"	EPA 8270D	
2,4-Dimethylphenol	ND	9.06	18.1	"	"	"	"	
2,4-Dinitrophenol	ND	45.2	90.6	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	45.2	90.6	"	"	"	"	
2-Methylphenol	ND	4.52	9.06	"	"	"	"	
3+4-Methylphenol(s)	ND	4.52	9.06	"	"	"	"	
2-Nitrophenol	ND	18.1	36.3	"	"	"	"	
4-Nitrophenol	ND	18.1	36.3	"	"	"	"	
Pentachlorophenol (PCP)	ND	18.1	36.3	"	"	"	"	
Phenol	ND	7.24	7.24	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	9.06	18.1	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	9.06	18.1	"	"	"	"	
2,4,5-Trichlorophenol	ND	9.06	18.1	"	"	"	"	
2,4,6-Trichlorophenol	ND	9.06	18.1	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	27.2	54.3	"	"	"	"	
Butyl benzyl phthalate	ND	18.1	36.3	"	"	"	"	
Diethylphthalate	ND	18.1	36.3	"	"	"	"	
Dimethylphthalate	ND	18.1	36.3	"	"	"	"	
Di-n-butylphthalate	ND	18.1	36.3	"	"	"	"	
Di-n-octyl phthalate	ND	18.1	36.3	"	"	"	"	
N-Nitrosodimethylamine	ND	4.52	9.06	"	"	"	"	
N-Nitroso-di-n-propylamine	ND	4.52	9.06	"	"	"	"	
N-Nitrosodiphenylamine	ND	4.52	9.06	"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	4.52	9.06	"	"	"	"	
Bis(2-Chloroethyl) ether	ND	4.52	9.06	"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	4.52	9.06	"	"	"	"	
Hexachlorobenzene	ND	1.81	3.63	"	"	"	"	
Hexachlorobutadiene	ND	4.52	9.06	"	"	"	"	
Hexachlorocyclopentadiene	ND	9.06	18.1	"	"	"	"	
Hexachloroethane	ND	4.52	9.06	"	"	"	"	
2-Chloronaphthalene	ND	1.81	3.63	"	"	"	"	
1,2-Dichlorobenzene	ND	4.52	9.06	"	"	"	"	
1,3-Dichlorobenzene	ND	4.52	9.06	"	"	"	"	
1,4-Dichlorobenzene	ND	4.52	9.06	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.52	9.06	"	"	"	"	

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Hahn and Associates

434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB032 (A6C1134-04RE1)			Matrix: Soil		Batch: 6031018			
4-Bromophenyl phenyl ether	ND	4.52	9.06	ug/kg dry	1	"	EPA 8270D	
4-Chlorophenyl phenyl ether	ND	4.52	9.06	"	"	"	"	
Aniline	ND	9.06	18.1	"	"	"	"	
4-Chloroaniline	ND	4.52	9.06	"	"	"	"	
2-Nitroaniline	ND	36.3	72.4	"	"	"	"	
3-Nitroaniline	ND	36.3	72.4	"	"	"	"	
4-Nitroaniline	ND	36.3	72.4	"	"	"	"	
Nitrobenzene	ND	18.1	36.3	"	"	"	"	
2,4-Dinitrotoluene	ND	18.1	36.3	"	"	"	"	
2,6-Dinitrotoluene	ND	18.1	36.3	"	"	"	"	
Benzoic acid	ND	227	452	"	"	"	"	
Benzyl alcohol	ND	9.06	18.1	"	"	"	"	
Isophorone	ND	4.52	9.06	"	"	"	"	
Azobenzene (1,2-DPH)	ND	4.52	9.06	"	"	"	"	
Bis(2-Ethylhexyl) adipate	ND	45.2	90.6	"	"	"	"	
3,3'-Dichlorobenzidine	ND	18.1	36.3	"	"	"	"	
1,2-Dinitrobenzene	ND	45.2	90.6	"	"	"	"	
1,3-Dinitrobenzene	ND	45.2	90.6	"	"	"	"	
1,4-Dinitrobenzene	ND	45.2	90.6	"	"	"	"	
Pyridine	ND	9.06	18.1	"	"	"	"	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 83 %</i>		<i>Limits: 37-122 %</i>	"	"	"	
<i>2-Fluorobiphenyl (Surr)</i>		<i>85 %</i>		<i>Limits: 44-115 %</i>	"	"	"	
<i>Phenol-d6 (Surr)</i>		<i>86 %</i>		<i>Limits: 33-122 %</i>	"	"	"	
<i>p-Terphenyl-d14 (Surr)</i>		<i>90 %</i>		<i>Limits: 54-127 %</i>	"	"	"	
<i>2-Fluorophenol (Surr)</i>		<i>80 %</i>		<i>Limits: 35-115 %</i>	"	"	"	
<i>2,4,6-Tribromophenol (Surr)</i>		<i>99 %</i>		<i>Limits: 39-132 %</i>	"	"	"	

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Philip Nerenberg, Lab Director

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Hahn and Associates
 434 NW 6th Ave. Suite 203
 Portland, OR 97209

Project: **Siltronic RI-Doane Creek**
 Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:
 05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160329-DC-EMB029 (A6C1134-06)			Matrix: Soil		Batch: 6031018			
Acenaphthene	30.8	7.19	14.4	ug/kg dry	4	04/05/16 16:34	EPA 8270D	
Acenaphthylene	8.51	7.19	14.4	"	"	"	"	J
Anthracene	35.2	7.19	14.4	"	"	"	"	
Benz(a)anthracene	241	7.19	14.4	"	"	"	"	
Benzo(a)pyrene	379	10.8	21.6	"	"	"	"	
Benzo(b)fluoranthene	480	10.8	21.6	"	"	"	"	M-02
Benzo(k)fluoranthene	159	10.8	21.6	"	"	"	"	M-02
Benzo(g,h,i)perylene	325	7.19	14.4	"	"	"	"	
Chrysene	306	7.19	14.4	"	"	"	"	
Dibenz(a,h)anthracene	57.4	7.19	14.4	"	"	"	"	
Fluoranthene	431	7.19	14.4	"	"	"	"	
Fluorene	12.8	7.19	14.4	"	"	"	"	J
Indeno(1,2,3-cd)pyrene	288	7.19	14.4	"	"	"	"	
1-Methylnaphthalene	ND	14.4	28.8	"	"	"	"	
2-Methylnaphthalene	ND	14.4	28.8	"	"	"	"	
Naphthalene	22.3	14.4	28.8	"	"	"	"	J
Phenanthrene	178	7.19	14.4	"	"	"	"	
Pyrene	481	7.19	14.4	"	"	"	"	
Carbazole	33.3	10.8	21.6	"	"	"	"	
Dibenzofuran	ND	7.19	14.4	"	"	"	"	
4-Chloro-3-methylphenol	ND	71.9	144	"	"	"	"	
2-Chlorophenol	ND	36.1	71.9	"	"	"	"	
2,4-Dichlorophenol	ND	36.1	71.9	"	"	"	"	
2,4-Dimethylphenol	ND	36.1	71.9	"	"	"	"	
2,4-Dinitrophenol	ND	180	361	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	180	361	"	"	"	"	
2-Methylphenol	ND	18.0	36.1	"	"	"	"	
3+4-Methylphenol(s)	ND	18.0	36.1	"	"	"	"	
2-Nitrophenol	ND	71.9	144	"	"	"	"	
4-Nitrophenol	ND	71.9	144	"	"	"	"	
Pentachlorophenol (PCP)	ND	71.9	144	"	"	"	"	
Phenol	ND	14.4	28.8	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	36.1	71.9	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	36.1	71.9	"	"	"	"	
2,4,5-Trichlorophenol	ND	36.1	71.9	"	"	"	"	
2,4,6-Trichlorophenol	ND	36.1	71.9	"	"	"	"	

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Philip Nerenberg, Lab Director

Hahn and Associates

434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160329-DC-EMB029 (A6C1134-06)			Matrix: Soil		Batch: 6031018			
Bis(2-ethylhexyl)phthalate	ND	108	216	ug/kg dry	4	"	EPA 8270D	
Butyl benzyl phthalate	ND	71.9	144	"	"	"	"	
Diethylphthalate	ND	71.9	144	"	"	"	"	
Dimethylphthalate	ND	71.9	144	"	"	"	"	
Di-n-butylphthalate	ND	71.9	144	"	"	"	"	
Di-n-octyl phthalate	ND	71.9	144	"	"	"	"	
N-Nitrosodimethylamine	ND	18.0	36.1	"	"	"	"	
N-Nitroso-di-n-propylamine	ND	18.0	36.1	"	"	"	"	
N-Nitrosodiphenylamine	ND	18.0	36.1	"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	18.0	36.1	"	"	"	"	
Bis(2-Chloroethyl) ether	ND	18.0	36.1	"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	18.0	36.1	"	"	"	"	
Hexachlorobenzene	ND	7.19	14.4	"	"	"	"	
Hexachlorobutadiene	ND	18.0	36.1	"	"	"	"	
Hexachlorocyclopentadiene	ND	71.9	71.9	"	"	"	"	
Hexachloroethane	ND	18.0	36.1	"	"	"	"	
2-Chloronaphthalene	ND	7.19	14.4	"	"	"	"	
1,2-Dichlorobenzene	ND	18.0	36.1	"	"	"	"	
1,3-Dichlorobenzene	ND	18.0	36.1	"	"	"	"	
1,4-Dichlorobenzene	ND	18.0	36.1	"	"	"	"	
1,2,4-Trichlorobenzene	ND	18.0	36.1	"	"	"	"	
4-Bromophenyl phenyl ether	ND	18.0	36.1	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	18.0	36.1	"	"	"	"	
Aniline	ND	36.1	71.9	"	"	"	"	
4-Chloroaniline	ND	18.0	36.1	"	"	"	"	
2-Nitroaniline	ND	144	288	"	"	"	"	
3-Nitroaniline	ND	144	288	"	"	"	"	
4-Nitroaniline	ND	144	288	"	"	"	"	
Nitrobenzene	ND	71.9	144	"	"	"	"	
2,4-Dinitrotoluene	ND	71.9	144	"	"	"	"	
2,6-Dinitrotoluene	ND	71.9	144	"	"	"	"	
Benzoic acid	ND	903	1800	"	"	"	"	
Benzyl alcohol	ND	36.1	71.9	"	"	"	"	
Isophorone	ND	18.0	36.1	"	"	"	"	
Azobenzene (1,2-DPH)	ND	18.0	36.1	"	"	"	"	

Apex Laboratories



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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting			Dilution	Date Analyzed	Method	Notes
			Limit	Units					
5237-160329-DC-EMB029 (A6C1134-06)			Matrix: Soil		Batch: 6031018				
Bis(2-Ethylhexyl) adipate	ND	180	361	ug/kg dry	4	"	EPA 8270D		
3,3'-Dichlorobenzidine	ND	71.9	144	"	"	"	"		
1,2-Dinitrobenzene	ND	180	361	"	"	"	"		
1,3-Dinitrobenzene	ND	180	361	"	"	"	"		
1,4-Dinitrobenzene	ND	180	361	"	"	"	"		
Pyridine	ND	36.1	71.9	"	"	"	"		
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>			<i>Recovery: 85 %</i>		<i>Limits: 37-122 %</i>		"	"	
<i>2-Fluorobiphenyl (Surr)</i>			<i>91 %</i>		<i>Limits: 44-115 %</i>		"	"	
<i>Phenol-d6 (Surr)</i>			<i>87 %</i>		<i>Limits: 33-122 %</i>		"	"	
<i>p-Terphenyl-d14 (Surr)</i>			<i>90 %</i>		<i>Limits: 54-127 %</i>		"	"	
<i>2-Fluorophenol (Surr)</i>			<i>79 %</i>		<i>Limits: 35-115 %</i>		"	"	
<i>2,4,6-Tribromophenol (Surr)</i>			<i>111 %</i>		<i>Limits: 39-132 %</i>		"	"	
5237-160330-DC-EMB028 (A6C1134-08RE1)			Matrix: Soil		Batch: 6031018				
Acenaphthene	11.9	1.81	3.64	ug/kg dry	1	04/08/16 18:28	EPA 8270D		
Acenaphthylene	2.54	1.81	3.64	"	"	"	"	J	
Anthracene	13.5	1.81	3.64	"	"	"	"		
Benz(a)anthracene	89.6	1.81	3.64	"	"	"	"		
Benzo(a)pyrene	128	2.73	5.45	"	"	"	"		
Benzo(b)fluoranthene	172	2.73	5.45	"	"	"	"	M-02	
Benzo(k)fluoranthene	57.2	2.73	5.45	"	"	"	"	M-02	
Benzo(g,h,i)perylene	107	1.81	3.64	"	"	"	"		
Chrysene	113	1.81	3.64	"	"	"	"		
Dibenz(a,h)anthracene	19.6	1.81	3.64	"	"	"	"		
Fluoranthene	155	1.81	3.64	"	"	"	"		
Fluorene	5.13	1.81	3.64	"	"	"	"		
Indeno(1,2,3-cd)pyrene	97.2	1.81	3.64	"	"	"	"		
1-Methylnaphthalene	ND	3.64	7.27	"	"	"	"		
2-Methylnaphthalene	ND	3.64	7.27	"	"	"	"		
Naphthalene	5.36	3.64	7.27	"	"	"	"	J	
Phenanthrene	64.7	1.81	3.64	"	"	"	"		
Pyrene	161	1.81	3.64	"	"	"	"		
Carbazole	13.1	2.73	5.45	"	"	"	"		
Dibenzofuran	2.71	1.81	3.64	"	"	"	"	J	
4-Chloro-3-methylphenol	ND	18.1	36.4	"	"	"	"		
2-Chlorophenol	ND	9.10	18.1	"	"	"	"		

Apex Laboratories



Philip Nerenberg, Lab Director

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Hahn and Associates

434 NW 6th Ave. Suite 203
 Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit	Matrix					
5237-160330-DC-EMB028 (A6C1134-08RE1)			Matrix: Soil		Batch: 6031018				
2,4-Dichlorophenol	ND	9.10	18.1		ug/kg dry	1	"	EPA 8270D	
2,4-Dimethylphenol	ND	9.10	18.1		"	"	"	"	
2,4-Dinitrophenol	ND	45.4	91.0		"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	45.4	91.0		"	"	"	"	
2-Methylphenol	ND	4.54	9.10		"	"	"	"	
3+4-Methylphenol(s)	ND	4.54	9.10		"	"	"	"	
2-Nitrophenol	ND	18.1	36.4		"	"	"	"	
4-Nitrophenol	ND	18.1	36.4		"	"	"	"	
Pentachlorophenol (PCP)	ND	18.1	36.4		"	"	"	"	
Phenol	ND	7.27	7.27		"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	9.10	18.1		"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	9.10	18.1		"	"	"	"	
2,4,5-Trichlorophenol	ND	9.10	18.1		"	"	"	"	
2,4,6-Trichlorophenol	ND	9.10	18.1		"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	27.3	54.5		"	"	"	"	
Butyl benzyl phthalate	ND	18.1	36.4		"	"	"	"	
Diethylphthalate	ND	18.1	36.4		"	"	"	"	
Dimethylphthalate	ND	18.1	36.4		"	"	"	"	
Di-n-butylphthalate	ND	18.1	36.4		"	"	"	"	
Di-n-octyl phthalate	ND	18.1	36.4		"	"	"	"	
N-Nitrosodimethylamine	ND	4.54	9.10		"	"	"	"	
N-Nitroso-di-n-propylamine	ND	4.54	9.10		"	"	"	"	
N-Nitrosodiphenylamine	ND	4.54	9.10		"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	4.54	9.10		"	"	"	"	
Bis(2-Chloroethyl) ether	ND	4.54	9.10		"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	4.54	9.10		"	"	"	"	
Hexachlorobenzene	ND	1.81	3.64		"	"	"	"	
Hexachlorobutadiene	ND	4.54	9.10		"	"	"	"	
Hexachlorocyclopentadiene	ND	9.10	18.1		"	"	"	"	
Hexachloroethane	ND	4.54	9.10		"	"	"	"	
2-Chloronaphthalene	ND	1.81	3.64		"	"	"	"	
1,2-Dichlorobenzene	ND	4.54	9.10		"	"	"	"	
1,3-Dichlorobenzene	ND	4.54	9.10		"	"	"	"	
1,4-Dichlorobenzene	ND	4.54	9.10		"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.54	9.10		"	"	"	"	

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Hahn and Associates

434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB028 (A6C1134-08RE1)			Matrix: Soil		Batch: 6031018			
4-Bromophenyl phenyl ether	ND	4.54	9.10	ug/kg dry	1	"	EPA 8270D	
4-Chlorophenyl phenyl ether	ND	4.54	9.10	"	"	"	"	
Aniline	ND	9.10	18.1	"	"	"	"	
4-Chloroaniline	ND	4.54	9.10	"	"	"	"	
2-Nitroaniline	ND	36.4	72.7	"	"	"	"	
3-Nitroaniline	ND	36.4	72.7	"	"	"	"	
4-Nitroaniline	ND	36.4	72.7	"	"	"	"	
Nitrobenzene	ND	18.1	36.4	"	"	"	"	
2,4-Dinitrotoluene	ND	18.1	36.4	"	"	"	"	
2,6-Dinitrotoluene	ND	18.1	36.4	"	"	"	"	
Benzoic acid	ND	228	454	"	"	"	"	
Benzyl alcohol	11.9	9.10	18.1	"	"	"	"	J
Isophorone	ND	4.54	9.10	"	"	"	"	
Azobenzene (1,2-DPH)	ND	4.54	9.10	"	"	"	"	
Bis(2-Ethylhexyl) adipate	ND	45.4	91.0	"	"	"	"	
3,3'-Dichlorobenzidine	ND	18.1	36.4	"	"	"	"	
1,2-Dinitrobenzene	ND	45.4	91.0	"	"	"	"	
1,3-Dinitrobenzene	ND	45.4	91.0	"	"	"	"	
1,4-Dinitrobenzene	ND	45.4	91.0	"	"	"	"	
Pyridine	ND	9.10	18.1	"	"	"	"	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 37-122 %</i>		"	"	"
<i>2-Fluorobiphenyl (Surr)</i>		<i>84 %</i>		<i>Limits: 44-115 %</i>		"	"	"
<i>Phenol-d6 (Surr)</i>		<i>88 %</i>		<i>Limits: 33-122 %</i>		"	"	"
<i>p-Terphenyl-d14 (Surr)</i>		<i>88 %</i>		<i>Limits: 54-127 %</i>		"	"	"
<i>2-Fluorophenol (Surr)</i>		<i>83 %</i>		<i>Limits: 35-115 %</i>		"	"	"
<i>2,4,6-Tribromophenol (Surr)</i>		<i>100 %</i>		<i>Limits: 39-132 %</i>		"	"	"

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Philip Nerenberg, Lab Director

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Hahn and Associates

434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB056 (A6C1134-10RE1)			Matrix: Soil		Batch: 6031018			
Acenaphthene	40.0	7.24	14.5	ug/kg dry	4	04/05/16 15:57	EPA 8270D	
Acenaphthylene	8.33	7.24	14.5	"	"	"	"	J
Anthracene	48.4	7.24	14.5	"	"	"	"	
Benz(a)anthracene	320	7.24	14.5	"	"	"	"	
Benzo(a)pyrene	479	10.9	21.8	"	"	"	"	
Benzo(b)fluoranthene	579	10.9	21.8	"	"	"	"	M-02
Benzo(k)fluoranthene	202	10.9	21.8	"	"	"	"	M-02
Benzo(g,h,i)perylene	366	7.24	14.5	"	"	"	"	
Chrysene	387	7.24	14.5	"	"	"	"	
Dibenz(a,h)anthracene	66.8	7.24	14.5	"	"	"	"	
Fluoranthene	568	7.24	14.5	"	"	"	"	
Fluorene	17.8	7.24	14.5	"	"	"	"	
Indeno(1,2,3-cd)pyrene	335	7.24	14.5	"	"	"	"	
1-Methylnaphthalene	ND	14.5	29.0	"	"	"	"	
2-Methylnaphthalene	ND	14.5	29.0	"	"	"	"	
Naphthalene	15.7	14.5	29.0	"	"	"	"	J
Phenanthrene	244	7.24	14.5	"	"	"	"	
Pyrene	586	7.24	14.5	"	"	"	"	
Carbazole	48.2	10.9	21.8	"	"	"	"	
Dibenzofuran	8.28	7.24	14.5	"	"	"	"	J
4-Chloro-3-methylphenol	ND	72.4	145	"	"	"	"	
2-Chlorophenol	ND	36.3	72.4	"	"	"	"	
2,4-Dichlorophenol	ND	36.3	72.4	"	"	"	"	
2,4-Dimethylphenol	ND	36.3	72.4	"	"	"	"	
2,4-Dinitrophenol	ND	181	363	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	181	363	"	"	"	"	
2-Methylphenol	ND	18.1	36.3	"	"	"	"	
3+4-Methylphenol(s)	ND	18.1	36.3	"	"	"	"	
2-Nitrophenol	ND	72.4	145	"	"	"	"	
4-Nitrophenol	ND	72.4	145	"	"	"	"	
Pentachlorophenol (PCP)	ND	72.4	145	"	"	"	"	
Phenol	ND	14.5	29.0	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	36.3	72.4	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	36.3	72.4	"	"	"	"	
2,4,5-Trichlorophenol	ND	36.3	72.4	"	"	"	"	
2,4,6-Trichlorophenol	ND	36.3	72.4	"	"	"	"	

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Philip Nerenberg, Lab Director

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434 NW 6th Ave. Suite 203
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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:
 05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB056 (A6C1134-10RE1)			Matrix: Soil		Batch: 6031018			
Bis(2-ethylhexyl)phthalate	ND	109	218	ug/kg dry	4	"	EPA 8270D	
Butyl benzyl phthalate	ND	72.4	145	"	"	"	"	
Diethylphthalate	ND	72.4	145	"	"	"	"	
Dimethylphthalate	ND	72.4	145	"	"	"	"	
Di-n-butylphthalate	ND	72.4	145	"	"	"	"	
Di-n-octyl phthalate	ND	72.4	145	"	"	"	"	
N-Nitrosodimethylamine	ND	18.1	36.3	"	"	"	"	
N-Nitroso-di-n-propylamine	ND	18.1	36.3	"	"	"	"	
N-Nitrosodiphenylamine	ND	18.1	36.3	"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	18.1	36.3	"	"	"	"	
Bis(2-Chloroethyl) ether	ND	18.1	36.3	"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	18.1	36.3	"	"	"	"	
Hexachlorobenzene	ND	7.24	14.5	"	"	"	"	
Hexachlorobutadiene	ND	18.1	36.3	"	"	"	"	
Hexachlorocyclopentadiene	ND	72.4	72.4	"	"	"	"	
Hexachloroethane	ND	18.1	36.3	"	"	"	"	
2-Chloronaphthalene	ND	7.24	14.5	"	"	"	"	
1,2-Dichlorobenzene	ND	18.1	36.3	"	"	"	"	
1,3-Dichlorobenzene	ND	18.1	36.3	"	"	"	"	
1,4-Dichlorobenzene	ND	18.1	36.3	"	"	"	"	
1,2,4-Trichlorobenzene	ND	18.1	36.3	"	"	"	"	
4-Bromophenyl phenyl ether	ND	18.1	36.3	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	18.1	36.3	"	"	"	"	
Aniline	ND	36.3	72.4	"	"	"	"	
4-Chloroaniline	ND	18.1	36.3	"	"	"	"	
2-Nitroaniline	ND	145	290	"	"	"	"	
3-Nitroaniline	ND	145	290	"	"	"	"	
4-Nitroaniline	ND	145	290	"	"	"	"	
Nitrobenzene	ND	72.4	145	"	"	"	"	
2,4-Dinitrotoluene	ND	72.4	145	"	"	"	"	
2,6-Dinitrotoluene	ND	72.4	145	"	"	"	"	
Benzoic acid	ND	909	1810	"	"	"	"	
Benzyl alcohol	ND	36.3	72.4	"	"	"	"	
Isophorone	ND	18.1	36.3	"	"	"	"	
Azobenzene (1,2-DPH)	ND	18.1	36.3	"	"	"	"	

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Philip Nerenberg, Lab Director

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes
			Limit	Units	Dilution			
5237-160330-DC-EMB056 (A6C1134-10RE1)			Matrix: Soil		Batch: 6031018			
Bis(2-Ethylhexyl) adipate	ND	181	363	ug/kg dry	4	"	EPA 8270D	
3,3'-Dichlorobenzidine	ND	72.4	145	"	"	"	"	
1,2-Dinitrobenzene	ND	181	363	"	"	"	"	
1,3-Dinitrobenzene	ND	181	363	"	"	"	"	
1,4-Dinitrobenzene	ND	181	363	"	"	"	"	
Pyridine	ND	36.3	72.4	"	"	"	"	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>			<i>Recovery: 80 %</i>		<i>Limits: 37-122 %</i>		<i>"</i>	
<i>2-Fluorobiphenyl (Surr)</i>			<i>89 %</i>		<i>Limits: 44-115 %</i>		<i>"</i>	
<i>Phenol-d6 (Surr)</i>			<i>83 %</i>		<i>Limits: 33-122 %</i>		<i>"</i>	
<i>p-Terphenyl-d14 (Surr)</i>			<i>92 %</i>		<i>Limits: 54-127 %</i>		<i>"</i>	
<i>2-Fluorophenol (Surr)</i>			<i>74 %</i>		<i>Limits: 35-115 %</i>		<i>"</i>	
<i>2,4,6-Tribromophenol (Surr)</i>			<i>104 %</i>		<i>Limits: 39-132 %</i>		<i>"</i>	
5237-160330-DC-EMB055 (A6C1134-12)			Matrix: Soil		Batch: 6031018			
Acenaphthene	19.0	7.20	14.5	ug/kg dry	4	04/05/16 17:57	EPA 8270D	
Acenaphthylene	8.25	7.20	14.5	"	"	"	"	J
Anthracene	24.4	7.20	14.5	"	"	"	"	
Benz(a)anthracene	134	7.20	14.5	"	"	"	"	
Benzo(a)pyrene	199	10.8	21.7	"	"	"	"	
Benzo(b)fluoranthene	235	10.8	21.7	"	"	"	"	M-02
Benzo(k)fluoranthene	79.4	10.8	21.7	"	"	"	"	M-02
Benzo(g,h,i)perylene	146	7.20	14.5	"	"	"	"	
Chrysene	153	7.20	14.5	"	"	"	"	
Dibenz(a,h)anthracene	28.1	7.20	14.5	"	"	"	"	
Fluoranthene	239	7.20	14.5	"	"	"	"	
Fluorene	12.2	7.20	14.5	"	"	"	"	J
Indeno(1,2,3-cd)pyrene	140	7.20	14.5	"	"	"	"	
1-Methylnaphthalene	ND	14.5	28.9	"	"	"	"	
2-Methylnaphthalene	ND	14.5	28.9	"	"	"	"	
Naphthalene	16.6	14.5	28.9	"	"	"	"	J
Phenanthrene	128	7.20	14.5	"	"	"	"	
Pyrene	247	7.20	14.5	"	"	"	"	
Carbazole	20.8	10.8	21.7	"	"	"	"	J
Dibenzofuran	ND	7.20	14.5	"	"	"	"	
4-Chloro-3-methylphenol	ND	72.0	145	"	"	"	"	
2-Chlorophenol	ND	36.1	72.0	"	"	"	"	

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Hahn and Associates

434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit	Matrix					
5237-160330-DC-EMB055 (A6C1134-12)			Matrix: Soil		Batch: 6031018				
2,4-Dichlorophenol	ND	36.1	72.0		ug/kg dry	4	"	EPA 8270D	
2,4-Dimethylphenol	ND	36.1	72.0		"	"	"	"	
2,4-Dinitrophenol	ND	180	361		"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	180	361		"	"	"	"	
2-Methylphenol	ND	18.0	36.1		"	"	"	"	
3+4-Methylphenol(s)	ND	18.0	36.1		"	"	"	"	
2-Nitrophenol	ND	72.0	145		"	"	"	"	
4-Nitrophenol	ND	72.0	145		"	"	"	"	
Pentachlorophenol (PCP)	ND	72.0	145		"	"	"	"	
Phenol	ND	14.5	28.9		"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	36.1	72.0		"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	36.1	72.0		"	"	"	"	
2,4,5-Trichlorophenol	ND	36.1	72.0		"	"	"	"	
2,4,6-Trichlorophenol	ND	36.1	72.0		"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	108	217		"	"	"	"	
Butyl benzyl phthalate	ND	72.0	145		"	"	"	"	
Diethylphthalate	ND	72.0	145		"	"	"	"	
Dimethylphthalate	ND	72.0	145		"	"	"	"	
Di-n-butylphthalate	ND	72.0	145		"	"	"	"	
Di-n-octyl phthalate	ND	72.0	145		"	"	"	"	
N-Nitrosodimethylamine	ND	18.0	36.1		"	"	"	"	
N-Nitroso-di-n-propylamine	ND	18.0	36.1		"	"	"	"	
N-Nitrosodiphenylamine	ND	18.0	36.1		"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	18.0	36.1		"	"	"	"	
Bis(2-Chloroethyl) ether	ND	18.0	36.1		"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	18.0	36.1		"	"	"	"	
Hexachlorobenzene	ND	7.20	14.5		"	"	"	"	
Hexachlorobutadiene	ND	18.0	36.1		"	"	"	"	
Hexachlorocyclopentadiene	ND	72.0	72.0		"	"	"	"	
Hexachloroethane	ND	18.0	36.1		"	"	"	"	
2-Chloronaphthalene	ND	7.20	14.5		"	"	"	"	
1,2-Dichlorobenzene	ND	18.0	36.1		"	"	"	"	
1,3-Dichlorobenzene	ND	18.0	36.1		"	"	"	"	
1,4-Dichlorobenzene	ND	18.0	36.1		"	"	"	"	
1,2,4-Trichlorobenzene	ND	18.0	36.1		"	"	"	"	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB055 (A6C1134-12)			Matrix: Soil		Batch: 6031018			
4-Bromophenyl phenyl ether	ND	18.0	36.1	ug/kg dry	4	"	EPA 8270D	
4-Chlorophenyl phenyl ether	ND	18.0	36.1	"	"	"	"	
Aniline	ND	36.1	72.0	"	"	"	"	
4-Chloroaniline	ND	18.0	36.1	"	"	"	"	
2-Nitroaniline	ND	145	289	"	"	"	"	
3-Nitroaniline	ND	145	289	"	"	"	"	
4-Nitroaniline	ND	145	289	"	"	"	"	
Nitrobenzene	ND	72.0	145	"	"	"	"	
2,4-Dinitrotoluene	ND	72.0	145	"	"	"	"	
2,6-Dinitrotoluene	ND	72.0	145	"	"	"	"	
Benzoic acid	ND	904	1800	"	"	"	"	
Benzyl alcohol	ND	36.1	72.0	"	"	"	"	
Isophorone	ND	18.0	36.1	"	"	"	"	
Azobenzene (1,2-DPH)	ND	18.0	36.1	"	"	"	"	
Bis(2-Ethylhexyl) adipate	ND	180	361	"	"	"	"	
3,3'-Dichlorobenzidine	ND	72.0	145	"	"	"	"	
1,2-Dinitrobenzene	ND	180	361	"	"	"	"	
1,3-Dinitrobenzene	ND	180	361	"	"	"	"	
1,4-Dinitrobenzene	ND	180	361	"	"	"	"	
Pyridine	ND	36.1	72.0	"	"	"	"	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 84 %</i>		<i>Limits: 37-122 %</i>	"	"	"	
<i>2-Fluorobiphenyl (Surr)</i>		<i>84 %</i>		<i>Limits: 44-115 %</i>	"	"	"	
<i>Phenol-d6 (Surr)</i>		<i>85 %</i>		<i>Limits: 33-122 %</i>	"	"	"	
<i>p-Terphenyl-d14 (Surr)</i>		<i>84 %</i>		<i>Limits: 54-127 %</i>	"	"	"	
<i>2-Fluorophenol (Surr)</i>		<i>75 %</i>		<i>Limits: 35-115 %</i>	"	"	"	
<i>2,4,6-Tribromophenol (Surr)</i>		<i>97 %</i>		<i>Limits: 39-132 %</i>	"	"	"	

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Philip Nerenberg, Lab Director

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Hahn and Associates
434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**
Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160329-DC-EMB051 (A6C1134-14RE1)			Matrix: Soil		Batch: 6031018			
Acenaphthene	11.5	1.84	3.70	ug/kg dry	1	04/08/16 19:43	EPA 8270D	
Acenaphthylene	4.33	1.84	3.70	"	"	"	"	
Anthracene	19.4	1.84	3.70	"	"	"	"	
Benz(a)anthracene	102	1.84	3.70	"	"	"	"	
Benzo(a)pyrene	145	2.77	5.54	"	"	"	"	
Benzo(b)fluoranthene	185	2.77	5.54	"	"	"	"	M-02
Benzo(k)fluoranthene	62.1	2.77	5.54	"	"	"	"	M-02
Benzo(g,h,i)perylene	113	1.84	3.70	"	"	"	"	
Chrysene	124	1.84	3.70	"	"	"	"	
Dibenz(a,h)anthracene	22.6	1.84	3.70	"	"	"	"	
Fluoranthene	183	1.84	3.70	"	"	"	"	
Fluorene	6.91	1.84	3.70	"	"	"	"	
Indeno(1,2,3-cd)pyrene	107	1.84	3.70	"	"	"	"	
1-Methylnaphthalene	3.71	3.70	7.38	"	"	"	"	J
2-Methylnaphthalene	5.79	3.70	7.38	"	"	"	"	J
Naphthalene	10.4	3.70	7.38	"	"	"	"	
Phenanthrene	91.2	1.84	3.70	"	"	"	"	
Pyrene	191	1.84	3.70	"	"	"	"	
Carbazole	14.9	2.77	5.54	"	"	"	"	
Dibenzofuran	3.20	1.84	3.70	"	"	"	"	J
4-Chloro-3-methylphenol	ND	18.4	37.0	"	"	"	"	
2-Chlorophenol	ND	9.24	18.4	"	"	"	"	
2,4-Dichlorophenol	ND	9.24	18.4	"	"	"	"	
2,4-Dimethylphenol	ND	9.24	18.4	"	"	"	"	
2,4-Dinitrophenol	ND	46.1	92.4	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	46.1	92.4	"	"	"	"	
2-Methylphenol	5.25	4.61	9.24	"	"	"	"	J
3+4-Methylphenol(s)	ND	4.61	9.24	"	"	"	"	
2-Nitrophenol	ND	18.4	37.0	"	"	"	"	
4-Nitrophenol	ND	18.4	37.0	"	"	"	"	
Pentachlorophenol (PCP)	ND	18.4	37.0	"	"	"	"	
Phenol	ND	14.5	14.5	"	"	"	"	R-02
2,3,4,6-Tetrachlorophenol	ND	9.24	18.4	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	9.24	18.4	"	"	"	"	
2,4,5-Trichlorophenol	ND	9.24	18.4	"	"	"	"	
2,4,6-Trichlorophenol	ND	9.24	18.4	"	"	"	"	

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Hahn and Associates

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Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit	Matrix: Soil					
5237-160329-DC-EMB051 (A6C1134-14RE1)			Matrix: Soil		Batch: 6031018				
Bis(2-ethylhexyl)phthalate	ND	27.7	55.4		ug/kg dry	1	"	EPA 8270D	
Butyl benzyl phthalate	ND	18.4	37.0		"	"	"	"	
Diethylphthalate	ND	18.4	37.0		"	"	"	"	
Dimethylphthalate	ND	18.4	37.0		"	"	"	"	
Di-n-butylphthalate	ND	18.4	37.0		"	"	"	"	
Di-n-octyl phthalate	ND	18.4	37.0		"	"	"	"	
N-Nitrosodimethylamine	ND	4.61	9.24		"	"	"	"	
N-Nitroso-di-n-propylamine	ND	398	398		"	"	"	"	R-02
N-Nitrosodiphenylamine	ND	4.61	9.24		"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	4.61	9.24		"	"	"	"	
Bis(2-Chloroethyl) ether	ND	4.61	9.24		"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	4.61	9.24		"	"	"	"	
Hexachlorobenzene	ND	1.84	3.70		"	"	"	"	
Hexachlorobutadiene	ND	4.61	9.24		"	"	"	"	
Hexachlorocyclopentadiene	ND	9.24	18.4		"	"	"	"	
Hexachloroethane	ND	4.61	9.24		"	"	"	"	
2-Chloronaphthalene	ND	1.84	3.70		"	"	"	"	
1,2-Dichlorobenzene	ND	4.61	9.24		"	"	"	"	
1,3-Dichlorobenzene	ND	4.61	9.24		"	"	"	"	
1,4-Dichlorobenzene	ND	4.61	9.24		"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.61	9.24		"	"	"	"	
4-Bromophenyl phenyl ether	ND	4.61	9.24		"	"	"	"	
4-Chlorophenyl phenyl ether	ND	4.61	9.24		"	"	"	"	
Aniline	ND	9.24	18.4		"	"	"	"	
4-Chloroaniline	ND	4.61	9.24		"	"	"	"	
2-Nitroaniline	ND	37.0	73.8		"	"	"	"	
3-Nitroaniline	ND	37.0	73.8		"	"	"	"	
4-Nitroaniline	ND	37.0	73.8		"	"	"	"	
Nitrobenzene	ND	18.4	37.0		"	"	"	"	
2,4-Dinitrotoluene	ND	18.4	37.0		"	"	"	"	
2,6-Dinitrotoluene	ND	18.4	37.0		"	"	"	"	
Benzoic acid	1720	231	461		"	"	"	"	
Benzyl alcohol	482	9.24	18.4		"	"	"	"	
Isophorone	ND	4.61	9.24		"	"	"	"	
Azobenzene (1,2-DPH)	ND	4.61	9.24		"	"	"	"	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes
			Limit	Units	Dilution			
5237-160329-DC-EMB051 (A6C1134-14RE1)			Matrix: Soil		Batch: 6031018			
Bis(2-Ethylhexyl) adipate	ND	46.1	92.4	ug/kg dry	1	"	EPA 8270D	
3,3'-Dichlorobenzidine	ND	18.4	37.0	"	"	"	"	
1,2-Dinitrobenzene	ND	46.1	92.4	"	"	"	"	
1,3-Dinitrobenzene	ND	46.1	92.4	"	"	"	"	
1,4-Dinitrobenzene	ND	46.1	92.4	"	"	"	"	
Pyridine	ND	9.24	18.4	"	"	"	"	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>			<i>Recovery: 71 %</i>	<i>Limits: 37-122 %</i>	"	"	"	
<i>2-Fluorobiphenyl (Surr)</i>			<i>75 %</i>	<i>Limits: 44-115 %</i>	"	"	"	
<i>Phenol-d6 (Surr)</i>			<i>79 %</i>	<i>Limits: 33-122 %</i>	"	"	"	
<i>p-Terphenyl-d14 (Surr)</i>			<i>91 %</i>	<i>Limits: 54-127 %</i>	"	"	"	
<i>2-Fluorophenol (Surr)</i>			<i>71 %</i>	<i>Limits: 35-115 %</i>	"	"	"	
<i>2,4,6-Tribromophenol (Surr)</i>			<i>97 %</i>	<i>Limits: 39-132 %</i>	"	"	"	
5237-160330-DC-EMB050 (A6C1134-16RE1)			Matrix: Soil		Batch: 6031018			
Acenaphthene	107	7.49	15.0	ug/kg dry	4	04/05/16 15:20	EPA 8270D	
Acenaphthylene	14.4	7.49	15.0	"	"	"	"	J
Anthracene	119	7.49	15.0	"	"	"	"	
Benz(a)anthracene	742	7.49	15.0	"	"	"	"	
Benzo(a)pyrene	1040	11.3	22.5	"	"	"	"	
Benzo(b)fluoranthene	1380	11.3	22.5	"	"	"	"	M-02
Benzo(k)fluoranthene	509	11.3	22.5	"	"	"	"	M-02
Benzo(g,h,i)perylene	812	7.49	15.0	"	"	"	"	
Chrysene	859	7.49	15.0	"	"	"	"	
Dibenz(a,h)anthracene	161	7.49	15.0	"	"	"	"	
Fluoranthene	1230	7.49	15.0	"	"	"	"	
Fluorene	61.9	7.49	15.0	"	"	"	"	
Indeno(1,2,3-cd)pyrene	744	7.49	15.0	"	"	"	"	
1-Methylnaphthalene	16.0	15.0	30.0	"	"	"	"	J
2-Methylnaphthalene	26.5	15.0	30.0	"	"	"	"	J
Naphthalene	57.9	15.0	30.0	"	"	"	"	
Phenanthrene	577	7.49	15.0	"	"	"	"	
Pyrene	1200	7.49	15.0	"	"	"	"	
Carbazole	109	11.3	22.5	"	"	"	"	
Dibenzofuran	38.5	7.49	15.0	"	"	"	"	
4-Chloro-3-methylphenol	ND	74.9	150	"	"	"	"	
2-Chlorophenol	ND	37.6	74.9	"	"	"	"	
2,4-Dichlorophenol	ND	37.6	74.9	"	"	"	"	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:


05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit	Matrix: Soil					
5237-160330-DC-EMB050 (A6C1134-16RE1)			Matrix: Soil		Batch: 6031018				
2,4-Dimethylphenol	ND	37.6	74.9		ug/kg dry	4	"	EPA 8270D	
2,4-Dinitrophenol	ND	188	376		"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	188	376		"	"	"	"	
2-Methylphenol	ND	18.8	37.6		"	"	"	"	
3+4-Methylphenol(s)	ND	18.8	37.6		"	"	"	"	
2-Nitrophenol	ND	74.9	150		"	"	"	"	
4-Nitrophenol	ND	74.9	150		"	"	"	"	
Pentachlorophenol (PCP)	ND	74.9	150		"	"	"	"	
Phenol	ND	15.0	30.0		"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	37.6	74.9		"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	37.6	74.9		"	"	"	"	
2,4,5-Trichlorophenol	ND	37.6	74.9		"	"	"	"	
2,4,6-Trichlorophenol	ND	37.6	74.9		"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	113	225		"	"	"	"	
Butyl benzyl phthalate	ND	74.9	150		"	"	"	"	
Diethylphthalate	ND	74.9	150		"	"	"	"	
Dimethylphthalate	ND	74.9	150		"	"	"	"	
Di-n-butylphthalate	ND	74.9	150		"	"	"	"	
Di-n-octyl phthalate	ND	74.9	150		"	"	"	"	
N-Nitrosodimethylamine	ND	18.8	37.6		"	"	"	"	
N-Nitroso-di-n-propylamine	ND	18.8	37.6		"	"	"	"	
N-Nitrosodiphenylamine	ND	18.8	37.6		"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	18.8	37.6		"	"	"	"	
Bis(2-Chloroethyl) ether	ND	18.8	37.6		"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	18.8	37.6		"	"	"	"	
Hexachlorobenzene	ND	7.49	15.0		"	"	"	"	
Hexachlorobutadiene	ND	18.8	37.6		"	"	"	"	
Hexachlorocyclopentadiene	ND	74.9	74.9		"	"	"	"	
Hexachloroethane	ND	18.8	37.6		"	"	"	"	
2-Chloronaphthalene	ND	7.49	15.0		"	"	"	"	
1,2-Dichlorobenzene	ND	18.8	37.6		"	"	"	"	
1,3-Dichlorobenzene	ND	18.8	37.6		"	"	"	"	
1,4-Dichlorobenzene	ND	18.8	37.6		"	"	"	"	
1,2,4-Trichlorobenzene	ND	18.8	37.6		"	"	"	"	
4-Bromophenyl phenyl ether	ND	18.8	37.6		"	"	"	"	

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Project Number: 5237-10dc
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05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit	Matrix					
5237-160330-DC-EMB050 (A6C1134-16RE1)			Matrix: Soil		Batch: 6031018				
4-Chlorophenyl phenyl ether	ND	18.8	37.6		ug/kg dry	4	"	EPA 8270D	
Aniline	ND	37.6	74.9		"	"	"	"	
4-Chloroaniline	ND	18.8	37.6		"	"	"	"	
2-Nitroaniline	ND	150	300		"	"	"	"	
3-Nitroaniline	ND	150	300		"	"	"	"	
4-Nitroaniline	ND	150	300		"	"	"	"	
Nitrobenzene	ND	74.9	150		"	"	"	"	
2,4-Dinitrotoluene	ND	74.9	150		"	"	"	"	
2,6-Dinitrotoluene	ND	74.9	150		"	"	"	"	
Benzoic acid	ND	941	1880		"	"	"	"	
Benzyl alcohol	ND	37.6	74.9		"	"	"	"	
Isophorone	ND	18.8	37.6		"	"	"	"	
Azobenzene (1,2-DPH)	ND	18.8	37.6		"	"	"	"	
Bis(2-Ethylhexyl) adipate	ND	188	376		"	"	"	"	
3,3'-Dichlorobenzidine	ND	74.9	150		"	"	"	"	
1,2-Dinitrobenzene	ND	188	376		"	"	"	"	
1,3-Dinitrobenzene	ND	188	376		"	"	"	"	
1,4-Dinitrobenzene	ND	188	376		"	"	"	"	
Pyridine	ND	37.6	74.9		"	"	"	"	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>			<i>Recovery: 79 %</i>	<i>Limits: 37-122 %</i>		"	"	"	
<i>2-Fluorobiphenyl (Surr)</i>			<i>86 %</i>	<i>Limits: 44-115 %</i>		"	"	"	
<i>Phenol-d6 (Surr)</i>			<i>81 %</i>	<i>Limits: 33-122 %</i>		"	"	"	
<i>p-Terphenyl-d14 (Surr)</i>			<i>94 %</i>	<i>Limits: 54-127 %</i>		"	"	"	
<i>2-Fluorophenol (Surr)</i>			<i>73 %</i>	<i>Limits: 35-115 %</i>		"	"	"	
<i>2,4,6-Tribromophenol (Surr)</i>			<i>109 %</i>	<i>Limits: 39-132 %</i>		"	"	"	

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Project: **Siltronic RI-Doane Creek**
 Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:
 05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB035 (A6C1134-18RE1)			Matrix: Soil		Batch: 6031018			
Acenaphthene	6.52	1.77	3.55	ug/kg dry	1	04/08/16 19:05	EPA 8270D	
Acenaphthylene	2.53	1.77	3.55	"	"	"	"	J
Anthracene	8.92	1.77	3.55	"	"	"	"	
Benz(a)anthracene	62.7	1.77	3.55	"	"	"	"	
Benzo(a)pyrene	98.7	2.66	5.31	"	"	"	"	
Benzo(b)fluoranthene	123	2.66	5.31	"	"	"	"	M-02
Benzo(k)fluoranthene	44.3	2.66	5.31	"	"	"	"	M-02
Benzo(g,h,i)perylene	95.5	1.77	3.55	"	"	"	"	
Chrysene	79.0	1.77	3.55	"	"	"	"	
Dibenz(a,h)anthracene	15.3	1.77	3.55	"	"	"	"	
Fluoranthene	112	1.77	3.55	"	"	"	"	
Fluorene	3.55	1.77	3.55	"	"	"	"	
Indeno(1,2,3-cd)pyrene	80.4	1.77	3.55	"	"	"	"	
1-Methylnaphthalene	ND	3.55	7.08	"	"	"	"	
2-Methylnaphthalene	ND	3.55	7.08	"	"	"	"	
Naphthalene	6.62	3.55	7.08	"	"	"	"	J
Phenanthrene	45.2	1.77	3.55	"	"	"	"	
Pyrene	129	1.77	3.55	"	"	"	"	
Carbazole	8.31	2.66	5.31	"	"	"	"	
Dibenzofuran	ND	1.77	3.55	"	"	"	"	
4-Chloro-3-methylphenol	ND	17.7	35.5	"	"	"	"	
2-Chlorophenol	ND	8.86	17.7	"	"	"	"	
2,4-Dichlorophenol	ND	8.86	17.7	"	"	"	"	
2,4-Dimethylphenol	ND	8.86	17.7	"	"	"	"	
2,4-Dinitrophenol	ND	44.2	88.6	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	44.2	88.6	"	"	"	"	
2-Methylphenol	ND	4.42	8.86	"	"	"	"	
3+4-Methylphenol(s)	ND	4.42	8.86	"	"	"	"	
2-Nitrophenol	ND	17.7	35.5	"	"	"	"	
4-Nitrophenol	ND	17.7	35.5	"	"	"	"	
Pentachlorophenol (PCP)	ND	17.7	35.5	"	"	"	"	
Phenol	ND	3.55	7.08	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	8.86	17.7	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	8.86	17.7	"	"	"	"	
2,4,5-Trichlorophenol	ND	8.86	17.7	"	"	"	"	
2,4,6-Trichlorophenol	ND	8.86	17.7	"	"	"	"	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit	Matrix: Soil					
5237-160330-DC-EMB035 (A6C1134-18RE1)			Matrix: Soil		Batch: 6031018				
Bis(2-ethylhexyl)phthalate	ND	26.6	53.1		ug/kg dry	1	"	EPA 8270D	
Butyl benzyl phthalate	ND	17.7	35.5		"	"	"	"	
Diethylphthalate	ND	17.7	35.5		"	"	"	"	
Dimethylphthalate	ND	17.7	35.5		"	"	"	"	
Di-n-butylphthalate	ND	17.7	35.5		"	"	"	"	
Di-n-octyl phthalate	ND	17.7	35.5		"	"	"	"	
N-Nitrosodimethylamine	ND	4.42	8.86		"	"	"	"	
N-Nitroso-di-n-propylamine	ND	4.42	8.86		"	"	"	"	
N-Nitrosodiphenylamine	ND	4.42	8.86		"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	4.42	8.86		"	"	"	"	
Bis(2-Chloroethyl) ether	ND	4.42	8.86		"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	4.42	8.86		"	"	"	"	
Hexachlorobenzene	ND	1.77	3.55		"	"	"	"	
Hexachlorobutadiene	ND	4.42	8.86		"	"	"	"	
Hexachlorocyclopentadiene	ND	8.86	17.7		"	"	"	"	
Hexachloroethane	ND	4.42	8.86		"	"	"	"	
2-Chloronaphthalene	ND	1.77	3.55		"	"	"	"	
1,2-Dichlorobenzene	ND	4.42	8.86		"	"	"	"	
1,3-Dichlorobenzene	ND	4.42	8.86		"	"	"	"	
1,4-Dichlorobenzene	ND	4.42	8.86		"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.42	8.86		"	"	"	"	
4-Bromophenyl phenyl ether	ND	4.42	8.86		"	"	"	"	
4-Chlorophenyl phenyl ether	ND	4.42	8.86		"	"	"	"	
Aniline	ND	8.86	17.7		"	"	"	"	
4-Chloroaniline	ND	4.42	8.86		"	"	"	"	
2-Nitroaniline	ND	35.5	70.8		"	"	"	"	
3-Nitroaniline	ND	35.5	70.8		"	"	"	"	
4-Nitroaniline	ND	35.5	70.8		"	"	"	"	
Nitrobenzene	ND	17.7	35.5		"	"	"	"	
2,4-Dinitrotoluene	ND	17.7	35.5		"	"	"	"	
2,6-Dinitrotoluene	ND	17.7	35.5		"	"	"	"	
Benzoic acid	ND	222	442		"	"	"	"	
Benzyl alcohol	ND	8.86	17.7		"	"	"	"	
Isophorone	ND	4.42	8.86		"	"	"	"	
Azobenzene (1,2-DPH)	ND	4.42	8.86		"	"	"	"	

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Philip Nerenberg, Lab Director

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Hahn and Associates

434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes
			Limit	Units	Dilution			
5237-160330-DC-EMB035 (A6C1134-18RE1)			Matrix: Soil		Batch: 6031018			
Bis(2-Ethylhexyl) adipate	ND	44.2	88.6	ug/kg dry	1	"	EPA 8270D	
3,3'-Dichlorobenzidine	ND	17.7	35.5	"	"	"	"	
1,2-Dinitrobenzene	ND	44.2	88.6	"	"	"	"	
1,3-Dinitrobenzene	ND	44.2	88.6	"	"	"	"	
1,4-Dinitrobenzene	ND	44.2	88.6	"	"	"	"	
Pyridine	ND	8.86	17.7	"	"	"	"	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>			<i>Recovery: 86 %</i>		<i>Limits: 37-122 %</i>		"	"
<i>2-Fluorobiphenyl (Surr)</i>			<i>85 %</i>		<i>Limits: 44-115 %</i>		"	"
<i>Phenol-d6 (Surr)</i>			<i>86 %</i>		<i>Limits: 33-122 %</i>		"	"
<i>p-Terphenyl-d14 (Surr)</i>			<i>90 %</i>		<i>Limits: 54-127 %</i>		"	"
<i>2-Fluorophenol (Surr)</i>			<i>81 %</i>		<i>Limits: 35-115 %</i>		"	"
<i>2,4,6-Tribromophenol (Surr)</i>			<i>97 %</i>		<i>Limits: 39-132 %</i>		"	"
5237-160330-DC-EMB035D (A6C1134-20)			Matrix: Soil		Batch: 6031018			
Acenaphthene	20.8	7.21	14.5	ug/kg dry	4	04/05/16 17:14	EPA 8270D	
Acenaphthylene	ND	7.21	14.5	"	"	"	"	
Anthracene	26.6	7.21	14.5	"	"	"	"	
Benz(a)anthracene	179	7.21	14.5	"	"	"	"	
Benzo(a)pyrene	283	10.8	21.7	"	"	"	"	
Benzo(b)fluoranthene	345	10.8	21.7	"	"	"	"	M-02
Benzo(k)fluoranthene	122	10.8	21.7	"	"	"	"	M-02
Benzo(g,h,i)perylene	237	7.21	14.5	"	"	"	"	
Chrysene	220	7.21	14.5	"	"	"	"	
Dibenz(a,h)anthracene	39.8	7.21	14.5	"	"	"	"	
Fluoranthene	320	7.21	14.5	"	"	"	"	
Fluorene	9.75	7.21	14.5	"	"	"	"	J
Indeno(1,2,3-cd)pyrene	217	7.21	14.5	"	"	"	"	
1-Methylnaphthalene	ND	14.5	28.9	"	"	"	"	
2-Methylnaphthalene	ND	14.5	28.9	"	"	"	"	
Naphthalene	ND	14.5	28.9	"	"	"	"	
Phenanthrene	130	7.21	14.5	"	"	"	"	
Pyrene	327	7.21	14.5	"	"	"	"	
Carbazole	26.1	10.8	21.7	"	"	"	"	
Dibenzofuran	ND	7.21	14.5	"	"	"	"	
4-Chloro-3-methylphenol	ND	72.1	145	"	"	"	"	
2-Chlorophenol	ND	36.2	72.1	"	"	"	"	

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Philip Nerenberg, Lab Director

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Hahn and Associates

434 NW 6th Ave. Suite 203
 Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:
 05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit	Matrix: Soil					
5237-160330-DC-EMB035D (A6C1134-20)			Matrix: Soil		Batch: 6031018				
2,4-Dichlorophenol	ND	36.2	72.1		ug/kg dry	4	"	EPA 8270D	
2,4-Dimethylphenol	ND	36.2	72.1		"	"	"	"	
2,4-Dinitrophenol	ND	181	362		"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	181	362		"	"	"	"	
2-Methylphenol	ND	18.1	36.2		"	"	"	"	
3+4-Methylphenol(s)	ND	18.1	36.2		"	"	"	"	
2-Nitrophenol	ND	72.1	145		"	"	"	"	
4-Nitrophenol	ND	72.1	145		"	"	"	"	
Pentachlorophenol (PCP)	ND	72.1	145		"	"	"	"	
Phenol	ND	14.5	28.9		"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	36.2	72.1		"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	36.2	72.1		"	"	"	"	
2,4,5-Trichlorophenol	ND	36.2	72.1		"	"	"	"	
2,4,6-Trichlorophenol	ND	36.2	72.1		"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	108	217		"	"	"	"	
Butyl benzyl phthalate	ND	72.1	145		"	"	"	"	
Diethylphthalate	ND	72.1	145		"	"	"	"	
Dimethylphthalate	ND	72.1	145		"	"	"	"	
Di-n-butylphthalate	ND	72.1	145		"	"	"	"	
Di-n-octyl phthalate	ND	72.1	145		"	"	"	"	
N-Nitrosodimethylamine	ND	18.1	36.2		"	"	"	"	
N-Nitroso-di-n-propylamine	ND	18.1	36.2		"	"	"	"	
N-Nitrosodiphenylamine	ND	18.1	36.2		"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	18.1	36.2		"	"	"	"	
Bis(2-Chloroethyl) ether	ND	18.1	36.2		"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	18.1	36.2		"	"	"	"	
Hexachlorobenzene	ND	7.21	14.5		"	"	"	"	
Hexachlorobutadiene	ND	18.1	36.2		"	"	"	"	
Hexachlorocyclopentadiene	ND	72.1	72.1		"	"	"	"	
Hexachloroethane	ND	18.1	36.2		"	"	"	"	
2-Chloronaphthalene	ND	7.21	14.5		"	"	"	"	
1,2-Dichlorobenzene	ND	18.1	36.2		"	"	"	"	
1,3-Dichlorobenzene	ND	18.1	36.2		"	"	"	"	
1,4-Dichlorobenzene	ND	18.1	36.2		"	"	"	"	
1,2,4-Trichlorobenzene	ND	18.1	36.2		"	"	"	"	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB035D (A6C1134-20)			Matrix: Soil		Batch: 6031018			
4-Bromophenyl phenyl ether	ND	18.1	36.2	ug/kg dry	4	"	EPA 8270D	
4-Chlorophenyl phenyl ether	ND	18.1	36.2	"	"	"	"	
Aniline	ND	36.2	72.1	"	"	"	"	
4-Chloroaniline	ND	18.1	36.2	"	"	"	"	
2-Nitroaniline	ND	145	289	"	"	"	"	
3-Nitroaniline	ND	145	289	"	"	"	"	
4-Nitroaniline	ND	145	289	"	"	"	"	
Nitrobenzene	ND	72.1	145	"	"	"	"	
2,4-Dinitrotoluene	ND	72.1	145	"	"	"	"	
2,6-Dinitrotoluene	ND	72.1	145	"	"	"	"	
Benzoic acid	ND	906	1810	"	"	"	"	
Benzyl alcohol	ND	36.2	72.1	"	"	"	"	
Isophorone	ND	18.1	36.2	"	"	"	"	
Azobenzene (1,2-DPH)	ND	18.1	36.2	"	"	"	"	
Bis(2-Ethylhexyl) adipate	ND	181	362	"	"	"	"	
3,3'-Dichlorobenzidine	ND	72.1	145	"	"	"	"	
1,2-Dinitrobenzene	ND	181	362	"	"	"	"	
1,3-Dinitrobenzene	ND	181	362	"	"	"	"	
1,4-Dinitrobenzene	ND	181	362	"	"	"	"	
Pyridine	ND	36.2	72.1	"	"	"	"	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 77 %</i>		<i>Limits: 37-122 %</i>	"	"	"	
<i>2-Fluorobiphenyl (Surr)</i>		<i>86 %</i>		<i>Limits: 44-115 %</i>	"	"	"	
<i>Phenol-d6 (Surr)</i>		<i>77 %</i>		<i>Limits: 33-122 %</i>	"	"	"	
<i>p-Terphenyl-d14 (Surr)</i>		<i>92 %</i>		<i>Limits: 54-127 %</i>	"	"	"	
<i>2-Fluorophenol (Surr)</i>		<i>71 %</i>		<i>Limits: 35-115 %</i>	"	"	"	
<i>2,4,6-Tribromophenol (Surr)</i>		<i>103 %</i>		<i>Limits: 39-132 %</i>	"	"	"	

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Philip Nerenberg, Lab Director

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434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Alkylated PAH Homologs by 8270D Modified

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit						
5237-160330-DC-EMB033 (A6C1134-02RE1)			Matrix: Soil		Batch: 6031018				
C1-Chrysenes/Benz(a)anthracenes	24.3	18.5	18.5		ug/kg dry	1	04/08/16 17:13	GC/MS Scan	
C1-Fluoranthrenes/Pyrenes	29.6	18.5	18.5		"	"	"	"	
C1-Fluorenes	ND	18.5	18.5		"	"	"	"	
C1-Phenanthrenes/Anthracenes	ND	18.5	18.5		"	"	"	"	
C2-Chrysenes/Benz(a)anthracenes	ND	18.5	18.5		"	"	"	"	
C2-Fluorenes	ND	18.5	18.5		"	"	"	"	
C2-Naphthalenes	ND	18.5	18.5		"	"	"	"	
C2-Phenanthrenes/Anthracenes	ND	18.5	18.5		"	"	"	"	
C3-Chrysenes/Benz(a)anthracenes	ND	18.5	18.5		"	"	"	"	
C3-Fluorenes	ND	18.5	18.5		"	"	"	"	
C3-Naphthalenes	ND	18.5	18.5		"	"	"	"	
C3-Phenanthrenes/Anthracenes	ND	18.5	18.5		"	"	"	"	
C4-Chrysenes/Benz(a)anthracenes	ND	36.9	36.9		"	"	"	"	
C4-Naphthalenes	ND	18.5	18.5		"	"	"	"	
C4-Phenanthrenes/Anthracenes	ND	36.9	36.9		"	"	"	"	
<i>Surrogate: Acenaphthylene-d8 (Surr)</i>			<i>Recovery: 91 %</i>		<i>Limits: 40-120 %</i>		"	"	"
<i>Benzo(a)pyrene-d12 (Surr)</i>			<i>82 %</i>		<i>Limits: 40-120 %</i>		"	"	"
5237-160330-DC-EMB032 (A6C1134-04RE1)			Matrix: Soil		Batch: 6031018				
C1-Chrysenes/Benz(a)anthracenes	44.3	18.1	18.1		ug/kg dry	1	04/08/16 17:51	GC/MS Scan	
C1-Fluoranthrenes/Pyrenes	51.3	18.1	18.1		"	"	"	"	
C1-Fluorenes	ND	18.1	18.1		"	"	"	"	
C1-Phenanthrenes/Anthracenes	24.5	18.1	18.1		"	"	"	"	
C2-Chrysenes/Benz(a)anthracenes	19.5	18.1	18.1		"	"	"	"	
C2-Fluorenes	ND	18.1	18.1		"	"	"	"	
C2-Naphthalenes	ND	18.1	18.1		"	"	"	"	
C2-Phenanthrenes/Anthracenes	ND	18.1	18.1		"	"	"	"	
C3-Chrysenes/Benz(a)anthracenes	ND	18.1	18.1		"	"	"	"	
C3-Fluorenes	ND	18.1	18.1		"	"	"	"	
C3-Naphthalenes	ND	18.1	18.1		"	"	"	"	
C3-Phenanthrenes/Anthracenes	ND	18.1	18.1		"	"	"	"	
C4-Chrysenes/Benz(a)anthracenes	ND	36.2	36.2		"	"	"	"	
C4-Naphthalenes	ND	18.1	18.1		"	"	"	"	
C4-Phenanthrenes/Anthracenes	ND	36.2	36.2		"	"	"	"	

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434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Alkylated PAH Homologs by 8270D Modified

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit						
5237-160330-DC-EMB032 (A6C1134-04RE1)			Matrix: Soil		Batch: 6031018				
<i>Surrogate: Acenaphthylene-d8 (Surr)</i>			Recovery: 83 %		Limits: 40-120 %	1	"	GC/MS Scan	
<i>Benzo(a)pyrene-d12 (Surr)</i>			88 %		Limits: 40-120 %	"	"	"	
5237-160329-DC-EMB029 (A6C1134-06)			Matrix: Soil		Batch: 6031018				
C1-Chrysenes/Benz(a)anthracenes	140	72.1	72.1		ug/kg dry	4	04/05/16 16:34	GC/MS Scan	
C1-Fluoranthrenes/Pyrenes	165	72.1	72.1		"	"	"	"	
C1-Fluorenes	ND	72.1	72.1		"	"	"	"	
C1-Phenanthrenes/Anthracenes	78.1	72.1	72.1		"	"	"	"	
C2-Chrysenes/Benz(a)anthracenes	ND	72.1	72.1		"	"	"	"	
C2-Fluorenes	ND	72.1	72.1		"	"	"	"	
C2-Naphthalenes	ND	72.1	72.1		"	"	"	"	
C2-Phenanthrenes/Anthracenes	ND	72.1	72.1		"	"	"	"	
C3-Chrysenes/Benz(a)anthracenes	ND	72.1	72.1		"	"	"	"	
C3-Fluorenes	ND	72.1	72.1		"	"	"	"	
C3-Naphthalenes	ND	72.1	72.1		"	"	"	"	
C3-Phenanthrenes/Anthracenes	ND	72.1	72.1		"	"	"	"	
C4-Chrysenes/Benz(a)anthracenes	ND	144	144		"	"	"	"	
C4-Naphthalenes	ND	72.1	72.1		"	"	"	"	
C4-Phenanthrenes/Anthracenes	ND	144	144		"	"	"	"	
<i>Surrogate: Acenaphthylene-d8 (Surr)</i>			Recovery: 90 %		Limits: 40-120 %	"	"	"	
<i>Benzo(a)pyrene-d12 (Surr)</i>			95 %		Limits: 40-120 %	"	"	"	
5237-160330-DC-EMB028 (A6C1134-08RE1)			Matrix: Soil		Batch: 6031018				
C1-Chrysenes/Benz(a)anthracenes	48.6	18.2	18.2		ug/kg dry	1	04/08/16 18:28	GC/MS Scan	
C1-Fluoranthrenes/Pyrenes	59.9	18.2	18.2		"	"	"	"	
C1-Fluorenes	ND	18.2	18.2		"	"	"	"	
C1-Phenanthrenes/Anthracenes	27.2	18.2	18.2		"	"	"	"	
C2-Chrysenes/Benz(a)anthracenes	20.1	18.2	18.2		"	"	"	"	
C2-Fluorenes	ND	18.2	18.2		"	"	"	"	
C2-Naphthalenes	ND	18.2	18.2		"	"	"	"	
C2-Phenanthrenes/Anthracenes	ND	18.2	18.2		"	"	"	"	
C3-Chrysenes/Benz(a)anthracenes	ND	18.2	18.2		"	"	"	"	
C3-Fluorenes	ND	18.2	18.2		"	"	"	"	
C3-Naphthalenes	ND	18.2	18.2		"	"	"	"	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Alkylated PAH Homologs by 8270D Modified

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit	Matrix: Soil					
5237-160330-DC-EMB028 (A6C1134-08RE1)			Matrix: Soil		Batch: 6031018				
C3-Phenanthrenes/Anthracenes	ND	18.2	18.2		ug/kg dry	1	"	GC/MS Scan	
C4-Chrysenes/Benz(a)anthracenes	ND	36.4	36.4		"	"	"	"	
C4-Naphthalenes	ND	18.2	18.2		"	"	"	"	
C4-Phenanthrenes/Anthracenes	ND	36.4	36.4		"	"	"	"	
<i>Surrogate: Acenaphthylene-d8 (Surr)</i>			Recovery: 86 %		Limits: 40-120 %		"	"	"
<i>Benzo(a)pyrene-d12 (Surr)</i>			85 %		Limits: 40-120 %		"	"	"
5237-160330-DC-EMB056 (A6C1134-10RE1)			Matrix: Soil		Batch: 6031018				
C1-Chrysenes/Benz(a)anthracenes	179	72.5	72.5		ug/kg dry	4	04/05/16 15:57	GC/MS Scan	
C1-Fluoranthrenes/Pyrenes	213	72.5	72.5		"	"	"	"	
C1-Fluorenes	ND	72.5	72.5		"	"	"	"	
C1-Phenanthrenes/Anthracenes	109	72.5	72.5		"	"	"	"	
C2-Chrysenes/Benz(a)anthracenes	ND	72.5	72.5		"	"	"	"	
C2-Fluorenes	ND	72.5	72.5		"	"	"	"	
C2-Naphthalenes	ND	72.5	72.5		"	"	"	"	
C2-Phenanthrenes/Anthracenes	ND	72.5	72.5		"	"	"	"	
C3-Chrysenes/Benz(a)anthracenes	ND	72.5	72.5		"	"	"	"	
C3-Fluorenes	ND	72.5	72.5		"	"	"	"	
C3-Naphthalenes	ND	72.5	72.5		"	"	"	"	
C3-Phenanthrenes/Anthracenes	ND	72.5	72.5		"	"	"	"	
C4-Chrysenes/Benz(a)anthracenes	ND	145	145		"	"	"	"	
C4-Naphthalenes	ND	72.5	72.5		"	"	"	"	
C4-Phenanthrenes/Anthracenes	ND	145	145		"	"	"	"	
<i>Surrogate: Acenaphthylene-d8 (Surr)</i>			Recovery: 86 %		Limits: 40-120 %		"	"	"
<i>Benzo(a)pyrene-d12 (Surr)</i>			92 %		Limits: 40-120 %		"	"	"
5237-160330-DC-EMB055 (A6C1134-12)			Matrix: Soil		Batch: 6031018				
C1-Chrysenes/Benz(a)anthracenes	ND	72.2	72.2		ug/kg dry	4	04/05/16 17:57	GC/MS Scan	
C1-Fluoranthrenes/Pyrenes	80.6	72.2	72.2		"	"	"	"	
C1-Fluorenes	ND	72.2	72.2		"	"	"	"	
C1-Phenanthrenes/Anthracenes	ND	72.2	72.2		"	"	"	"	
C2-Chrysenes/Benz(a)anthracenes	ND	72.2	72.2		"	"	"	"	
C2-Fluorenes	ND	72.2	72.2		"	"	"	"	
C2-Naphthalenes	ND	72.2	72.2		"	"	"	"	
C2-Phenanthrenes/Anthracenes	ND	72.2	72.2		"	"	"	"	
C3-Chrysenes/Benz(a)anthracenes	ND	72.2	72.2		"	"	"	"	

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Hahn and Associates

434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Alkylated PAH Homologs by 8270D Modified

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit						
5237-160330-DC-EMB055 (A6C1134-12)			Matrix: Soil		Batch: 6031018				
C3-Fluorenes	ND	72.2	72.2		ug/kg dry	4	"	GC/MS Scan	
C3-Naphthalenes	ND	72.2	72.2		"	"	"	"	
C3-Phenanthrenes/Anthracenes	ND	72.2	72.2		"	"	"	"	
C4-Chrysenes/Benz(a)anthracenes	ND	144	144		"	"	"	"	
C4-Naphthalenes	ND	72.2	72.2		"	"	"	"	
C4-Phenanthrenes/Anthracenes	ND	144	144		"	"	"	"	
<i>Surrogate: Acenaphthylene-d8 (Surr)</i>			Recovery: 80 %		Limits: 40-120 %		"	"	"
<i>Benzo(a)pyrene-d12 (Surr)</i>			89 %		Limits: 40-120 %		"	"	"
5237-160329-DC-EMB051 (A6C1134-14RE1)			Matrix: Soil		Batch: 6031018				
C1-Chrysenes/Benz(a)anthracenes	56.0	18.5	18.5		ug/kg dry	1	04/08/16 19:43	GC/MS Scan	
C1-Fluoranthrenes/Pyrenes	68.3	18.5	18.5		"	"	"	"	
C1-Fluorenes	ND	19.4	19.4		"	"	"	"	R-02
C1-Phenanthrenes/Anthracenes	36.6	18.5	18.5		"	"	"	"	
C2-Chrysenes/Benz(a)anthracenes	22.0	18.5	18.5		"	"	"	"	
C2-Fluorenes	ND	18.5	18.5		"	"	"	"	
C2-Naphthalenes	ND	18.5	18.5		"	"	"	"	
C2-Phenanthrenes/Anthracenes	ND	18.5	18.5		"	"	"	"	
C3-Chrysenes/Benz(a)anthracenes	ND	18.5	18.5		"	"	"	"	
C3-Fluorenes	ND	18.5	18.5		"	"	"	"	
C3-Naphthalenes	20.1	18.5	18.5		"	"	"	"	
C3-Phenanthrenes/Anthracenes	ND	18.5	18.5		"	"	"	"	
C4-Chrysenes/Benz(a)anthracenes	ND	36.9	36.9		"	"	"	"	
C4-Naphthalenes	ND	18.5	18.5		"	"	"	"	
C4-Phenanthrenes/Anthracenes	ND	36.9	36.9		"	"	"	"	
<i>Surrogate: Acenaphthylene-d8 (Surr)</i>			Recovery: 80 %		Limits: 40-120 %		"	"	"
<i>Benzo(a)pyrene-d12 (Surr)</i>			87 %		Limits: 40-120 %		"	"	"
5237-160330-DC-EMB050 (A6C1134-16RE1)			Matrix: Soil		Batch: 6031018				
C1-Chrysenes/Benz(a)anthracenes	389	75.1	75.1		ug/kg dry	4	04/05/16 15:20	GC/MS Scan	
C1-Fluoranthrenes/Pyrenes	471	75.1	75.1		"	"	"	"	
C1-Fluorenes	ND	93.9	93.9		"	"	"	"	R-02
C1-Phenanthrenes/Anthracenes	219	75.1	75.1		"	"	"	"	
C2-Chrysenes/Benz(a)anthracenes	137	75.1	75.1		"	"	"	"	

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434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Alkylated PAH Homologs by 8270D Modified

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit						
5237-160330-DC-EMB050 (A6C1134-16RE1)			Matrix: Soil		Batch: 6031018				
C2-Fluorenes	ND	75.1	75.1		ug/kg dry	4	"	GC/MS Scan	
C2-Naphthalenes	ND	75.1	75.1		"	"	"	"	
C2-Phenanthrenes/Anthracenes	104	75.1	75.1		"	"	"	"	
C3-Chrysenes/Benz(a)anthracenes	102	75.1	75.1		"	"	"	"	
C3-Fluorenes	ND	75.1	75.1		"	"	"	"	
C3-Naphthalenes	ND	75.1	75.1		"	"	"	"	
C3-Phenanthrenes/Anthracenes	ND	75.1	75.1		"	"	"	"	
C4-Chrysenes/Benz(a)anthracenes	ND	150	150		"	"	"	"	
C4-Naphthalenes	ND	75.1	75.1		"	"	"	"	
C4-Phenanthrenes/Anthracenes	ND	150	150		"	"	"	"	
<i>Surrogate: Acenaphthylene-d8 (Surr)</i>			Recovery: 87 %		Limits: 40-120 %		"	"	"
<i>Benzo(a)pyrene-d12 (Surr)</i>			96 %		Limits: 40-120 %		"	"	"
5237-160330-DC-EMB035 (A6C1134-18RE1)			Matrix: Soil		Batch: 6031018				
C1-Chrysenes/Benz(a)anthracenes	34.4	17.7	17.7		ug/kg dry	1	04/08/16 19:05	GC/MS Scan	
C1-Fluoranthrenes/Pyrenes	40.8	17.7	17.7		"	"	"	"	
C1-Fluorenes	ND	17.7	17.7		"	"	"	"	
C1-Phenanthrenes/Anthracenes	22.4	17.7	17.7		"	"	"	"	
C2-Chrysenes/Benz(a)anthracenes	ND	17.7	17.7		"	"	"	"	
C2-Fluorenes	ND	17.7	17.7		"	"	"	"	
C2-Naphthalenes	ND	17.7	17.7		"	"	"	"	
C2-Phenanthrenes/Anthracenes	ND	17.7	17.7		"	"	"	"	
C3-Chrysenes/Benz(a)anthracenes	ND	17.7	17.7		"	"	"	"	
C3-Fluorenes	ND	17.7	17.7		"	"	"	"	
C3-Naphthalenes	ND	17.7	17.7		"	"	"	"	
C3-Phenanthrenes/Anthracenes	ND	17.7	17.7		"	"	"	"	
C4-Chrysenes/Benz(a)anthracenes	ND	35.4	35.4		"	"	"	"	
C4-Naphthalenes	ND	17.7	17.7		"	"	"	"	
C4-Phenanthrenes/Anthracenes	ND	35.4	35.4		"	"	"	"	
<i>Surrogate: Acenaphthylene-d8 (Surr)</i>			Recovery: 83 %		Limits: 40-120 %		"	"	"
<i>Benzo(a)pyrene-d12 (Surr)</i>			88 %		Limits: 40-120 %		"	"	"
5237-160330-DC-EMB035D (A6C1134-20)			Matrix: Soil		Batch: 6031018				
C1-Chrysenes/Benz(a)anthracenes	93.6	72.3	72.3		ug/kg dry	4	04/05/16 17:14	GC/MS Scan	

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434 NW 6th Ave. Suite 203
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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Alkylated PAH Homologs by 8270D Modified

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit	Matrix					
5237-160330-DC-EMB035D (A6C1134-20)			Matrix: Soil		Batch: 6031018				
C1-Fluoranthrenes/Pyrenes	113	72.3	72.3		ug/kg dry	4	"	GC/MS Scan	
C1-Fluorenes	ND	72.3	72.3		"	"	"	"	
C1-Phenanthrenes/Anthracenes	ND	72.3	72.3		"	"	"	"	
C2-Chrysenes/Benz(a)anthracenes	ND	72.3	72.3		"	"	"	"	
C2-Fluorenes	ND	72.3	72.3		"	"	"	"	
C2-Naphthalenes	ND	72.3	72.3		"	"	"	"	
C2-Phenanthrenes/Anthracenes	ND	72.3	72.3		"	"	"	"	
C3-Chrysenes/Benz(a)anthracenes	ND	72.3	72.3		"	"	"	"	
C3-Fluorenes	ND	72.3	72.3		"	"	"	"	
C3-Naphthalenes	ND	72.3	72.3		"	"	"	"	
C3-Phenanthrenes/Anthracenes	ND	72.3	72.3		"	"	"	"	
C4-Chrysenes/Benz(a)anthracenes	ND	145	145		"	"	"	"	
C4-Naphthalenes	ND	72.3	72.3		"	"	"	"	
C4-Phenanthrenes/Anthracenes	ND	145	145		"	"	"	"	
<i>Surrogate: Acenaphthylene-d8 (Surr)</i>			<i>Recovery: 86 %</i>	<i>Limits: 40-120 %</i>			"	"	"
<i>Benzo(a)pyrene-d12 (Surr)</i>			<i>93 %</i>	<i>Limits: 40-120 %</i>			"	"	"

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434 NW 6th Ave. Suite 203
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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
5237-160330-DC-EMB033 (A6C1134-02)		Matrix: Soil						
Batch: 6040228								
Aluminum	14300	37.1	74.2	mg/kg dry	10	04/12/16 12:54	EPA 6020A	
Antimony	ND	0.742	1.48	"	"	"	"	
Arsenic	10.1	0.742	1.48	"	"	"	"	
Barium	154	0.742	1.48	"	"	"	"	
Beryllium	0.683	0.148	0.297	"	"	"	"	
Cadmium	0.371	0.148	0.297	"	"	"	"	
Calcium	4440	74.2	148	"	"	"	"	
Chromium	18.5	0.742	1.48	"	"	"	"	
Copper	26.3	0.742	1.48	"	"	"	"	
Iron	35700	37.1	74.2	"	"	"	"	
Lead	16.7	0.148	0.297	"	"	"	"	
Magnesium	5970	37.1	74.2	"	"	"	"	
Manganese	781	0.742	1.48	"	"	"	"	
Mercury	ND	0.0594	0.119	"	"	"	"	
Nickel	20.3	0.742	1.48	"	"	"	"	
Potassium	1050	74.2	148	"	"	"	"	
Selenium	ND	0.742	1.48	"	"	"	"	
Silver	ND	0.148	0.297	"	"	"	"	
Sodium	172	74.2	148	"	"	"	"	
Thallium	0.178	0.148	0.297	"	"	"	"	J
Vanadium	91.2	0.742	1.48	"	"	"	"	
Zinc	85.3	2.97	5.94	"	"	"	"	



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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
5237-160330-DC-EMB032 (A6C1134-04)		Matrix: Soil						
Batch: 6040228								
Aluminum	19700	36.6	73.2	mg/kg dry	10	04/12/16 12:57	EPA 6020A	
Antimony	ND	0.732	1.46	"	"	"	"	
Arsenic	8.51	0.732	1.46	"	"	"	"	
Barium	164	0.732	1.46	"	"	"	"	
Beryllium	0.791	0.146	0.293	"	"	"	"	
Cadmium	0.293	0.146	0.293	"	"	"	"	
Calcium	3660	73.2	146	"	"	"	"	
Chromium	22.5	0.732	1.46	"	"	"	"	
Copper	28.0	0.732	1.46	"	"	"	"	
Iron	39300	36.6	73.2	"	"	"	"	
Lead	15.3	0.146	0.293	"	"	"	"	
Magnesium	5340	36.6	73.2	"	"	"	"	
Manganese	742	0.732	1.46	"	"	"	"	
Mercury	ND	0.0586	0.117	"	"	"	"	
Nickel	20.7	0.732	1.46	"	"	"	"	
Potassium	1160	73.2	146	"	"	"	"	
Selenium	ND	0.732	1.46	"	"	"	"	
Silver	ND	0.146	0.293	"	"	"	"	
Sodium	128	73.2	146	"	"	"	"	J
Thallium	0.190	0.146	0.293	"	"	"	"	J
Vanadium	103	0.732	1.46	"	"	"	"	
Zinc	93.7	2.93	5.86	"	"	"	"	

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Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
5237-160329-DC-EMB029 (A6C1134-06)		Matrix: Soil						
Batch: 6040228								
Aluminum	23500	36.1	72.3	mg/kg dry	10	04/12/16 13:00	EPA 6020A	
Antimony	ND	0.723	1.45	"	"	"	"	
Arsenic	16.1	0.723	1.45	"	"	"	"	
Barium	224	0.723	1.45	"	"	"	"	
Beryllium	0.983	0.145	0.289	"	"	"	"	
Cadmium	0.405	0.145	0.289	"	"	"	"	
Calcium	4200	72.3	145	"	"	"	"	
Chromium	27.1	0.723	1.45	"	"	"	"	
Copper	34.7	0.723	1.45	"	"	"	"	
Iron	44300	36.1	72.3	"	"	"	"	
Lead	26.9	0.145	0.289	"	"	"	"	
Magnesium	7520	36.1	72.3	"	"	"	"	
Manganese	919	0.723	1.45	"	"	"	"	
Mercury	ND	0.0578	0.116	"	"	"	"	
Nickel	28.1	0.723	1.45	"	"	"	"	
Potassium	1660	72.3	145	"	"	"	"	
Selenium	ND	0.723	1.45	"	"	"	"	
Silver	ND	0.145	0.289	"	"	"	"	
Sodium	143	72.3	145	"	"	"	"	J
Thallium	0.246	0.145	0.289	"	"	"	"	J
Vanadium	111	0.723	1.45	"	"	"	"	
Zinc	114	2.89	5.78	"	"	"	"	

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Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
5237-160330-DC-EMB028 (A6C1134-08)		Matrix: Soil						
Batch: 6040228								
Aluminum	17600	34.2	68.3	mg/kg dry	10	04/12/16 13:03	EPA 6020A	
Antimony	ND	0.683	1.37	"	"	"	"	
Arsenic	11.6	0.683	1.37	"	"	"	"	
Barium	175	0.683	1.37	"	"	"	"	
Beryllium	0.765	0.137	0.273	"	"	"	"	
Cadmium	0.396	0.137	0.273	"	"	"	"	
Calcium	4220	68.3	137	"	"	"	"	
Chromium	22.0	0.683	1.37	"	"	"	"	
Copper	29.4	0.683	1.37	"	"	"	"	
Iron	41300	34.2	68.3	"	"	"	"	
Lead	18.7	0.137	0.273	"	"	"	"	
Magnesium	6130	34.2	68.3	"	"	"	"	
Manganese	908	0.683	1.37	"	"	"	"	
Mercury	ND	0.0547	0.109	"	"	"	"	
Nickel	21.9	0.683	1.37	"	"	"	"	
Potassium	1120	68.3	137	"	"	"	"	
Selenium	ND	0.683	1.37	"	"	"	"	
Silver	ND	0.137	0.273	"	"	"	"	
Sodium	165	68.3	137	"	"	"	"	
Thallium	0.191	0.137	0.273	"	"	"	"	J
Vanadium	106	0.683	1.37	"	"	"	"	
Zinc	93.0	2.73	5.47	"	"	"	"	

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05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
5237-160330-DC-EMB056 (A6C1134-10)		Matrix: Soil						
Batch: 6040293								
Antimony	ND	0.689	1.38	mg/kg dry	10	04/13/16 22:01	EPA 6020A	
Arsenic	10.8	0.689	1.38	"	"	"	"	
Barium	153	0.689	1.38	"	"	"	"	
Beryllium	0.703	0.138	0.276	"	"	"	"	
Cadmium	0.331	0.138	0.276	"	"	"	"	
Chromium	20.6	0.689	1.38	"	"	"	"	
Copper	26.7	0.689	1.38	"	"	"	"	
Iron	35300	34.5	68.9	"	"	"	"	
Manganese	831	0.689	1.38	"	"	"	"	
Mercury	ND	0.0551	0.110	"	"	"	"	
Nickel	18.7	0.689	1.38	"	"	"	"	
Selenium	ND	0.689	1.38	"	"	"	"	
Silver	ND	0.138	0.276	"	"	"	"	
Thallium	0.165	0.138	0.276	"	"	"	"	J
Vanadium	95.7	0.689	1.38	"	"	"	"	
Zinc	88.2	2.76	5.51	"	"	"	"	
5237-160330-DC-EMB056 (A6C1134-10RE1)		Matrix: Soil						
Batch: 6040293								
Aluminum	15800	34.5	68.9	mg/kg dry	10	04/14/16 13:28	EPA 6020A	
Calcium	4440	68.9	138	"	"	"	"	
Lead	20.5	0.138	0.276	"	"	"	"	
Magnesium	5930	34.5	68.9	"	"	"	"	
Potassium	1190	68.9	138	"	"	"	"	
Sodium	154	68.9	138	"	"	"	"	
5237-160330-DC-EMB055 (A6C1134-12)		Matrix: Soil						
Batch: 6040293								
Antimony	ND	0.712	1.42	mg/kg dry	10	04/13/16 22:13	EPA 6020A	
Arsenic	11.5	0.712	1.42	"	"	"	"	
Barium	159	0.712	1.42	"	"	"	"	
Beryllium	0.783	0.142	0.285	"	"	"	"	
Cadmium	0.356	0.142	0.285	"	"	"	"	
Chromium	23.3	0.712	1.42	"	"	"	"	
Copper	27.3	0.712	1.42	"	"	"	"	
Iron	43400	35.6	71.2	"	"	"	"	
Lead	14.0	0.142	0.285	"	"	"	"	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB055 (A6C1134-12)			Matrix: Soil					
Manganese	823	0.712	1.42	mg/kg dry	10	"	EPA 6020A	
Mercury	ND	0.0570	0.114	"	"	"	"	
Nickel	21.8	0.712	1.42	"	"	"	"	
Selenium	ND	0.712	1.42	"	"	"	"	
Silver	ND	0.142	0.285	"	"	"	"	
Thallium	0.185	0.142	0.285	"	"	"	"	J
Vanadium	118	0.712	1.42	"	"	"	"	
Zinc	88.9	2.85	5.70	"	"	"	"	
5237-160330-DC-EMB055 (A6C1134-12RE1)			Matrix: Soil					
Batch: 6040293								
Aluminum	18800	35.6	71.2	mg/kg dry	10	04/14/16 13:31	EPA 6020A	
Calcium	4220	71.2	142	"	"	"	"	
Magnesium	6770	35.6	71.2	"	"	"	"	
Potassium	1120	71.2	142	"	"	"	"	
Sodium	188	71.2	142	"	"	"	"	
5237-160329-DC-EMB051 (A6C1134-14)			Matrix: Soil					
Batch: 6040293								
Antimony	ND	0.740	1.48	mg/kg dry	10	04/13/16 22:16	EPA 6020A	
Arsenic	9.18	0.740	1.48	"	"	"	"	
Barium	146	0.740	1.48	"	"	"	"	
Beryllium	0.652	0.148	0.296	"	"	"	"	
Cadmium	0.311	0.148	0.296	"	"	"	"	
Chromium	19.9	0.740	1.48	"	"	"	"	
Copper	26.9	0.740	1.48	"	"	"	"	
Iron	37900	37.0	74.0	"	"	"	"	
Lead	17.5	0.148	0.296	"	"	"	"	
Manganese	747	0.740	1.48	"	"	"	"	
Mercury	ND	0.0592	0.118	"	"	"	"	
Nickel	19.1	0.740	1.48	"	"	"	"	
Selenium	ND	0.740	1.48	"	"	"	"	
Silver	ND	0.148	0.296	"	"	"	"	
Thallium	0.178	0.148	0.296	"	"	"	"	J
Vanadium	97.0	0.740	1.48	"	"	"	"	
Zinc	85.3	2.96	5.92	"	"	"	"	
5237-160329-DC-EMB051 (A6C1134-14RE1)			Matrix: Soil					

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434 NW 6th Ave. Suite 203
 Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160329-DC-EMB051 (A6C1134-14RE1)			Matrix: Soil					
Batch: 6040293								
Aluminum	17400	37.0	74.0	mg/kg dry	10	04/14/16 13:34	EPA 6020A	
Calcium	4080	74.0	148	"	"	"	"	
Magnesium	6220	37.0	74.0	"	"	"	"	
Potassium	1120	74.0	148	"	"	"	"	
Sodium	285	74.0	148	"	"	"	"	
5237-160330-DC-EMB050 (A6C1134-16)			Matrix: Soil					
Batch: 6040293								
Antimony	ND	0.690	1.38	mg/kg dry	10	04/13/16 22:28	EPA 6020A	
Arsenic	5.44	0.690	1.38	"	"	"	"	
Barium	116	0.690	1.38	"	"	"	"	
Beryllium	0.552	0.138	0.276	"	"	"	"	
Cadmium	0.235	0.138	0.276	"	"	"	"	J
Chromium	18.7	0.690	1.38	"	"	"	"	
Copper	17.7	0.690	1.38	"	"	"	"	
Iron	27400	34.5	69.0	"	"	"	"	
Lead	16.9	0.138	0.276	"	"	"	"	
Manganese	580	0.690	1.38	"	"	"	"	
Mercury	ND	0.0552	0.110	"	"	"	"	
Nickel	12.9	0.690	1.38	"	"	"	"	
Selenium	ND	0.690	1.38	"	"	"	"	
Silver	ND	0.138	0.276	"	"	"	"	
Thallium	0.138	0.138	0.276	"	"	"	"	J
Vanadium	82.6	0.690	1.38	"	"	"	"	
Zinc	70.1	2.76	5.52	"	"	"	"	
5237-160330-DC-EMB050 (A6C1134-16RE1)			Matrix: Soil					
Batch: 6040293								
Aluminum	15500	34.5	69.0	mg/kg dry	10	04/14/16 13:42	EPA 6020A	
Calcium	2160	69.0	138	"	"	"	"	
Magnesium	3660	34.5	69.0	"	"	"	"	
Potassium	897	69.0	138	"	"	"	"	
Sodium	99.2	69.0	138	"	"	"	"	J
5237-160330-DC-EMB035 (A6C1134-18)			Matrix: Soil					
Batch: 6040293								
Antimony	ND	0.719	1.44	mg/kg dry	10	04/13/16 22:31	EPA 6020A	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
5237-160330-DC-EMB035 (A6C1134-18)			Matrix: Soil					
Arsenic	11.8	0.719	1.44	mg/kg dry	10	"	EPA 6020A	
Barium	178	0.719	1.44	"	"	"	"	
Beryllium	0.704	0.144	0.287	"	"	"	"	
Cadmium	0.273	0.144	0.287	"	"	"	"	J
Chromium	23.1	0.719	1.44	"	"	"	"	
Copper	25.8	0.719	1.44	"	"	"	"	
Iron	37600	35.9	71.9	"	"	"	"	
Lead	16.0	0.144	0.287	"	"	"	"	
Manganese	917	0.719	1.44	"	"	"	"	
Mercury	ND	0.0575	0.115	"	"	"	"	
Nickel	19.9	0.719	1.44	"	"	"	"	
Selenium	ND	0.719	1.44	"	"	"	"	
Silver	ND	0.144	0.287	"	"	"	"	
Thallium	0.172	0.144	0.287	"	"	"	"	J
Vanadium	94.9	0.719	1.44	"	"	"	"	
Zinc	90.8	2.87	5.75	"	"	"	"	
5237-160330-DC-EMB035 (A6C1134-18RE1)			Matrix: Soil					
Batch: 6040293								
Aluminum	21100	35.9	71.9	mg/kg dry	10	04/14/16 13:45	EPA 6020A	
Calcium	3450	71.9	144	"	"	"	"	
Magnesium	6200	35.9	71.9	"	"	"	"	
Potassium	1230	71.9	144	"	"	"	"	
Sodium	130	71.9	144	"	"	"	"	J
5237-160330-DC-EMB035D (A6C1134-20)			Matrix: Soil					
Batch: 6040293								
Antimony	ND	0.728	1.46	mg/kg dry	10	04/13/16 22:34	EPA 6020A	
Arsenic	11.8	0.728	1.46	"	"	"	"	
Barium	193	0.728	1.46	"	"	"	"	
Beryllium	0.801	0.146	0.291	"	"	"	"	
Cadmium	0.379	0.146	0.291	"	"	"	"	
Chromium	24.4	0.728	1.46	"	"	"	"	
Copper	27.5	0.728	1.46	"	"	"	"	
Iron	44800	36.4	72.8	"	"	"	"	
Lead	16.1	0.146	0.291	"	"	"	"	
Manganese	940	0.728	1.46	"	"	"	"	
Mercury	ND	0.0583	0.117	"	"	"	"	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
5237-160330-DC-EMB035D (A6C1134-20)			Matrix: Soil					
Nickel	20.9	0.728	1.46	mg/kg dry	10	"	EPA 6020A	
Selenium	ND	0.728	1.46	"	"	"	"	
Silver	ND	0.146	0.291	"	"	"	"	
Thallium	0.233	0.146	0.291	"	"	"	"	J
Vanadium	114	0.728	1.46	"	"	"	"	
Zinc	95.7	2.91	5.83	"	"	"	"	
5237-160330-DC-EMB035D (A6C1134-20RE1)			Matrix: Soil					
Batch: 6040293								
Aluminum	24000	36.4	72.8	mg/kg dry	10	04/14/16 13:48	EPA 6020A	
Calcium	4150	72.8	146	"	"	"	"	
Magnesium	6520	36.4	72.8	"	"	"	"	
Potassium	1550	72.8	146	"	"	"	"	
Sodium	159	72.8	146	"	"	"	"	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:
 05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
5237-160330-DC-EMB033 (A6C1134-02)			Matrix: Soil					
Batch: 6040240								
Total Organic Carbon	9700	100	200	mg/kg	1	04/13/16 15:55	SM 5310B MOD	
5237-160330-DC-EMB032 (A6C1134-04)			Matrix: Soil					
Batch: 6040240								
Total Organic Carbon	4200	100	200	mg/kg	1	04/13/16 15:55	SM 5310B MOD	
5237-160329-DC-EMB029 (A6C1134-06)			Matrix: Soil					
Batch: 6040240								
Total Organic Carbon	9600	100	200	mg/kg	1	04/13/16 15:55	SM 5310B MOD	
5237-160330-DC-EMB028 (A6C1134-08)			Matrix: Soil					
Batch: 6040240								
Total Organic Carbon	6100	100	200	mg/kg	1	04/13/16 15:55	SM 5310B MOD	
5237-160330-DC-EMB056 (A6C1134-10)			Matrix: Soil					
Batch: 6040240								
Total Organic Carbon	12000	100	200	mg/kg	1	04/13/16 15:55	SM 5310B MOD	
5237-160330-DC-EMB055 (A6C1134-12)			Matrix: Soil					
Batch: 6040240								
Total Organic Carbon	4600	100	200	mg/kg	1	04/13/16 15:55	SM 5310B MOD	
5237-160329-DC-EMB051 (A6C1134-14)			Matrix: Soil					
Batch: 6040240								
Total Organic Carbon	8000	100	200	mg/kg	1	04/13/16 15:55	SM 5310B MOD	
5237-160330-DC-EMB050 (A6C1134-16)			Matrix: Soil					
Batch: 6040240								
Total Organic Carbon	17000	100	200	mg/kg	1	04/13/16 15:55	SM 5310B MOD	
5237-160330-DC-EMB035 (A6C1134-18)			Matrix: Soil					
Batch: 6040240								
Total Organic Carbon	11000	100	200	mg/kg	1	04/13/16 15:55	SM 5310B MOD	
5237-160330-DC-EMB035D (A6C1134-20)			Matrix: Soil					
Batch: 6040240								
Total Organic Carbon	10000	100	200	mg/kg	1	04/13/16 15:55	SM 5310B MOD	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Ammonia by UV Digestion/Gas Diffusion/Colorimetric Detection

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
5237-160330-DC-EMB033 (A6C1134-02)			Matrix: Soil		Batch: 6040054			
Ammonia as N	1.15	0.133	0.267	mg/kg dry	1	04/06/16 19:15	SM4500-NH3 Mod	
5237-160330-DC-EMB032 (A6C1134-04)			Matrix: Soil		Batch: 6040054			
Ammonia as N	0.804	0.134	0.268	mg/kg dry	1	04/06/16 19:15	SM4500-NH3 Mod	
5237-160329-DC-EMB029 (A6C1134-06)			Matrix: Soil		Batch: 6040054			
Ammonia as N	2.15	0.121	0.241	mg/kg dry	1	04/06/16 19:15	SM4500-NH3 Mod	
5237-160330-DC-EMB028 (A6C1134-08)			Matrix: Soil		Batch: 6040054			
Ammonia as N	1.19	0.138	0.276	mg/kg dry	1	04/06/16 19:15	SM4500-NH3 Mod	
5237-160330-DC-EMB056 (A6C1134-10)			Matrix: Soil		Batch: 6040054			
Ammonia as N	2.07	0.120	0.239	mg/kg dry	1	04/06/16 19:15	SM4500-NH3 Mod	
5237-160330-DC-EMB055 (A6C1134-12)			Matrix: Soil		Batch: 6040054			
Ammonia as N	0.926	0.120	0.241	mg/kg dry	1	04/06/16 19:15	SM4500-NH3 Mod	
5237-160329-DC-EMB051 (A6C1134-14)			Matrix: Soil		Batch: 6040054			
Ammonia as N	0.813	0.125	0.250	mg/kg dry	1	04/06/16 19:15	SM4500-NH3 Mod	
5237-160330-DC-EMB050 (A6C1134-16)			Matrix: Soil		Batch: 6040054			
Ammonia as N	1.58	0.124	0.249	mg/kg dry	1	04/06/16 19:15	SM4500-NH3 Mod	
5237-160330-DC-EMB035 (A6C1134-18)			Matrix: Soil		Batch: 6040054			
Ammonia as N	0.800	0.119	0.239	mg/kg dry	1	04/06/16 19:15	SM4500-NH3 Mod	
5237-160330-DC-EMB035D (A6C1134-20)			Matrix: Soil		Batch: 6040053			
Ammonia as N	0.880	0.126	0.252	mg/kg dry	1	04/06/16 19:15	SM4500-NH3 Mod	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight									
Analyte	Result	MDL	Reporting			Date Analyzed	Method	Notes	
			Limit	Units	Dilution				
5237-160330-DC-EMB033G (A6C1134-01)			Matrix: Soil	Batch: 6040069					
% Solids	71.1	1.00	1.00	% by Weight	1	04/04/16 14:33	EPA 8000C	A-01	
5237-160330-DC-EMB033 (A6C1134-02)			Matrix: Soil	Batch: 6040032					
% Solids	71.1	1.00	1.00	% by Weight	1	04/04/16 07:40	EPA 8000C		
5237-160330-DC-EMB032G (A6C1134-03)			Matrix: Soil	Batch: 6040069					
% Solids	71.6	1.00	1.00	% by Weight	1	04/04/16 14:33	EPA 8000C	A-01	
5237-160330-DC-EMB032 (A6C1134-04)			Matrix: Soil	Batch: 6040032					
% Solids	71.6	1.00	1.00	% by Weight	1	04/04/16 07:40	EPA 8000C		
5237-160330-DC-EMB029G (A6C1134-05)			Matrix: Soil	Batch: 6040069					
% Solids	71.8	1.00	1.00	% by Weight	1	04/04/16 14:33	EPA 8000C	A-01	
5237-160329-DC-EMB029 (A6C1134-06)			Matrix: Soil	Batch: 6040032					
% Solids	71.8	1.00	1.00	% by Weight	1	04/04/16 07:40	EPA 8000C		
5237-160330-DC-EMB028G (A6C1134-07)			Matrix: Soil	Batch: 6040069					
% Solids	71.8	1.00	1.00	% by Weight	1	04/04/16 14:33	EPA 8000C	A-01	
5237-160330-DC-EMB028 (A6C1134-08)			Matrix: Soil	Batch: 6040032					
% Solids	71.8	1.00	1.00	% by Weight	1	04/04/16 07:40	EPA 8000C		
5237-160330-DC-EMB056G (A6C1134-09)			Matrix: Soil	Batch: 6040069					
% Solids	71.6	1.00	1.00	% by Weight	1	04/04/16 14:33	EPA 8000C	A-01	
5237-160330-DC-EMB056 (A6C1134-10)			Matrix: Soil	Batch: 6040032					
% Solids	71.6	1.00	1.00	% by Weight	1	04/04/16 07:40	EPA 8000C		
5237-160330-DC-EMB055G (A6C1134-11)			Matrix: Soil	Batch: 6040069					
% Solids	71.8	1.00	1.00	% by Weight	1	04/04/16 14:33	EPA 8000C	A-01	
5237-160330-DC-EMB055 (A6C1134-12)			Matrix: Soil	Batch: 6040032					
% Solids	71.8	1.00	1.00	% by Weight	1	04/04/16 07:40	EPA 8000C		
5237-160330-DC-EMB051G (A6C1134-13)			Matrix: Soil	Batch: 6040069					
% Solids	70.5	1.00	1.00	% by Weight	1	04/04/16 14:33	EPA 8000C	A-01	
5237-160329-DC-EMB051 (A6C1134-14)			Matrix: Soil	Batch: 6040032					
% Solids	70.5	1.00	1.00	% by Weight	1	04/04/16 07:40	EPA 8000C		
5237-160330-DC-EMB050G (A6C1134-15)			Matrix: Soil	Batch: 6040069					
% Solids	69.6	1.00	1.00	% by Weight	1	04/04/16 14:33	EPA 8000C	A-01	
5237-160330-DC-EMB050 (A6C1134-16)			Matrix: Soil	Batch: 6040032					
% Solids	69.6	1.00	1.00	% by Weight	1	04/04/16 07:40	EPA 8000C		

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Portland, OR 97209

Project: **Siltronic RI-Doane Creek**
Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
5237-160330-DC-EMB035G (A6C1134-17)			Matrix: Soil		Batch: 6040069			
% Solids	74.5	1.00	1.00	% by Weight	1	04/04/16 14:33	EPA 8000C	A-01
5237-160330-DC-EMB035 (A6C1134-18)			Matrix: Soil		Batch: 6040032			
% Solids	74.5	1.00	1.00	% by Weight	1	04/04/16 07:40	EPA 8000C	
5237-160330-DC-EMB035GD (A6C1134-19)			Matrix: Soil		Batch: 6040069			
% Solids	72.6	1.00	1.00	% by Weight	1	04/04/16 14:33	EPA 8000C	A-01
5237-160330-DC-EMB035D (A6C1134-20)			Matrix: Soil		Batch: 6040032			
% Solids	72.6	1.00	1.00	% by Weight	1	04/04/16 07:40	EPA 8000C	

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Project: **Siltronic RI-Doane Creek**
Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040015 - EPA 3546 (Fuels)						Soil						
Blank (6040015-BLK1)						Prepared: 04/01/16 09:03 Analyzed: 04/01/16 20:43						
NWTPH-Dx												
Diesel	ND	8.33	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	16.7	50.0	"	"	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (6040015-BS1)						Prepared: 04/01/16 09:03 Analyzed: 04/01/16 21:03						
NWTPH-Dx												
Diesel	116	10.0	25.0	mg/kg wet	1	125	---	93	76-115%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Batch 6040030 - EPA 3546 (Fuels)						Soil						
Blank (6040030-BLK1)						Prepared: 04/01/16 12:58 Analyzed: 04/01/16 20:43						
NWTPH-Dx												
Diesel	ND	8.33	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	16.7	50.0	"	"	---	---	---	---	---	---	
Mineral Oil	ND	16.7	33.3	"	"	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 96 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (6040030-BS1)						Prepared: 04/01/16 12:58 Analyzed: 04/01/16 21:03						
NWTPH-Dx												
Diesel	109	10.0	25.0	mg/kg wet	1	125	---	87	76-115%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 96 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (6040030-DUP1)						Prepared: 04/01/16 12:58 Analyzed: 04/02/16 01:06						
QC Source Sample: 5237-160330-DC-EMB055 (A6C1134-12)												
NWTPH-Dx												
Diesel	ND	11.8	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	25.5	23.6	50.0	"	"	---	ND	---	---	---	30%	J
Mineral Oil	ND	23.6	47.1	"	"	---	ND	---	---	---	200%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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Philip Nerenberg, Lab Director

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434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031023 - EPA 5035A						Soil						
Blank (6031023-BLK1)						Prepared: 03/31/16 13:00 Analyzed: 03/31/16 16:29						
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 95 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>83 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (6031023-BS2)						Prepared: 03/31/16 13:00 Analyzed: 03/31/16 16:00						
NWTPH-Gx (MS)												
Gasoline Range Organics	22.1	2.50	5.00	mg/kg wet	50	25.0	---	88	70-130%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 94 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>93 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (6031023-DUP1)						Prepared: 03/30/16 11:00 Analyzed: 03/31/16 17:26						
QC Source Sample: 5237-160330-DC-EMB033G (A6C1134-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	4.09	8.19	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>82 %</i>		<i>50-150 %</i>		<i>"</i>						



Hahn and Associates 434 NW 6th Ave. Suite 203 Portland, OR 97209	Project: Siltronic RI-Doane Creek Project Number: 5237-10dc Project Manager: Rob Ede	Reported: 05/05/16 22:28
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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040011 - EPA 5035A						Soil						
Blank (6040011-BLK1)						Prepared: 04/01/16 09:21 Analyzed: 04/01/16 11:56						
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	2.50	5.00	mg/kg wet	50	---	---	---	---	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 93 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>92 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (6040011-BS2)						Prepared: 04/01/16 09:21 Analyzed: 04/01/16 11:32						
NWTPH-Gx (MS)												
Gasoline Range Organics	19.1	2.50	5.00	mg/kg wet	50	25.0	---	77	70-130%	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 88 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>97 %</i>		<i>50-150 %</i>		<i>"</i>						



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Project Number: 5237-10dc
Project Manager: Rob Ede

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QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031023 - EPA 5035A						Soil						
Blank (6031023-BLK1)						Prepared: 03/31/16 13:00 Analyzed: 03/31/16 16:29						
5035/8260B												
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	---
Toluene	ND	16.7	33.3	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	---
Xylenes, total	ND	33.3	66.7	"	"	---	---	---	---	---	---	---
<i>Surr: Dibromofluoromethane (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 70-130 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Surr)</i>		<i>100 %</i>		<i>70-130 %</i>		<i>"</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>70-130 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>103 %</i>		<i>70-130 %</i>		<i>"</i>						
LCS (6031023-BS1)						Prepared: 03/31/16 13:00 Analyzed: 03/31/16 15:31						
5035/8260B												
Benzene	1030	5.00	10.0	ug/kg wet	50	1000	---	103	65-135%	---	---	---
Toluene	1050	25.0	50.0	"	"	"	---	105	"	---	---	---
Ethylbenzene	1100	12.5	25.0	"	"	"	---	110	"	---	---	---
Xylenes, total	3450	50.0	100	"	"	3000	---	115	"	---	---	---
<i>Surr: Dibromofluoromethane (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 70-130 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Surr)</i>		<i>93 %</i>		<i>70-130 %</i>		<i>"</i>						
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>70-130 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>70-130 %</i>		<i>"</i>						
Duplicate (6031023-DUP1)						Prepared: 03/30/16 11:00 Analyzed: 03/31/16 17:26						
QC Source Sample: 5237-160330-DC-EMB033G (A6C1134-01)												
5035/8260B												
Benzene	ND	8.19	16.4	ug/kg dry	50	---	ND	---	---	---	---	30%
Toluene	ND	40.9	81.9	"	"	---	ND	---	---	---	---	30%
Ethylbenzene	ND	20.5	40.9	"	"	---	ND	---	---	---	---	30%
Xylenes, total	ND	81.9	164	"	"	---	ND	---	---	---	---	30%
<i>Surr: Dibromofluoromethane (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 70-130 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Surr)</i>		<i>97 %</i>		<i>70-130 %</i>		<i>"</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>70-130 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>101 %</i>		<i>70-130 %</i>		<i>"</i>						
Matrix Spike (6031023-MS1)						Prepared: 03/30/16 16:10 Analyzed: 03/31/16 22:11						

V-09

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Philip Nerenberg, Lab Director

Hahn and Associates

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Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031023 - EPA 5035A						Soil						
Matrix Spike (6031023-MS1)						Prepared: 03/30/16 16:10 Analyzed: 03/31/16 22:11						V-09
QC Source Sample: 5237-160330-DC-EMB035GD (A6C1134-19)												
5035/8260B												
Benzene	1820	7.70	15.4	ug/kg dry	50	1540	ND	118	65-135%	---	---	
Toluene	1790	38.5	77.0	"	"	"	ND	116	"	---	---	
Ethylbenzene	1870	19.3	38.5	"	"	"	ND	122	"	---	---	
Xylenes, total	5940	77.0	154	"	"	4620	ND	129	"	---	---	
<i>Surr: Dibromofluoromethane (Surr)</i>			<i>Recovery: 106 %</i>	<i>Limits: 70-130 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Surr)</i>			<i>98 %</i>	<i>70-130 %</i>		<i>"</i>						
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>70-130 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>			<i>97 %</i>	<i>70-130 %</i>		<i>"</i>						



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QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040011 - EPA 5035A						Soil						
Blank (6040011-BLK1)						Prepared: 04/01/16 09:21 Analyzed: 04/01/16 11:56						
5035/8260B												
Benzene	ND	5.00	10.0	ug/kg wet	50	---	---	---	---	---	---	---
Toluene	ND	25.0	50.0	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	12.5	25.0	"	"	---	---	---	---	---	---	---
Xylenes, total	ND	37.5	75.0	"	"	---	---	---	---	---	---	---

Surr: <i>Dibromofluoromethane (Surr)</i>	Recovery: 107 %	Limits: 70-130 %	Dilution: 1x
Surr: <i>1,4-Difluorobenzene (Surr)</i>	99 %	70-130 %	"
Surr: <i>Toluene-d8 (Surr)</i>	98 %	70-130 %	50x
Surr: <i>4-Bromofluorobenzene (Surr)</i>	100 %	70-130 %	1x

LCS (6040011-BS1)						Prepared: 04/01/16 09:21 Analyzed: 04/01/16 10:59						
5035/8260B												
Benzene	918	5.00	10.0	ug/kg wet	50	1000	---	92	65-135%	---	---	---
Toluene	950	25.0	50.0	"	"	"	---	95	"	---	---	---
Ethylbenzene	948	12.5	25.0	"	"	"	---	95	"	---	---	---
Xylenes, total	2790	37.5	75.0	"	"	3000	---	93	"	---	---	---

Surr: <i>Dibromofluoromethane (Surr)</i>	Recovery: 106 %	Limits: 70-130 %	Dilution: 1x
Surr: <i>1,4-Difluorobenzene (Surr)</i>	97 %	70-130 %	"
Surr: <i>Toluene-d8 (Surr)</i>	95 %	70-130 %	50x
Surr: <i>4-Bromofluorobenzene (Surr)</i>	96 %	70-130 %	1x

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031023 - EPA 5035A						Soil						
Blank (6031023-BLK1)						Prepared: 03/31/16 13:00 Analyzed: 03/31/16 16:29						
5035/8260B												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	"	"	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Bromodichloromethane	ND	33.3	66.7	"	"	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	"	"	---	---	---	---	---	---	
Bromomethane	ND	333	333	"	"	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	"	"	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Chloroethane	ND	167	333	"	"	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	"	"	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	"	"	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	"	"	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	"	"	---	---	---	---	---	---	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

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05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031023 - EPA 5035A						Soil						
Blank (6031023-BLK1)						Prepared: 03/31/16 13:00 Analyzed: 03/31/16 16:29						
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	"	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloropropane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	"	"	---	---	---	---	---	---	
2-Hexanone	ND	167	333	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Methylene chloride	ND	83.3	167	"	"	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	"	"	---	---	---	---	---	---	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031023 - EPA 5035A						Soil						
Blank (6031023-BLK1)						Prepared: 03/31/16 13:00 Analyzed: 03/31/16 16:29						
1,2,4-Trimethylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	"	"	---	---	---	---	---	---	
o-Xylene	ND	16.7	33.3	"	"	---	---	---	---	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 103 %	Limits: 70-130 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	100 %	70-130 %	"
Toluene-d8 (Surr)	99 %	70-130 %	"
4-Bromofluorobenzene (Surr)	103 %	70-130 %	"

LCS (6031023-BS1)

Prepared: 03/31/16 13:00 Analyzed: 03/31/16 15:31

5035/8260B												
Acetone	2180	500	1000	ug/kg wet	50	2000	---	109	65-135%	---	---	
Benzene	1030	5.00	10.0	"	"	1000	---	103	"	---	---	
Bromobenzene	1100	12.5	25.0	"	"	"	---	110	"	---	---	
Bromochloromethane	964	25.0	50.0	"	"	"	---	96	"	---	---	
Bromodichloromethane	1200	50.0	100	"	"	"	---	120	"	---	---	
Bromoform	1390	50.0	100	"	"	"	---	139	"	---	---	Q-41
Bromomethane	902	500	500	"	"	"	---	90	"	---	---	
2-Butanone (MEK)	2330	250	500	"	"	2000	---	117	"	---	---	
n-Butylbenzene	1120	25.0	50.0	"	"	1000	---	112	"	---	---	
sec-Butylbenzene	1130	25.0	50.0	"	"	"	---	113	"	---	---	
tert-Butylbenzene	1090	25.0	50.0	"	"	"	---	109	"	---	---	
Carbon tetrachloride	1160	25.0	50.0	"	"	"	---	116	"	---	---	
Chlorobenzene	1130	12.5	25.0	"	"	"	---	113	"	---	---	
Chloroethane	903	250	500	"	"	"	---	90	"	---	---	
Chloroform	1030	25.0	50.0	"	"	"	---	103	"	---	---	
Chloromethane	1040	125	250	"	"	"	---	104	"	---	---	
2-Chlorotoluene	1070	25.0	50.0	"	"	"	---	107	"	---	---	
4-Chlorotoluene	1090	25.0	50.0	"	"	"	---	109	"	---	---	
1,2-Dibromo-3-chloroprop ane	1230	125	250	"	"	"	---	123	"	---	---	

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Philip Nerenberg, Lab Director

Hahn and Associates

434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28


QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031023 - EPA 5035A						Soil						
LCS (6031023-BS1)						Prepared: 03/31/16 13:00 Analyzed: 03/31/16 15:31						
Dibromochloromethane	1240	50.0	100	ug/kg wet	"	"	---	124	"	---	---	
1,2-Dibromoethane (EDB)	1180	25.0	50.0	"	"	"	---	118	"	---	---	
Dibromomethane	1110	25.0	50.0	"	"	"	---	111	"	---	---	
1,2-Dichlorobenzene	1160	12.5	25.0	"	"	"	---	116	"	---	---	
1,3-Dichlorobenzene	1140	12.5	25.0	"	"	"	---	114	"	---	---	
1,4-Dichlorobenzene	1100	12.5	25.0	"	"	"	---	110	"	---	---	
Dichlorodifluoromethane	1140	50.0	100	"	"	"	---	114	"	---	---	
1,1-Dichloroethane	1050	12.5	25.0	"	"	"	---	105	"	---	---	
1,2-Dichloroethane (EDC)	1080	12.5	25.0	"	"	"	---	108	"	---	---	
1,1-Dichloroethene	1030	12.5	25.0	"	"	"	---	103	"	---	---	
cis-1,2-Dichloroethene	1000	12.5	25.0	"	"	"	---	100	"	---	---	
trans-1,2-Dichloroethene	1000	12.5	25.0	"	"	"	---	100	"	---	---	
1,2-Dichloropropane	968	12.5	25.0	"	"	"	---	97	"	---	---	
1,3-Dichloropropane	1110	25.0	50.0	"	"	"	---	111	"	---	---	
2,2-Dichloropropane	1160	25.0	50.0	"	"	"	---	116	"	---	---	
1,1-Dichloropropene	1080	25.0	50.0	"	"	"	---	108	"	---	---	
cis-1,3-Dichloropropene	1050	25.0	50.0	"	"	"	---	105	"	---	---	
trans-1,3-Dichloropropene	1230	25.0	50.0	"	"	"	---	123	"	---	---	
Ethylbenzene	1100	12.5	25.0	"	"	"	---	110	"	---	---	
Hexachlorobutadiene	1220	50.0	100	"	"	"	---	122	"	---	---	
2-Hexanone	2420	250	500	"	"	2000	---	121	"	---	---	
Isopropylbenzene	1160	25.0	50.0	"	"	1000	---	116	"	---	---	
4-Isopropyltoluene	1190	25.0	50.0	"	"	"	---	119	"	---	---	
4-Methyl-2-pentanone (MiBK)	2210	250	500	"	"	2000	---	110	"	---	---	
Methyl tert-butyl ether (MTBE)	1070	25.0	50.0	"	"	1000	---	107	"	---	---	
Methylene chloride	1080	125	250	"	"	"	---	108	"	---	---	
Naphthalene	1160	50.0	100	"	"	"	---	116	"	---	---	
n-Propylbenzene	1060	12.5	25.0	"	"	"	---	106	"	---	---	
Styrene	1130	25.0	50.0	"	"	"	---	113	"	---	---	
1,1,1,2-Tetrachloroethane	1150	12.5	25.0	"	"	"	---	115	"	---	---	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031023 - EPA 5035A						Soil						
LCS (6031023-BS1)						Prepared: 03/31/16 13:00 Analyzed: 03/31/16 15:31						
1,1,2,2-Tetrachloroethane	1170	25.0	50.0	"	"	"	---	117	"	---	---	
Tetrachloroethene (PCE)	1210	12.5	25.0	"	"	"	---	121	"	---	---	
Toluene	1050	25.0	50.0	"	"	"	---	105	"	---	---	
1,2,3-Trichlorobenzene	1140	125	250	"	"	"	---	114	"	---	---	
1,2,4-Trichlorobenzene	1130	125	250	"	"	"	---	113	"	---	---	
1,1,1-Trichloroethane	1120	12.5	25.0	"	"	"	---	112	"	---	---	
1,1,2-Trichloroethane	1170	12.5	25.0	"	"	"	---	117	"	---	---	
Trichloroethene (TCE)	1100	12.5	25.0	"	"	"	---	110	"	---	---	
Trichlorofluoromethane	966	50.0	100	"	"	"	---	97	"	---	---	
1,2,3-Trichloropropane	1180	25.0	50.0	"	"	"	---	118	"	---	---	
1,2,4-Trimethylbenzene	1140	25.0	50.0	"	"	"	---	114	"	---	---	
1,3,5-Trimethylbenzene	1140	25.0	50.0	"	"	"	---	114	"	---	---	
Vinyl chloride	1200	12.5	25.0	"	"	"	---	120	"	---	---	
m,p-Xylene	2350	25.0	50.0	"	"	2000	---	117	"	---	---	
o-Xylene	1100	25.0	50.0	"	"	1000	---	110	"	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 98 %	Limits: 70-130 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	93 %	70-130 %	"
Toluene-d8 (Surr)	96 %	70-130 %	"
4-Bromofluorobenzene (Surr)	99 %	70-130 %	"

Duplicate (6031023-DUP1)

Prepared: 03/30/16 11:00 Analyzed: 03/31/16 17:26


QC Source Sample: 5237-160330-DC-EMB033G (A6C1134-01)

5035/8260B

Acetone	ND	819	1640	ug/kg dry	50	---	ND	---	---	---	30%
Benzene	ND	8.19	16.4	"	"	---	ND	---	---	---	30%
Bromobenzene	ND	20.5	40.9	"	"	---	ND	---	---	---	30%
Bromochloromethane	ND	40.9	81.9	"	"	---	ND	---	---	---	30%
Bromodichloromethane	ND	81.9	164	"	"	---	ND	---	---	---	30%
Bromoform	ND	81.9	164	"	"	---	ND	---	---	---	30%
Bromomethane	ND	819	819	"	"	---	ND	---	---	---	30%
2-Butanone (MEK)	ND	409	819	"	"	---	ND	---	---	---	30%
n-Butylbenzene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%

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Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031023 - EPA 5035A						Soil						
Duplicate (6031023-DUP1)						Prepared: 03/30/16 11:00 Analyzed: 03/31/16 17:26						
QC Source Sample: 5237-160330-DC-EMB033G (A6C1134-01)												
sec-Butylbenzene	ND	40.9	81.9	ug/kg dry	"	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
Chlorobenzene	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
Chloroethane	ND	409	819	"	"	---	ND	---	---	---	30%	
Chloroform	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
Chloromethane	ND	205	409	"	"	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	205	409	"	"	---	ND	---	---	---	30%	
Dibromochloromethane	ND	81.9	164	"	"	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
Dibromomethane	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	81.9	164	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031023 - EPA 5035A						Soil						
Duplicate (6031023-DUP1)						Prepared: 03/30/16 11:00 Analyzed: 03/31/16 17:26						
QC Source Sample: 5237-160330-DC-EMB033G (A6C1134-01)												
Hexachlorobutadiene	ND	81.9	164	ug/kg dry	"	---	ND	---	---	---	30%	
2-Hexanone	ND	409	819	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	409	819	"	"	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
Methylene chloride	ND	205	409	"	"	---	ND	---	---	---	30%	
Naphthalene	ND	81.9	164	"	"	---	ND	---	---	---	30%	
n-Propylbenzene	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
Styrene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
Toluene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	205	409	"	"	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	205	409	"	"	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	81.9	164	"	"	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
Vinyl chloride	ND	20.5	40.9	"	"	---	ND	---	---	---	30%	
m,p-Xylene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	
o-Xylene	ND	40.9	81.9	"	"	---	ND	---	---	---	30%	

Surr: Dibromofluoromethane (Surr)	Recovery: 101 %	Limits: 70-130 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	97 %	70-130 %	"
Toluene-d8 (Surr)	98 %	70-130 %	"

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031023 - EPA 5035A						Soil						
Duplicate (6031023-DUP1)						Prepared: 03/30/16 11:00 Analyzed: 03/31/16 17:26						
QC Source Sample: 5237-160330-DC-EMB033G (A6C1134-01)												
<i>Surr: 4-Bromofluorobenzene (Surr) Recovery: 101 % Limits: 70-130 % Dilution: 1x</i>												
Matrix Spike (6031023-MS1)						Prepared: 03/30/16 16:10 Analyzed: 03/31/16 22:11						
QC Source Sample: 5237-160330-DC-EMB035GD (A6C1134-19)												
5035/8260B												
Acetone	3570	770	1540	ug/kg dry	50	3080	ND	116	65-135%	---	---	
Benzene	1820	7.70	15.4	"	"	1540	ND	118	"	---	---	
Bromobenzene	1790	19.3	38.5	"	"	"	ND	117	"	---	---	
Bromochloromethane	1770	38.5	77.0	"	"	"	ND	115	"	---	---	
Bromodichloromethane	2150	77.0	154	"	"	"	ND	140	"	---	---	Q-01
Bromoform	2230	77.0	154	"	"	"	ND	145	"	---	---	Q-01, V-09
Bromomethane	1540	770	770	"	"	"	ND	100	"	---	---	
2-Butanone (MEK)	3620	385	770	"	"	3080	ND	118	"	---	---	
n-Butylbenzene	1870	38.5	77.0	"	"	1540	ND	122	"	---	---	
sec-Butylbenzene	1930	38.5	77.0	"	"	"	ND	126	"	---	---	
tert-Butylbenzene	1890	38.5	77.0	"	"	"	ND	123	"	---	---	
Carbon tetrachloride	2170	38.5	77.0	"	"	"	ND	141	"	---	---	Q-01
Chlorobenzene	1860	19.3	38.5	"	"	"	ND	121	"	---	---	
Chloroethane	1860	385	770	"	"	"	ND	121	"	---	---	
Chloroform	1940	38.5	77.0	"	"	"	ND	126	"	---	---	
Chloromethane	1790	193	385	"	"	"	ND	116	"	---	---	
2-Chlorotoluene	1840	38.5	77.0	"	"	"	ND	120	"	---	---	
4-Chlorotoluene	1880	38.5	77.0	"	"	"	ND	122	"	---	---	
1,2-Dibromo-3-chloropropane	1940	193	385	"	"	"	ND	126	"	---	---	
Dibromochloromethane	2160	77.0	154	"	"	"	ND	141	"	---	---	Q-01
1,2-Dibromoethane (EDB)	1930	38.5	77.0	"	"	"	ND	125	"	---	---	
Dibromomethane	1980	38.5	77.0	"	"	"	ND	129	"	---	---	
1,2-Dichlorobenzene	1910	19.3	38.5	"	"	"	ND	124	"	---	---	
1,3-Dichlorobenzene	1890	19.3	38.5	"	"	"	ND	123	"	---	---	
1,4-Dichlorobenzene	1820	19.3	38.5	"	"	"	ND	118	"	---	---	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031023 - EPA 5035A						Soil						
Matrix Spike (6031023-MS1)						Prepared: 03/30/16 16:10 Analyzed: 03/31/16 22:11						
QC Source Sample: 5237-160330-DC-EMB035GD (A6C1134-19)												
Dichlorodifluoromethane	2270	77.0	154	ug/kg dry	"	"	ND	147	"	---	---	Q-01
1,1-Dichloroethane	1980	19.3	38.5	"	"	"	ND	128	"	---	---	
1,2-Dichloroethane (EDC)	2030	19.3	38.5	"	"	"	ND	132	"	---	---	
1,1-Dichloroethene	1920	19.3	38.5	"	"	"	ND	125	"	---	---	
cis-1,2-Dichloroethene	1780	19.3	38.5	"	"	"	ND	116	"	---	---	
trans-1,2-Dichloroethene	1870	19.3	38.5	"	"	"	ND	121	"	---	---	
1,2-Dichloropropane	1750	19.3	38.5	"	"	"	ND	114	"	---	---	
1,3-Dichloropropane	1850	38.5	77.0	"	"	"	ND	121	"	---	---	
2,2-Dichloropropane	1850	38.5	77.0	"	"	"	ND	121	"	---	---	
1,1-Dichloropropene	1910	38.5	77.0	"	"	"	ND	124	"	---	---	
cis-1,3-Dichloropropene	1700	38.5	77.0	"	"	"	ND	110	"	---	---	
trans-1,3-Dichloropropene	2100	38.5	77.0	"	"	"	ND	136	"	---	---	Q-01
Ethylbenzene	1870	19.3	38.5	"	"	"	ND	122	"	---	---	
Hexachlorobutadiene	2010	77.0	154	"	"	"	ND	130	"	---	---	
2-Hexanone	3670	385	770	"	"	3080	ND	119	"	---	---	
Isopropylbenzene	1980	38.5	77.0	"	"	1540	ND	129	"	---	---	
4-Isopropyltoluene	2000	38.5	77.0	"	"	"	ND	130	"	---	---	
4-Methyl-2-pentanone (MiBK)	3440	385	770	"	"	3080	ND	112	"	---	---	
Methyl tert-butyl ether (MTBE)	1810	38.5	77.0	"	"	1540	ND	118	"	---	---	
Methylene chloride	1900	193	385	"	"	"	ND	123	"	---	---	
Naphthalene	1770	77.0	154	"	"	"	ND	115	"	---	---	
n-Propylbenzene	1810	19.3	38.5	"	"	"	ND	118	"	---	---	
Styrene	1910	38.5	77.0	"	"	"	ND	124	"	---	---	
1,1,1,2-Tetrachloroethane	2000	19.3	38.5	"	"	"	ND	130	"	---	---	
1,1,2,2-Tetrachloroethane	1850	38.5	77.0	"	"	"	ND	121	"	---	---	
Tetrachloroethene (PCE)	2010	19.3	38.5	"	"	"	ND	131	"	---	---	
Toluene	1790	38.5	77.0	"	"	"	ND	116	"	---	---	
1,2,3-Trichlorobenzene	1810	193	385	"	"	"	ND	118	"	---	---	
1,2,4-Trichlorobenzene	1730	193	385	"	"	"	ND	112	"	---	---	

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Philip Nerenberg, Lab Director

Hahn and Associates

434 NW 6th Ave. Suite 203
 Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031023 - EPA 5035A						Soil						
Matrix Spike (6031023-MS1)						Prepared: 03/30/16 16:10 Analyzed: 03/31/16 22:11						
QC Source Sample: 5237-160330-DC-EMB035GD (A6C1134-19)												
1,1,1-Trichloroethane	2150	19.3	38.5	"	"	"	ND	140	"	---	---	Q-01
1,1,2-Trichloroethane	1940	19.3	38.5	"	"	"	ND	126	"	---	---	
Trichloroethene (TCE)	1930	19.3	38.5	"	"	"	ND	126	"	---	---	
Trichlorofluoromethane	2300	77.0	154	"	"	"	ND	149	"	---	---	Q-01
1,2,3-Trichloropropane	1880	38.5	77.0	"	"	"	ND	122	"	---	---	
1,2,4-Trimethylbenzene	1950	38.5	77.0	"	"	"	ND	127	"	---	---	
1,3,5-Trimethylbenzene	1960	38.5	77.0	"	"	"	ND	128	"	---	---	
Vinyl chloride	2190	19.3	38.5	"	"	"	ND	142	"	---	---	Q-01
m,p-Xylene	4040	38.5	77.0	"	"	3080	ND	131	"	---	---	
o-Xylene	1900	38.5	77.0	"	"	1540	ND	123	"	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 106 %	Limits: 70-130 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	98 %	70-130 %	"
Toluene-d8 (Surr)	97 %	70-130 %	"
4-Bromofluorobenzene (Surr)	97 %	70-130 %	"



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QUALITY CONTROL (QC) SAMPLE RESULTS

Anions by EPA 300.0/9056A (Ion Chromatography)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040309 - Method Prep: Non-Aq						Soil						
Blank (6040309-BLK1)						Prepared: 04/12/16 12:42 Analyzed: 04/12/16 18:22						
EPA 9056A												
Sulfate	ND	10.0	10.0	mg/kg wet	1	---	---	---	---	---	---	
LCS (6040309-BS1)						Prepared: 04/12/16 12:42 Analyzed: 04/12/16 18:43						
EPA 9056A												
Sulfate	79.1	10.0	10.0	mg/kg wet	1	80.0	---	99	90-110%	---	---	
Duplicate (6040309-DUP1)						Prepared: 04/12/16 12:42 Analyzed: 04/12/16 19:26						
QC Source Sample: 5237-160330-DC-EMB033 (A6C1134-02)												
EPA 9056A												
Sulfate	ND	13.7	13.7	mg/kg dry	1	---	ND	---	---	---	15%	
Matrix Spike (6040309-MS1)						Prepared: 04/12/16 12:42 Analyzed: 04/12/16 19:48						
QC Source Sample: 5237-160330-DC-EMB033 (A6C1134-02)												
EPA 9056A												
Sulfate	113	13.8	13.8	mg/kg dry	1	111	ND	102	80-120%	---	---	



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QUALITY CONTROL (QC) SAMPLE RESULTS

Cyanide - Total (Non-aqueous)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040170 - Method Prep: Non-Aq						Soil						
Blank (6040170-BLK1)						Prepared: 04/07/16 09:31 Analyzed: 04/07/16 15:40						
EPA 9013M/9014												
Cyanide, Total	ND	0.100	0.100	mg/kg wet	1	---	---	---	---	---	---	
LCS (6040170-BS1)						Prepared: 04/07/16 09:31 Analyzed: 04/07/16 15:42						
EPA 9013M/9014												
Cyanide, Total	4.03	0.100	0.100	mg/kg wet	1	4.00	---	101	85-115%	---	---	



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QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031018 - EPA 3546						Soil						
Blank (6031018-BLK1)						Prepared: 03/31/16 11:53 Analyzed: 03/31/16 17:08						
EPA 8270D												
Acenaphthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	---
Acenaphthylene	ND	1.25	2.50	"	"	---	---	---	---	---	---	---
Anthracene	ND	1.25	2.50	"	"	---	---	---	---	---	---	---
Benz(a)anthracene	ND	1.25	2.50	"	"	---	---	---	---	---	---	---
Benzo(a)pyrene	ND	1.87	3.75	"	"	---	---	---	---	---	---	---
Benzo(b)fluoranthene	ND	1.87	3.75	"	"	---	---	---	---	---	---	---
Benzo(k)fluoranthene	ND	1.87	3.75	"	"	---	---	---	---	---	---	---
Benzo(g,h,i)perylene	ND	1.25	2.50	"	"	---	---	---	---	---	---	---
Chrysene	ND	1.25	2.50	"	"	---	---	---	---	---	---	---
Dibenz(a,h)anthracene	ND	1.25	2.50	"	"	---	---	---	---	---	---	---
Fluoranthene	ND	1.25	2.50	"	"	---	---	---	---	---	---	---
Fluorene	ND	1.25	2.50	"	"	---	---	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	ND	1.25	2.50	"	"	---	---	---	---	---	---	---
1-Methylnaphthalene	ND	2.50	5.00	"	"	---	---	---	---	---	---	---
2-Methylnaphthalene	ND	2.50	5.00	"	"	---	---	---	---	---	---	---
Naphthalene	ND	2.50	5.00	"	"	---	---	---	---	---	---	---
Phenanthrene	ND	1.25	2.50	"	"	---	---	---	---	---	---	---
Pyrene	ND	1.25	2.50	"	"	---	---	---	---	---	---	---
Carbazole	ND	1.87	3.75	"	"	---	---	---	---	---	---	---
Dibenzofuran	ND	1.25	2.50	"	"	---	---	---	---	---	---	---
4-Chloro-3-methylphenol	ND	12.5	25.0	"	"	---	---	---	---	---	---	---
2-Chlorophenol	ND	6.25	12.5	"	"	---	---	---	---	---	---	---
2,4-Dichlorophenol	ND	6.25	12.5	"	"	---	---	---	---	---	---	---
2,4-Dimethylphenol	ND	6.25	12.5	"	"	---	---	---	---	---	---	---
2,4-Dinitrophenol	ND	31.2	62.5	"	"	---	---	---	---	---	---	---
4,6-Dinitro-2-methylphenol	ND	31.2	62.5	"	"	---	---	---	---	---	---	---
2-Methylphenol	ND	3.12	6.25	"	"	---	---	---	---	---	---	---
3+4-Methylphenol(s)	ND	3.12	6.25	"	"	---	---	---	---	---	---	---
2-Nitrophenol	ND	12.5	25.0	"	"	---	---	---	---	---	---	---
4-Nitrophenol	ND	12.5	25.0	"	"	---	---	---	---	---	---	---

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Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031018 - EPA 3546						Soil						
Blank (6031018-BLK1)						Prepared: 03/31/16 11:53 Analyzed: 03/31/16 17:08						
Pentachlorophenol (PCP)	ND	12.5	25.0	ug/kg wet	"	---	---	---	---	---	---	
Phenol	ND	2.50	5.00	"	"	---	---	---	---	---	---	
2,3,4,6-Tetrachlorophenol	ND	6.25	12.5	"	"	---	---	---	---	---	---	
2,3,5,6-Tetrachlorophenol	ND	6.25	12.5	"	"	---	---	---	---	---	---	
2,4,5-Trichlorophenol	ND	6.25	12.5	"	"	---	---	---	---	---	---	
2,4,6-Trichlorophenol	ND	6.25	12.5	"	"	---	---	---	---	---	---	
Bis(2-ethylhexyl)phthalate	ND	18.7	37.5	"	"	---	---	---	---	---	---	
Butyl benzyl phthalate	ND	12.5	25.0	"	"	---	---	---	---	---	---	
Diethylphthalate	ND	12.5	25.0	"	"	---	---	---	---	---	---	
Dimethylphthalate	ND	12.5	25.0	"	"	---	---	---	---	---	---	
Di-n-butylphthalate	ND	12.5	25.0	"	"	---	---	---	---	---	---	
Di-n-octyl phthalate	ND	12.5	25.0	"	"	---	---	---	---	---	---	
N-Nitrosodimethylamine	ND	3.12	6.25	"	"	---	---	---	---	---	---	
N-Nitroso-di-n-propylamine	ND	3.12	6.25	"	"	---	---	---	---	---	---	
N-Nitrosodiphenylamine	ND	3.12	6.25	"	"	---	---	---	---	---	---	
Bis(2-Chloroethoxy) methane	ND	3.12	6.25	"	"	---	---	---	---	---	---	
Bis(2-Chloroethyl) ether	ND	3.12	6.25	"	"	---	---	---	---	---	---	
Bis(2-Chloroisopropyl) ether	ND	3.12	6.25	"	"	---	---	---	---	---	---	
Hexachlorobenzene	ND	1.25	2.50	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	3.12	6.25	"	"	---	---	---	---	---	---	
Hexachlorocyclopentadiene	ND	6.25	12.5	"	"	---	---	---	---	---	---	
Hexachloroethane	ND	3.12	6.25	"	"	---	---	---	---	---	---	
2-Chloronaphthalene	ND	1.25	2.50	"	"	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	3.12	6.25	"	"	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	3.12	6.25	"	"	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	3.12	6.25	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	3.12	6.25	"	"	---	---	---	---	---	---	
4-Bromophenyl phenyl ether	ND	3.12	6.25	"	"	---	---	---	---	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031018 - EPA 3546						Soil						
Blank (6031018-BLK1)						Prepared: 03/31/16 11:53 Analyzed: 03/31/16 17:08						
4-Chlorophenyl phenyl ether	ND	3.12	6.25	ug/kg wet	"	---	---	---	---	---	---	
Aniline	ND	6.25	12.5	"	"	---	---	---	---	---	---	
4-Chloroaniline	ND	3.12	6.25	"	"	---	---	---	---	---	---	
2-Nitroaniline	ND	25.0	50.0	"	"	---	---	---	---	---	---	
3-Nitroaniline	ND	25.0	50.0	"	"	---	---	---	---	---	---	
4-Nitroaniline	ND	25.0	50.0	"	"	---	---	---	---	---	---	
Nitrobenzene	ND	12.5	25.0	"	"	---	---	---	---	---	---	
2,4-Dinitrotoluene	ND	12.5	25.0	"	"	---	---	---	---	---	---	
2,6-Dinitrotoluene	ND	12.5	25.0	"	"	---	---	---	---	---	---	
Benzoic acid	ND	157	312	"	"	---	---	---	---	---	---	
Benzyl alcohol	ND	6.25	12.5	"	"	---	---	---	---	---	---	
Isophorone	ND	3.12	6.25	"	"	---	---	---	---	---	---	
Azobenzene (1,2-DPH)	ND	3.12	6.25	"	"	---	---	---	---	---	---	
Bis(2-Ethylhexyl) adipate	ND	31.2	62.5	"	"	---	---	---	---	---	---	
3,3'-Dichlorobenzidine	ND	12.5	25.0	"	"	---	---	---	---	---	---	
1,2-Dinitrobenzene	ND	31.2	62.5	"	"	---	---	---	---	---	---	
1,3-Dinitrobenzene	ND	31.2	62.5	"	"	---	---	---	---	---	---	
1,4-Dinitrobenzene	ND	31.2	62.5	"	"	---	---	---	---	---	---	
Pyridine	ND	6.25	12.5	"	"	---	---	---	---	---	---	

Surr: Nitrobenzene-d5 (Surr)	Recovery: 85 %	Limits: 37-122 %	Dilution: 1x
2-Fluorobiphenyl (Surr)	75 %	44-115 %	"
Phenol-d6 (Surr)	74 %	33-122 %	"
p-Terphenyl-d14 (Surr)	104 %	54-127 %	"
2-Fluorophenol (Surr)	71 %	35-115 %	"
2,4,6-Tribromophenol (Surr)	72 %	39-132 %	"

LCS (6031018-BS1)

Prepared: 03/31/16 11:53 Analyzed: 03/31/16 17:45

EPA 8270D												
Acenaphthene	509	1.33	2.67	ug/kg wet	1	533	---	95	40-122%	---	---	
Acenaphthylene	483	1.33	2.67	"	"	"	---	91	32-132%	---	---	
Anthracene	518	1.33	2.67	"	"	"	---	97	47-123%	---	---	
Benz(a)anthracene	534	1.33	2.67	"	"	"	---	100	49-126%	---	---	

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Project: **Siltronic RI-Doane Creek**

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Reported:

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QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031018 - EPA 3546						Soil						
LCS (6031018-BS1)						Prepared: 03/31/16 11:53 Analyzed: 03/31/16 17:45						
Benzo(a)pyrene	532	2.00	4.00	ug/kg wet	"	"	---	100	45-129%	---	---	
Benzo(b)fluoranthene	591	2.00	4.00	"	"	"	---	111	45-132%	---	---	
Benzo(k)fluoranthene	552	2.00	4.00	"	"	"	---	104	47-132%	---	---	
Benzo(g,h,i)perylene	546	1.33	2.67	"	"	"	---	102	43-134%	---	---	
Chrysene	540	1.33	2.67	"	"	"	---	101	50-124%	---	---	
Dibenz(a,h)anthracene	519	1.33	2.67	"	"	"	---	97	45-134%	---	---	
Fluoranthene	549	1.33	2.67	"	"	"	---	103	50-127%	---	---	
Fluorene	526	1.33	2.67	"	"	"	---	99	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	507	1.33	2.67	"	"	"	---	95	45-133%	---	---	
1-Methylnaphthalene	518	2.67	5.33	"	"	"	---	97	40-120%	---	---	
2-Methylnaphthalene	515	2.67	5.33	"	"	"	---	97	38-122%	---	---	
Naphthalene	485	2.67	5.33	"	"	"	---	91	35-123%	---	---	
Phenanthrene	502	1.33	2.67	"	"	"	---	94	50-121%	---	---	
Pyrene	537	1.33	2.67	"	"	"	---	101	47-127%	---	---	
Carbazole	518	2.00	4.00	"	"	"	---	97	50-122%	---	---	
Dibenzofuran	504	1.33	2.67	"	"	"	---	94	44-120%	---	---	
4-Chloro-3-methylphenol	573	13.3	26.7	"	"	"	---	107	45-122%	---	---	
2-Chlorophenol	553	6.67	13.3	"	"	"	---	104	34-121%	---	---	
2,4-Dichlorophenol	559	6.67	13.3	"	"	"	---	105	40-122%	---	---	
2,4-Dimethylphenol	569	6.67	13.3	"	"	"	---	107	30-127%	---	---	
2,4-Dinitrophenol	466	33.3	66.7	"	"	"	---	87	5-137%	---	---	
4,6-Dinitro-2-methylphenol	489	33.3	66.7	"	"	"	---	92	29-132%	---	---	
2-Methylphenol	616	3.33	6.67	"	"	"	---	116	32-122%	---	---	
3+4-Methylphenol(s)	650	3.33	6.67	"	"	"	---	122	34-120%	---	---	Q-29
2-Nitrophenol	502	13.3	26.7	"	"	"	---	94	36-123%	---	---	
4-Nitrophenol	504	13.3	26.7	"	"	"	---	95	30-132%	---	---	
Pentachlorophenol (PCP)	515	13.3	26.7	"	"	"	---	97	25-133%	---	---	
Phenol	584	2.67	5.33	"	"	"	---	109	34-120%	---	---	
2,3,4,6-Tetrachlorophenol	519	6.67	13.3	"	"	"	---	97	44-125%	---	---	
2,3,5,6-Tetrachlorophenol	507	6.67	13.3	"	"	"	---	95	40-120%	---	---	
2,4,5-Trichlorophenol	521	6.67	13.3	"	"	"	---	98	41-124%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031018 - EPA 3546						Soil						
LCS (6031018-BS1)						Prepared: 03/31/16 11:53 Analyzed: 03/31/16 17:45						
2,4,6-Trichlorophenol	504	6.67	13.3	ug/kg wet	"	"	---	94	39-126%	---	---	
Bis(2-ethylhexyl)phthalate	562	20.0	40.0	"	"	"	---	105	51-133%	---	---	
Butyl benzyl phthalate	576	13.3	26.7	"	"	"	---	108	48-132%	---	---	
Diethylphthalate	526	13.3	26.7	"	"	"	---	99	50-124%	---	---	
Dimethylphthalate	514	13.3	26.7	"	"	"	---	96	48-124%	---	---	
Di-n-butylphthalate	550	13.3	26.7	"	"	"	---	103	51-128%	---	---	
Di-n-octyl phthalate	567	13.3	26.7	"	"	"	---	106	44-140%	---	---	
N-Nitrosodimethylamine	515	3.33	6.67	"	"	"	---	97	23-120%	---	---	
N-Nitroso-di-n-propylamine	607	3.33	6.67	"	"	"	---	114	36-120%	---	---	
N-Nitrosodiphenylamine	531	3.33	6.67	"	"	"	---	100	38-127%	---	---	
Bis(2-Chloroethoxy) methane	507	3.33	6.67	"	"	"	---	95	36-121%	---	---	
Bis(2-Chloroethyl) ether	524	3.33	6.67	"	"	"	---	98	31-120%	---	---	
Bis(2-Chloroisopropyl) ether	490	3.33	6.67	"	"	"	---	92	33-131%	---	---	
Hexachlorobenzene	499	1.33	2.67	"	"	"	---	94	44-122%	---	---	
Hexachlorobutadiene	474	3.33	6.67	"	"	"	---	89	32-123%	---	---	
Hexachlorocyclopentadiene	451	6.67	13.3	"	"	"	---	84	5-140%	---	---	
Hexachloroethane	481	3.33	6.67	"	"	"	---	90	28-120%	---	---	
2-Chloronaphthalene	480	1.33	2.67	"	"	"	---	90	41-120%	---	---	
1,2-Dichlorobenzene	473	3.33	6.67	"	"	"	---	89	33-120%	---	---	
1,3-Dichlorobenzene	464	3.33	6.67	"	"	"	---	87	30-120%	---	---	
1,4-Dichlorobenzene	469	3.33	6.67	"	"	"	---	88	31-120%	---	---	
1,2,4-Trichlorobenzene	472	3.33	6.67	"	"	"	---	89	34-120%	---	---	
4-Bromophenyl phenyl ether	529	3.33	6.67	"	"	"	---	99	46-124%	---	---	
4-Chlorophenyl phenyl ether	530	3.33	6.67	"	"	"	---	99	45-121%	---	---	
Aniline	498	6.67	13.3	"	"	"	---	93	7-120%	---	---	
4-Chloroaniline	310	3.33	6.67	"	"	"	---	58	16-120%	---	---	
2-Nitroaniline	505	26.7	53.3	"	"	"	---	95	44-127%	---	---	
3-Nitroaniline	431	26.7	53.3	"	"	"	---	81	33-120%	---	---	

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Philip Nerenberg, Lab Director

Hahn and Associates

434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031018 - EPA 3546						Soil						
LCS (6031018-BS1)						Prepared: 03/31/16 11:53 Analyzed: 03/31/16 17:45						
4-Nitroaniline	502	26.7	53.3	ug/kg wet	"	"	---	94	35-120%	---	---	
Nitrobenzene	548	13.3	26.7	"	"	"	---	103	34-122%	---	---	
2,4-Dinitrotoluene	555	13.3	26.7	"	"	"	---	104	48-126%	---	---	
2,6-Dinitrotoluene	530	13.3	26.7	"	"	"	---	99	46-124%	---	---	
Benzoic acid	421	167	333	"	"	1070	---	39	5-140%	---	---	
Benzyl alcohol	614	6.67	13.3	"	"	533	---	115	29-122%	---	---	
Isophorone	547	3.33	6.67	"	"	"	---	103	30-122%	---	---	
Azobenzene (1,2-DPH)	484	3.33	6.67	"	"	"	---	91	39-125%	---	---	
Bis(2-Ethylhexyl) adipate	546	33.3	66.7	"	"	"	---	102	60-121%	---	---	
3,3'-Dichlorobenzidine	1400	13.3	26.7	"	"	1070	---	132	22-121%	---	---	Q-29
1,2-Dinitrobenzene	545	33.3	66.7	"	"	533	---	102	44-120%	---	---	
1,3-Dinitrobenzene	529	33.3	66.7	"	"	"	---	99	42-127%	---	---	
1,4-Dinitrobenzene	538	33.3	66.7	"	"	"	---	101	37-132%	---	---	
Pyridine	491	6.67	13.3	"	"	"	---	92	5-120%	---	---	

Surr: Nitrobenzene-d5 (Surr)	Recovery: 99 %	Limits: 37-122 %	Dilution: 1x
2-Fluorobiphenyl (Surr)	91 %	44-115 %	"
Phenol-d6 (Surr)	111 %	33-122 %	"
p-Terphenyl-d14 (Surr)	105 %	54-127 %	"
2-Fluorophenol (Surr)	94 %	35-115 %	"
2,4,6-Tribromophenol (Surr)	91 %	39-132 %	"

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Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Alkylated PAH Homologs by 8270D Modified

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031018 - EPA 3546						Soil						
Blank (6031018-BLK1)						Prepared: 03/31/16 11:53 Analyzed: 03/31/16 17:08						
GC/MS Scan												
C1-Chrysenes/Benz(a)anthracenes	ND	12.5	12.5	ug/kg wet	1	---	---	---	---	---	---	
C1-Fluoranthrenes/Pyrenes	ND	12.5	12.5	"	"	---	---	---	---	---	---	
C1-Fluorenes	ND	12.5	12.5	"	"	---	---	---	---	---	---	
C1-Phenanthrenes/Anthracenes	ND	12.5	12.5	"	"	---	---	---	---	---	---	
C2-Chrysenes/Benz(a)anthracenes	ND	12.5	12.5	"	"	---	---	---	---	---	---	
C2-Fluorenes	ND	12.5	12.5	"	"	---	---	---	---	---	---	
C2-Naphthalenes	ND	12.5	12.5	"	"	---	---	---	---	---	---	
C2-Phenanthrenes/Anthracenes	ND	12.5	12.5	"	"	---	---	---	---	---	---	
C3-Chrysenes/Benz(a)anthracenes	ND	12.5	12.5	"	"	---	---	---	---	---	---	
C3-Fluorenes	ND	12.5	12.5	"	"	---	---	---	---	---	---	
C3-Naphthalenes	ND	12.5	12.5	"	"	---	---	---	---	---	---	
C3-Phenanthrenes/Anthracenes	ND	12.5	12.5	"	"	---	---	---	---	---	---	
C4-Chrysenes/Benz(a)anthracenes	ND	25.0	25.0	"	"	---	---	---	---	---	---	
C4-Naphthalenes	ND	12.5	12.5	"	"	---	---	---	---	---	---	
C4-Phenanthrenes/Anthracenes	ND	25.0	25.0	"	"	---	---	---	---	---	---	
2-Methylnaphthalene	ND	6.25	12.5	"	"	---	---	---	---	---	---	
2,6-Dimethylnaphthalene	ND	6.25	12.5	"	"	---	---	---	---	---	---	
1,6,7-Trimethylnaphthalene	ND	6.25	12.5	"	"	---	---	---	---	---	---	
Fluorene	ND	6.25	12.5	"	"	---	---	---	---	---	---	
1-Methylphenanthrene	ND	6.25	12.5	"	"	---	---	---	---	---	---	
Pyrene	ND	6.25	12.5	"	"	---	---	---	---	---	---	
Chrysene	ND	6.25	12.5	"	"	---	---	---	---	---	---	
<i>Surr: Acenaphthylene-d8 (Surr)</i>		<i>Recovery: 78 %</i>		<i>Limits: 40-120 %</i>		<i>Dilution: 1x</i>						
<i>Benzo(a)pyrene-d12 (Surr)</i>		<i>85 %</i>		<i>40-120 %</i>		<i>"</i>						

LCS (6031018-BS2)

Prepared: 03/31/16 11:53 Analyzed: 03/31/16 18:23

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Alkylated PAH Homologs by 8270D Modified

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6031018 - EPA 3546						Soil						
LCS (6031018-BS2)						Prepared: 03/31/16 11:53 Analyzed: 03/31/16 18:23						
GC/MS Scan												
2-Methylnaphthalene	522	6.67	13.3	ug/kg wet	1	533	---	98	38-122%	---	---	
2,6-Dimethylnaphthalene	476	6.67	13.3	"	"	"	---	89	40-125%	---	---	
1,6,7-Trimethylnaphthalene	532	6.67	13.3	"	"	"	---	100	45-125%	---	---	
Fluorene	516	6.67	13.3	"	"	"	---	97	43-125%	---	---	
1-Methylphenanthrene	571	6.67	13.3	"	"	"	---	107	45-125%	---	---	
Pyrene	585	6.67	13.3	"	"	"	---	110	47-127%	---	---	
Chrysene	557	6.67	13.3	"	"	"	---	104	50-124%	---	---	
<i>Surr: Acenaphthylene-d8 (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 40-120 %</i>		<i>Dilution: 1x</i>						
<i>Benzo(a)pyrene-d12 (Surr)</i>		<i>97 %</i>		<i>40-120 %</i>		<i>"</i>						

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040228 - EPA 3051A						Soil						
Blank (6040228-BLK1)						Prepared: 04/08/16 12:24 Analyzed: 04/12/16 11:58						
EPA 6020A												
Aluminum	ND	25.0	50.0	mg/kg wet	10	---	---	---	---	---	---	---
Antimony	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Arsenic	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Barium	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Beryllium	ND	0.100	0.200	"	"	---	---	---	---	---	---	---
Cadmium	ND	0.100	0.200	"	"	---	---	---	---	---	---	---
Calcium	ND	50.0	100	"	"	---	---	---	---	---	---	---
Chromium	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Copper	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Iron	ND	25.0	50.0	"	"	---	---	---	---	---	---	---
Lead	ND	0.100	0.200	"	"	---	---	---	---	---	---	---
Magnesium	ND	25.0	50.0	"	"	---	---	---	---	---	---	---
Manganese	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Mercury	ND	0.0400	0.0800	"	"	---	---	---	---	---	---	---
Nickel	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Potassium	ND	50.0	100	"	"	---	---	---	---	---	---	---
Selenium	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Silver	ND	0.100	0.200	"	"	---	---	---	---	---	---	---
Sodium	ND	50.0	100	"	"	---	---	---	---	---	---	---
Thallium	ND	0.100	0.200	"	"	---	---	---	---	---	---	---
Vanadium	ND	0.500	1.00	"	"	---	---	---	---	---	---	---
Zinc	ND	2.00	4.00	"	"	---	---	---	---	---	---	---

LCS (6040228-BS1)

Prepared: 04/08/16 12:24 Analyzed: 04/12/16 12:01

EPA 6020A												
Aluminum	4920	25.0	50.0	mg/kg wet	10	5000	---	98	80-120%	---	---	---
Antimony	25.7	0.500	1.00	"	"	25.0	---	103	"	---	---	---
Arsenic	51.4	0.500	1.00	"	"	50.0	---	103	"	---	---	---
Barium	51.3	0.500	1.00	"	"	"	---	103	"	---	---	---
Beryllium	23.8	0.100	0.200	"	"	25.0	---	95	"	---	---	---

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040228 - EPA 3051A						Soil						
LCS (6040228-BS1)						Prepared: 04/08/16 12:24 Analyzed: 04/12/16 12:01						
Cadmium	49.5	0.100	0.200	mg/kg wet	"	50.0	---	99	"	---	---	
Calcium	5220	50.0	100	"	"	5000	---	104	"	---	---	
Chromium	50.2	0.500	1.00	"	"	50.0	---	100	"	---	---	
Copper	51.1	0.500	1.00	"	"	"	---	102	"	---	---	
Iron	5100	25.0	50.0	"	"	5000	---	102	"	---	---	
Lead	51.7	0.100	0.200	"	"	50.0	---	103	"	---	---	
Magnesium	4720	25.0	50.0	"	"	5000	---	94	"	---	---	
Manganese	51.0	0.500	1.00	"	"	50.0	---	102	"	---	---	
Mercury	1.07	0.0400	0.0800	"	"	1.00	---	107	"	---	---	
Nickel	51.2	0.500	1.00	"	"	50.0	---	102	"	---	---	
Potassium	5100	50.0	100	"	"	5000	---	102	"	---	---	
Selenium	29.3	0.500	1.00	"	"	25.0	---	117	"	---	---	
Silver	24.4	0.100	0.200	"	"	"	---	98	"	---	---	
Sodium	4820	50.0	100	"	"	5000	---	96	"	---	---	
Thallium	24.6	0.100	0.200	"	"	25.0	---	98	"	---	---	
Vanadium	52.0	0.500	1.00	"	"	50.0	---	104	"	---	---	
Zinc	56.1	2.00	4.00	"	"	"	---	112	"	---	---	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040293 - EPA 3051A						Soil						
Blank (6040293-BLK1)						Prepared: 04/12/16 09:23 Analyzed: 04/13/16 21:50						
EPA 6020A												
Aluminum	ND	25.0	50.0	mg/kg wet	10	---	---	---	---	---	---	
Antimony	ND	0.500	1.00	"	"	---	---	---	---	---	---	
Arsenic	ND	0.500	1.00	"	"	---	---	---	---	---	---	
Barium	ND	0.500	1.00	"	"	---	---	---	---	---	---	
Beryllium	ND	0.100	0.200	"	"	---	---	---	---	---	---	
Cadmium	ND	0.100	0.200	"	"	---	---	---	---	---	---	
Calcium	ND	50.0	100	"	"	---	---	---	---	---	---	
Chromium	ND	0.500	1.00	"	"	---	---	---	---	---	---	
Copper	ND	0.500	1.00	"	"	---	---	---	---	---	---	
Iron	ND	25.0	50.0	"	"	---	---	---	---	---	---	
Lead	ND	0.100	0.200	"	"	---	---	---	---	---	---	
Magnesium	ND	25.0	50.0	"	"	---	---	---	---	---	---	
Manganese	ND	0.500	1.00	"	"	---	---	---	---	---	---	
Mercury	ND	0.0400	0.0800	"	"	---	---	---	---	---	---	
Nickel	ND	0.500	1.00	"	"	---	---	---	---	---	---	
Potassium	ND	50.0	100	"	"	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	"	"	---	---	---	---	---	---	
Silver	ND	0.100	0.200	"	"	---	---	---	---	---	---	
Thallium	ND	0.100	0.200	"	"	---	---	---	---	---	---	
Vanadium	ND	0.500	1.00	"	"	---	---	---	---	---	---	
Zinc	ND	2.00	4.00	"	"	---	---	---	---	---	---	

Blank (6040293-BLK2)

Prepared: 04/12/16 09:23 Analyzed: 04/14/16 13:13

EPA 6020A												
Sodium	ND	50.0	100	mg/kg wet	10	---	---	---	---	---	---	Q-16

LCS (6040293-BS1)

Prepared: 04/12/16 09:23 Analyzed: 04/13/16 21:53

EPA 6020A												
Aluminum	4770	25.0	50.0	mg/kg wet	10	5000	---	95	80-120%	---	---	
Antimony	25.2	0.500	1.00	"	"	25.0	---	101	"	---	---	
Arsenic	48.6	0.500	1.00	"	"	50.0	---	97	"	---	---	

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040293 - EPA 3051A						Soil						
LCS (6040293-BS1)						Prepared: 04/12/16 09:23 Analyzed: 04/13/16 21:53						
Barium	48.8	0.500	1.00	mg/kg wet	"	"	---	98	"	---	---	
Beryllium	24.7	0.100	0.200	"	"	25.0	---	99	"	---	---	
Cadmium	48.4	0.100	0.200	"	"	50.0	---	97	"	---	---	
Calcium	4990	50.0	100	"	"	5000	---	100	"	---	---	
Chromium	49.0	0.500	1.00	"	"	50.0	---	98	"	---	---	
Copper	48.6	0.500	1.00	"	"	"	---	97	"	---	---	
Iron	4960	25.0	50.0	"	"	5000	---	99	"	---	---	
Lead	47.0	0.100	0.200	"	"	50.0	---	94	"	---	---	
Magnesium	4770	25.0	50.0	"	"	5000	---	95	"	---	---	
Manganese	49.5	0.500	1.00	"	"	50.0	---	99	"	---	---	
Mercury	1.01	0.0400	0.0800	"	"	1.00	---	101	"	---	---	
Nickel	47.6	0.500	1.00	"	"	50.0	---	95	"	---	---	
Potassium	4840	50.0	100	"	"	5000	---	97	"	---	---	
Selenium	29.5	0.500	1.00	"	"	25.0	---	118	"	---	---	
Silver	24.6	0.100	0.200	"	"	"	---	99	"	---	---	
Sodium	4750	1000	2000	"	"	5000	---	95	"	---	---	
Thallium	24.4	0.100	0.200	"	"	25.0	---	98	"	---	---	
Vanadium	50.1	0.500	1.00	"	"	50.0	---	100	"	---	---	
Zinc	50.2	2.00	4.00	"	"	"	---	100	"	---	---	

Duplicate (6040293-DUP1)

Prepared: 04/12/16 09:23 Analyzed: 04/13/16 22:19

QC Source Sample: 5237-160329-DC-EMB051 (A6C1134-14)

EPA 6020A

Antimony	ND	0.764	1.53	mg/kg dry	10	---	ND	---	---	---	40%
Arsenic	9.00	0.764	1.53	"	"	---	9.18	---	---	2	40%
Barium	142	0.764	1.53	"	"	---	146	---	---	3	40%
Beryllium	0.673	0.153	0.306	"	"	---	0.652	---	---	3	40%
Cadmium	0.306	0.153	0.306	"	"	---	0.311	---	---	2	40%
Chromium	18.3	0.764	1.53	"	"	---	19.9	---	---	8	40%
Copper	23.9	0.764	1.53	"	"	---	26.9	---	---	12	40%
Iron	32900	38.2	76.4	"	"	---	37900	---	---	14	40%

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040293 - EPA 3051A												
Soil												
Duplicate (6040293-DUP1)						Prepared: 04/12/16 09:23		Analyzed: 04/13/16 22:19				
QC Source Sample: 5237-160329-DC-EMB051 (A6C1134-14)												
Lead	18.0	0.153	0.306	mg/kg dry	"	---	17.5	---	---	3	40%	
Manganese	753	0.764	1.53	"	"	---	747	---	---	0.9	40%	
Mercury	ND	0.0611	0.122	"	"	---	ND	---	---	---	40%	
Nickel	17.3	0.764	1.53	"	"	---	19.1	---	---	10	40%	
Selenium	ND	0.764	1.53	"	"	---	ND	---	---	---	40%	
Silver	ND	0.153	0.306	"	"	---	ND	---	---	---	40%	
Thallium	0.153	0.153	0.306	"	"	---	0.178	---	---	15	40%	J
Vanadium	86.8	0.764	1.53	"	"	---	97.0	---	---	11	40%	
Zinc	78.0	3.06	6.11	"	"	---	85.3	---	---	9	40%	
Duplicate (6040293-DUP2)						Prepared: 04/12/16 09:23		Analyzed: 04/14/16 13:37				
QC Source Sample: 5237-160329-DC-EMB051 (A6C1134-14RE1)												
EPA 6020A												
Aluminum	15700	38.2	76.4	mg/kg dry	10	---	17400	---	---	10	40%	Q-16
Calcium	3900	76.4	153	"	"	---	4080	---	---	4	40%	Q-16
Magnesium	6190	38.2	76.4	"	"	---	6220	---	---	0.5	40%	Q-16
Potassium	1040	76.4	153	"	"	---	1120	---	---	8	40%	Q-16
Sodium	255	76.4	153	"	"	---	285	---	---	11	40%	Q-16
Matrix Spike (6040293-MS1)						Prepared: 04/12/16 09:23		Analyzed: 04/13/16 22:22				
QC Source Sample: 5237-160329-DC-EMB051 (A6C1134-14)												
EPA 6020A												
Antimony	33.5	0.764	1.53	mg/kg dry	10	38.2	ND	88	75-125%	---	---	
Arsenic	82.6	0.764	1.53	"	"	76.4	9.18	96	"	---	---	
Barium	218	0.764	1.53	"	"	"	146	94	"	---	---	
Beryllium	36.5	0.153	0.306	"	"	38.2	0.652	94	"	---	---	
Cadmium	75.6	0.153	0.306	"	"	76.4	0.311	98	"	---	---	
Chromium	91.3	0.764	1.53	"	"	"	19.9	93	"	---	---	
Copper	99.5	0.764	1.53	"	"	"	26.9	95	"	---	---	
Iron	42400	38.2	76.4	"	"	7640	37900	59	"	---	---	Q-03
Lead	85.2	0.153	0.306	"	"	76.4	17.5	89	"	---	---	

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Philip Nerenberg, Lab Director

Hahn and Associates

434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040293 - EPA 3051A						Soil						
Matrix Spike (6040293-MS1)						Prepared: 04/12/16 09:23 Analyzed: 04/13/16 22:22						
QC Source Sample: 5237-160329-DC-EMB051 (A6C1134-14)												
Manganese	875	0.764	1.53	"	"	"	747	168	"	---	---	Q-03
Mercury	1.52	0.0611	0.122	"	"	1.53	ND	100	"	---	---	
Nickel	91.0	0.764	1.53	"	"	76.4	19.1	94	"	---	---	
Selenium	39.9	0.764	1.53	"	"	38.2	ND	104	"	---	---	
Silver	36.4	0.153	0.306	"	"	"	ND	95	"	---	---	
Thallium	35.3	0.153	0.306	"	"	"	0.178	92	"	---	---	
Vanadium	169	0.764	1.53	"	"	76.4	97.0	94	"	---	---	
Zinc	158	3.06	6.11	"	"	"	85.3	95	"	---	---	

Matrix Spike (6040293-MS3)

Prepared: 04/12/16 09:23 Analyzed: 04/14/16 13:39

QC Source Sample: 5237-160329-DC-EMB051 (A6C1134-14RE1)

EPA 6020A												
Aluminum	24000	38.2	76.4	mg/kg dry	10	7640	17400	86	75-125%	---	---	Q-16
Calcium	11300	76.4	153	"	"	"	4080	94	"	---	---	Q-16
Magnesium	13500	38.2	76.4	"	"	"	6220	95	"	---	---	Q-16
Potassium	8130	76.4	153	"	"	"	1120	92	"	---	---	Q-16
Sodium	7390	76.4	153	"	"	"	285	93	"	---	---	Q-16

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05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040240 - PSEP TOC						Sediment						
Blank (6040240-BLK1)						Prepared: 04/08/16 17:20 Analyzed: 04/13/16 15:55						
SM 5310B MOD												
Total Organic Carbon	ND	100	200	mg/kg	1	---	---	---	---	---	---	
LCS (6040240-BS1)						Prepared: 04/08/16 17:20 Analyzed: 04/13/16 15:55						
SM 5310B MOD												
Total Organic Carbon	9400			mg/kg	1	10000	---	94	85-115%	---	---	
Duplicate (6040240-DUP1)						Prepared: 04/08/16 17:20 Analyzed: 04/13/16 15:55						
QC Source Sample: 5237-160330-DC-EMB033 (A6C1134-02)												
SM 5310B MOD												
Total Organic Carbon	9200	100	200	mg/kg	1	---	9700	---	---	5	20%	

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Project: **Siltronic RI-Doane Creek**

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Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Ammonia by UV Digestion/Gas Diffusion/Colorimetric Detection

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040053 - Method Prep: Non-Aq						Soil						
Blank (6040053-BLK1)						Prepared: 04/04/16 10:05 Analyzed: 04/06/16 19:15						
SM4500-NH3 Mod												
Ammonia as N	ND	0.100	0.200	mg/kg wet	1	---	---	---	---	---	---	
LCS (6040053-BS1)						Prepared: 04/04/16 10:05 Analyzed: 04/06/16 19:15						
SM4500-NH3 Mod												
Ammonia as N	1.92	0.100	0.200	mg/kg wet	1	2.00	---	96	90-110%	---	---	
Duplicate (6040053-DUP2)						Prepared: 04/04/16 10:05 Analyzed: 04/06/16 19:15						
QC Source Sample: 5237-160330-DC-EMB035D (A6C1134-20)												
SM4500-NH3 Mod												
Ammonia as N	0.864	0.129	0.258	mg/kg dry	1	---	0.880	---	---	2	10%	
Matrix Spike (6040053-MS2)						Prepared: 04/04/16 10:05 Analyzed: 04/06/16 19:15						
QC Source Sample: 5237-160330-DC-EMB035D (A6C1134-20)												
SM4500-NH3 Mod												
Ammonia as N	3.46	0.118	0.236	mg/kg dry	1	2.36	0.880	109	90-110%	---	---	



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Project Number: 5237-10dc
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Reported:
05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Ammonia by UV Digestion/Gas Diffusion/Colorimetric Detection

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040054 - Method Prep: Non-Aq						Soil						
Blank (6040054-BLK1)						Prepared: 04/04/16 10:09 Analyzed: 04/06/16 19:15						
SM4500-NH3 Mod												
Ammonia as N	ND	0.100	0.200	mg/kg wet	1	---	---	---	---	---	---	
LCS (6040054-BS1)						Prepared: 04/04/16 10:09 Analyzed: 04/06/16 19:15						
SM4500-NH3 Mod												
Ammonia as N	2.02	0.100	0.200	mg/kg wet	1	2.00	---	101	90-110%	---	---	
Duplicate (6040054-DUP1)						Prepared: 04/04/16 10:09 Analyzed: 04/06/16 19:15						
QC Source Sample: 5237-160330-DC-EMB033 (A6C1134-02)												
SM4500-NH3 Mod												
Ammonia as N	1.18	0.139	0.278	mg/kg dry	1	---	1.15	---	---	3	10%	
Matrix Spike (6040054-MS1)						Prepared: 04/04/16 10:09 Analyzed: 04/06/16 19:15						
QC Source Sample: 5237-160330-DC-EMB033 (A6C1134-02)												
SM4500-NH3 Mod												
Ammonia as N	3.75	0.134	0.269	mg/kg dry	1	2.69	1.15	97	90-110%	---	---	

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Project: **Siltronic RI-Doane Creek**

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 Project Manager: Rob Ede

Reported:

05/05/16 22:28

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040032 - Total Solids (Dry Weight)						Soil						
Duplicate (6040032-DUP2)						Prepared: 04/01/16 13:25 Analyzed: 04/04/16 07:40						
QC Source Sample: 5237-160330-DC-EMB033 (A6C1134-02)												
EPA 8000C												
% Solids	71.0	1.00	1.00	% by Weight	1	---	71.1	---	---	0.03	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.



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Project: **Siltronic RI-Doane Creek**

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Reported:

05/05/16 22:28

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040015							
A6C1134-14	Soil	NWTPH-Dx	03/30/16 15:00	04/01/16 09:03	11.01g/5mL	10g/5mL	0.91
A6C1134-16	Soil	NWTPH-Dx	03/30/16 15:30	04/01/16 09:03	10.22g/5mL	10g/5mL	0.98
A6C1134-18	Soil	NWTPH-Dx	03/30/16 16:00	04/01/16 09:03	11.57g/5mL	10g/5mL	0.86
A6C1134-20	Soil	NWTPH-Dx	03/30/16 16:10	04/01/16 09:03	11.26g/5mL	10g/5mL	0.89
Batch: 6040030							
A6C1134-02	Soil	NWTPH-Dx	03/30/16 11:00	04/01/16 12:58	10.28g/5mL	10g/5mL	0.97
A6C1134-04	Soil	NWTPH-Dx	03/30/16 11:40	04/01/16 12:58	10.97g/5mL	10g/5mL	0.91
A6C1134-06	Soil	NWTPH-Dx	03/30/16 12:15	04/01/16 12:58	11.53g/5mL	10g/5mL	0.87
A6C1134-08	Soil	NWTPH-Dx	03/30/16 13:00	04/01/16 12:58	10.58g/5mL	10g/5mL	0.95
A6C1134-10	Soil	NWTPH-Dx	03/30/16 14:15	04/01/16 12:58	10.57g/5mL	10g/5mL	0.95
A6C1134-12	Soil	NWTPH-Dx	03/30/16 14:16	04/01/16 12:58	11.61g/5mL	10g/5mL	0.86

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6031023							
A6C1134-01	Soil	NWTPH-Gx (MS)	03/30/16 11:00	03/30/16 11:00	5.9g/5mL	5g/5mL	0.85
A6C1134-03	Soil	NWTPH-Gx (MS)	03/30/16 11:40	03/30/16 11:40	5.23g/5mL	5g/5mL	0.96
A6C1134-05	Soil	NWTPH-Gx (MS)	03/30/16 12:15	03/30/16 12:15	5.76g/5mL	5g/5mL	0.87
A6C1134-07	Soil	NWTPH-Gx (MS)	03/30/16 13:00	03/30/16 13:00	5.13g/5mL	5g/5mL	0.98
A6C1134-09	Soil	NWTPH-Gx (MS)	03/30/16 14:15	03/30/16 14:15	5.48g/5mL	5g/5mL	0.91
A6C1134-11	Soil	NWTPH-Gx (MS)	03/30/16 14:16	03/30/16 14:16	5.62g/5mL	5g/5mL	0.89
A6C1134-15	Soil	NWTPH-Gx (MS)	03/30/16 15:30	03/30/16 15:30	5.02g/5mL	5g/5mL	1.00
A6C1134-17	Soil	NWTPH-Gx (MS)	03/30/16 16:00	03/30/16 16:00	5.6g/5mL	5g/5mL	0.89
A6C1134-19	Soil	NWTPH-Gx (MS)	03/30/16 16:10	03/30/16 16:10	5.93g/5mL	5g/5mL	0.84
Batch: 6040011							
A6C1134-13RE1	Soil	NWTPH-Gx (MS)	03/30/16 15:00	03/30/16 15:00	5.22g/5mL	5g/5mL	0.96

BTEX Compounds by EPA 8260B

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6031023							

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

SAMPLE PREPARATION INFORMATION

BTEX Compounds by EPA 8260B

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A6C1134-01	Soil	5035/8260B	03/30/16 11:00	03/30/16 11:00	5.9g/5mL	5g/5mL	0.85
A6C1134-03	Soil	5035/8260B	03/30/16 11:40	03/30/16 11:40	5.23g/5mL	5g/5mL	0.96
A6C1134-05	Soil	5035/8260B	03/30/16 12:15	03/30/16 12:15	5.76g/5mL	5g/5mL	0.87
A6C1134-07	Soil	5035/8260B	03/30/16 13:00	03/30/16 13:00	5.13g/5mL	5g/5mL	0.98
A6C1134-09	Soil	5035/8260B	03/30/16 14:15	03/30/16 14:15	5.48g/5mL	5g/5mL	0.91
A6C1134-11	Soil	5035/8260B	03/30/16 14:16	03/30/16 14:16	5.62g/5mL	5g/5mL	0.89
A6C1134-15	Soil	5035/8260B	03/30/16 15:30	03/30/16 15:30	5.02g/5mL	5g/5mL	1.00
A6C1134-17	Soil	5035/8260B	03/30/16 16:00	03/30/16 16:00	5.6g/5mL	5g/5mL	0.89
A6C1134-19	Soil	5035/8260B	03/30/16 16:10	03/30/16 16:10	5.93g/5mL	5g/5mL	0.84

Batch: 6040011

A6C1134-13RE1	Soil	5035/8260B	03/30/16 15:00	03/30/16 15:00	5.22g/5mL	5g/5mL	0.96
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Volatile Organic Compounds by EPA 8260B

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A6C1134-15	Soil	5035/8260B	03/30/16 15:30	03/30/16 15:30	5.02g/5mL	5g/5mL	1.00

Batch: 6031023

Anions by EPA 300.0/9056A (Ion Chromatography)

Prep: Method Prep: Non-Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A6C1134-02	Soil	EPA 9056A	03/30/16 11:00	04/12/16 12:42	5.0937g/50mL	5g/50mL	0.98
A6C1134-04	Soil	EPA 9056A	03/30/16 11:40	04/12/16 12:42	5.01g/50mL	5g/50mL	1.00
A6C1134-06	Soil	EPA 9056A	03/30/16 12:15	04/12/16 12:42	5.061g/50mL	5g/50mL	0.99
A6C1134-08	Soil	EPA 9056A	03/30/16 13:00	04/12/16 12:42	5.1235g/50mL	5g/50mL	0.98
A6C1134-10	Soil	EPA 9056A	03/30/16 14:15	04/12/16 12:42	5.1169g/50mL	5g/50mL	0.98
A6C1134-12	Soil	EPA 9056A	03/30/16 14:16	04/12/16 12:42	5.1487g/50mL	5g/50mL	0.97
A6C1134-14	Soil	EPA 9056A	03/30/16 15:00	04/12/16 12:42	5.0885g/50mL	5g/50mL	0.98
A6C1134-16	Soil	EPA 9056A	03/30/16 15:30	04/12/16 12:42	5.1233g/50mL	5g/50mL	0.98
A6C1134-18	Soil	EPA 9056A	03/30/16 16:00	04/12/16 12:42	5.0058g/50mL	5g/50mL	1.00
A6C1134-20	Soil	EPA 9056A	03/30/16 16:10	04/12/16 12:42	5.1574g/50mL	5g/50mL	0.97

Cyanide - Total (Non-aqueous)

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Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

SAMPLE PREPARATION INFORMATION

Cyanide - Total (Non-aqueous)

Prep: Method Prep: Non-Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040170							
A6C1134-02	Soil	EPA 9013M/9014	03/30/16 11:00	04/07/16 09:31	2.5703g/50mL	2.5g/50mL	0.97
A6C1134-04	Soil	EPA 9013M/9014	03/30/16 11:40	04/07/16 09:31	2.5745g/50mL	2.5g/50mL	0.97
A6C1134-06	Soil	EPA 9013M/9014	03/30/16 12:15	04/07/16 09:31	2.5575g/50mL	2.5g/50mL	0.98
A6C1134-08	Soil	EPA 9013M/9014	03/30/16 13:00	04/07/16 09:31	2.5076g/50mL	2.5g/50mL	1.00
A6C1134-10	Soil	EPA 9013M/9014	03/30/16 14:15	04/07/16 09:31	2.5381g/50mL	2.5g/50mL	0.99
A6C1134-12	Soil	EPA 9013M/9014	03/30/16 14:16	04/07/16 09:31	2.5235g/50mL	2.5g/50mL	0.99
A6C1134-14	Soil	EPA 9013M/9014	03/30/16 15:00	04/07/16 09:31	2.5403g/50mL	2.5g/50mL	0.98
A6C1134-16	Soil	EPA 9013M/9014	03/30/16 15:30	04/07/16 09:31	2.5554g/50mL	2.5g/50mL	0.98
A6C1134-18	Soil	EPA 9013M/9014	03/30/16 16:00	04/07/16 09:31	2.5227g/50mL	2.5g/50mL	0.99
A6C1134-20	Soil	EPA 9013M/9014	03/30/16 16:10	04/07/16 09:31	2.5508g/50mL	2.5g/50mL	0.98

Semivolatile Organic Compounds by EPA 8270D

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6031018							
A6C1134-02RE1	Soil	EPA 8270D	03/30/16 11:00	03/31/16 14:08	15.25g/2mL	15g/2mL	0.98
A6C1134-04RE1	Soil	EPA 8270D	03/30/16 11:40	03/31/16 14:08	15.43g/2mL	15g/2mL	0.97
A6C1134-06	Soil	EPA 8270D	03/30/16 12:15	03/31/16 14:08	15.46g/2mL	15g/2mL	0.97
A6C1134-08RE1	Soil	EPA 8270D	03/30/16 13:00	03/31/16 14:08	15.33g/2mL	15g/2mL	0.98
A6C1134-10RE1	Soil	EPA 8270D	03/30/16 14:15	03/31/16 14:08	15.41g/2mL	15g/2mL	0.97
A6C1134-12	Soil	EPA 8270D	03/30/16 14:16	03/31/16 14:08	15.43g/2mL	15g/2mL	0.97
A6C1134-14RE1	Soil	EPA 8270D	03/30/16 15:00	03/31/16 14:08	15.36g/2mL	15g/2mL	0.98
A6C1134-16RE1	Soil	EPA 8270D	03/30/16 15:30	03/31/16 14:08	15.29g/2mL	15g/2mL	0.98
A6C1134-18RE1	Soil	EPA 8270D	03/30/16 16:00	03/31/16 14:08	15.16g/2mL	15g/2mL	0.99
A6C1134-20	Soil	EPA 8270D	03/30/16 16:10	03/31/16 14:08	15.25g/2mL	15g/2mL	0.98

Alkylated PAH Homologs by 8270D Modified

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6031018							
A6C1134-02RE1	Soil	GC/MS Scan	03/30/16 11:00	03/31/16 14:08	15.25g/2mL	10g/2mL	0.66
A6C1134-04RE1	Soil	GC/MS Scan	03/30/16 11:40	03/31/16 14:08	15.43g/2mL	10g/2mL	0.65
A6C1134-06	Soil	GC/MS Scan	03/30/16 12:15	03/31/16 14:08	15.46g/2mL	10g/2mL	0.65

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Hahn and Associates

434 NW 6th Ave. Suite 203
 Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

SAMPLE PREPARATION INFORMATION

Alkylated PAH Homologs by 8270D Modified

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A6C1134-08RE1	Soil	GC/MS Scan	03/30/16 13:00	03/31/16 14:08	15.33g/2mL	10g/2mL	0.65
A6C1134-10RE1	Soil	GC/MS Scan	03/30/16 14:15	03/31/16 14:08	15.41g/2mL	10g/2mL	0.65
A6C1134-12	Soil	GC/MS Scan	03/30/16 14:16	03/31/16 14:08	15.43g/2mL	10g/2mL	0.65
A6C1134-14RE1	Soil	GC/MS Scan	03/30/16 15:00	03/31/16 14:08	15.36g/2mL	10g/2mL	0.65
A6C1134-16RE1	Soil	GC/MS Scan	03/30/16 15:30	03/31/16 14:08	15.29g/2mL	10g/2mL	0.65
A6C1134-18RE1	Soil	GC/MS Scan	03/30/16 16:00	03/31/16 14:08	15.16g/2mL	10g/2mL	0.66
A6C1134-20	Soil	GC/MS Scan	03/30/16 16:10	03/31/16 14:08	15.25g/2mL	10g/2mL	0.66

Total Metals by EPA 6020 (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040228							
A6C1134-02	Soil	EPA 6020A	03/30/16 11:00	04/08/16 12:24	0.474g/50mL	0.5g/50mL	1.05
A6C1134-04	Soil	EPA 6020A	03/30/16 11:40	04/08/16 12:24	0.477g/50mL	0.5g/50mL	1.05
A6C1134-06	Soil	EPA 6020A	03/30/16 12:15	04/08/16 12:24	0.482g/50mL	0.5g/50mL	1.04
A6C1134-08	Soil	EPA 6020A	03/30/16 13:00	04/08/16 12:24	0.51g/50mL	0.5g/50mL	0.98
Batch: 6040293							
A6C1134-10	Soil	EPA 6020A	03/30/16 14:15	04/12/16 09:23	0.507g/50mL	0.5g/50mL	0.99
A6C1134-10RE1	Soil	EPA 6020A	03/30/16 14:15	04/12/16 09:23	0.507g/50mL	0.5g/50mL	0.99
A6C1134-12	Soil	EPA 6020A	03/30/16 14:16	04/12/16 09:23	0.489g/50mL	0.5g/50mL	1.02
A6C1134-12RE1	Soil	EPA 6020A	03/30/16 14:16	04/12/16 09:23	0.489g/50mL	0.5g/50mL	1.02
A6C1134-14	Soil	EPA 6020A	03/30/16 15:00	04/12/16 09:23	0.479g/50mL	0.5g/50mL	1.04
A6C1134-14RE1	Soil	EPA 6020A	03/30/16 15:00	04/12/16 09:23	0.479g/50mL	0.5g/50mL	1.04
A6C1134-16	Soil	EPA 6020A	03/30/16 15:30	04/12/16 09:23	0.52g/50mL	0.5g/50mL	0.96
A6C1134-16RE1	Soil	EPA 6020A	03/30/16 15:30	04/12/16 09:23	0.52g/50mL	0.5g/50mL	0.96
A6C1134-18	Soil	EPA 6020A	03/30/16 16:00	04/12/16 09:23	0.467g/50mL	0.5g/50mL	1.07
A6C1134-18RE1	Soil	EPA 6020A	03/30/16 16:00	04/12/16 09:23	0.467g/50mL	0.5g/50mL	1.07
A6C1134-20	Soil	EPA 6020A	03/30/16 16:10	04/12/16 09:23	0.473g/50mL	0.5g/50mL	1.06
A6C1134-20RE1	Soil	EPA 6020A	03/30/16 16:10	04/12/16 09:23	0.473g/50mL	0.5g/50mL	1.06

Conventional Chemistry Parameters

Prep: PSEP TOC

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040240							

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Philip Nerenberg, Lab Director

Hahn and Associates

434 NW 6th Ave. Suite 203
 Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

SAMPLE PREPARATION INFORMATION

Conventional Chemistry Parameters

Prep: PSEP TOC

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A6C1134-02	Soil	SM 5310B MOD	03/30/16 11:00	04/08/16 17:20	5g/5g	5g/5g	NA
A6C1134-04	Soil	SM 5310B MOD	03/30/16 11:40	04/08/16 17:20	5g/5g	5g/5g	NA
A6C1134-06	Soil	SM 5310B MOD	03/30/16 12:15	04/08/16 17:20	5g/5g	5g/5g	NA
A6C1134-08	Soil	SM 5310B MOD	03/30/16 13:00	04/08/16 17:20	5g/5g	5g/5g	NA
A6C1134-10	Soil	SM 5310B MOD	03/30/16 14:15	04/08/16 17:20	5g/5g	5g/5g	NA
A6C1134-12	Soil	SM 5310B MOD	03/30/16 14:16	04/08/16 17:20	5g/5g	5g/5g	NA
A6C1134-14	Soil	SM 5310B MOD	03/30/16 15:00	04/08/16 17:20	5g/5g	5g/5g	NA
A6C1134-16	Soil	SM 5310B MOD	03/30/16 15:30	04/08/16 17:20	5g/5g	5g/5g	NA
A6C1134-18	Soil	SM 5310B MOD	03/30/16 16:00	04/08/16 17:20	5g/5g	5g/5g	NA
A6C1134-20	Soil	SM 5310B MOD	03/30/16 16:10	04/08/16 17:20	5g/5g	5g/5g	NA

Ammonia by UV Digestion/Gas Diffusion/Colorimetric Detection

Prep: Method Prep: Non-Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040053							
A6C1134-20	Soil	SM4500-NH3 Mod	03/30/16 16:10	04/04/16 10:05	5.4784g/50mL	5g/50mL	0.91
Batch: 6040054							
A6C1134-02	Soil	SM4500-NH3 Mod	03/30/16 11:00	04/04/16 10:09	5.2756g/50mL	5g/50mL	0.95
A6C1134-04	Soil	SM4500-NH3 Mod	03/30/16 11:40	04/04/16 10:09	5.2144g/50mL	5g/50mL	0.96
A6C1134-06	Soil	SM4500-NH3 Mod	03/30/16 12:15	04/04/16 10:09	5.7804g/50mL	5g/50mL	0.87
A6C1134-08	Soil	SM4500-NH3 Mod	03/30/16 13:00	04/04/16 10:09	5.054g/50mL	5g/50mL	0.99
A6C1134-10	Soil	SM4500-NH3 Mod	03/30/16 14:15	04/04/16 10:09	5.844g/50mL	5g/50mL	0.86
A6C1134-12	Soil	SM4500-NH3 Mod	03/30/16 14:16	04/04/16 10:09	5.787g/50mL	5g/50mL	0.86
A6C1134-14	Soil	SM4500-NH3 Mod	03/30/16 15:00	04/04/16 10:09	5.6743g/50mL	5g/50mL	0.88
A6C1134-16	Soil	SM4500-NH3 Mod	03/30/16 15:30	04/04/16 10:09	5.7788g/50mL	5g/50mL	0.87
A6C1134-18	Soil	SM4500-NH3 Mod	03/30/16 16:00	04/04/16 10:09	5.6246g/50mL	5g/50mL	0.89

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040032							
A6C1134-02	Soil	EPA 8000C	03/30/16 11:00	04/01/16 13:25	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-04	Soil	EPA 8000C	03/30/16 11:40	04/01/16 13:25	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-06	Soil	EPA 8000C	03/30/16 12:15	04/01/16 13:25	1N/A/1N/A	1N/A/1N/A	NA

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434 NW 6th Ave. Suite 203
 Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
 Project Manager: Rob Ede

Reported:

05/05/16 22:28

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A6C1134-08	Soil	EPA 8000C	03/30/16 13:00	04/01/16 13:25	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-10	Soil	EPA 8000C	03/30/16 14:15	04/01/16 13:25	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-12	Soil	EPA 8000C	03/30/16 14:16	04/01/16 13:25	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-14	Soil	EPA 8000C	03/30/16 15:00	04/01/16 13:25	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-16	Soil	EPA 8000C	03/30/16 15:30	04/01/16 13:25	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-18	Soil	EPA 8000C	03/30/16 16:00	04/01/16 13:25	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-20	Soil	EPA 8000C	03/30/16 16:10	04/01/16 13:25	1N/A/1N/A	1N/A/1N/A	NA
Batch: 6040069							
A6C1134-01	Soil	EPA 8000C	03/30/16 11:00	04/04/16 14:18	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-03	Soil	EPA 8000C	03/30/16 11:40	04/04/16 14:18	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-05	Soil	EPA 8000C	03/30/16 12:15	04/04/16 14:18	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-07	Soil	EPA 8000C	03/30/16 13:00	04/04/16 14:18	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-09	Soil	EPA 8000C	03/30/16 14:15	04/04/16 14:18	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-11	Soil	EPA 8000C	03/30/16 14:16	04/04/16 14:18	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-13	Soil	EPA 8000C	03/30/16 15:00	04/04/16 14:18	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-15	Soil	EPA 8000C	03/30/16 15:30	04/04/16 14:18	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-17	Soil	EPA 8000C	03/30/16 16:00	04/04/16 14:18	1N/A/1N/A	1N/A/1N/A	NA
A6C1134-19	Soil	EPA 8000C	03/30/16 16:10	04/04/16 14:18	1N/A/1N/A	1N/A/1N/A	NA



Hahn and Associates

434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:

05/05/16 22:28

Notes and Definitions

Qualifiers:

- A-01 % solids data copied from corresponding even numbered sample IDs to allow dry wt. correction of 5035 Gx analysis.
- F-03 The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.
- J Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-02 Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
- Q-01 Spike recovery and/or RPD is outside acceptance limits.
- Q-03 Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-16 Reanalysis of an original Batch QC sample.
- Q-29 Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.
- Q-41 Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
- R-02 The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- V-09 Pending WMS Correction of Matrix Spike Amount.

Notes and Conventions:

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
- RPD Relative Percent Difference
- MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
- WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
- Batch QC Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
- Blank Policy Apex assesses blank data for potential high bias down to a level equal to 1/2 the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses.

For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor.

Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.

Apex Laboratories

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Philip Nerenberg, Lab Director

Hahn and Associates

434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**

Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

--- QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

*** Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).



Hahn and Associates
434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**
Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

A61134

Hahn and Associates, Inc. Environmental Management 434 NW 6th Avenue, Suite 203 - Portland, OR 97209 (503) 786-0717 - Fax: (503) 227-2299		Apex Laboratories Tigard, Oregon Lab Project No.																																																																																																																																																																																																																																																																																																									
Project Manager: Rob Ede Project No: 5237-10dc Project Name: Siltronic RI - Doane Creek Collected by: Ben Uhl / Jane Kern	Samples Received at 4°C (Y or N) Appropriate Containers Used (Y or N) Provide Preliminary Results.	Analytes to be Performed																																																																																																																																																																																																																																																																																																									
Sample Number Prefix: 5237-160330-DC - Analyte EDD and Full Data Validation Package - Target MDLs as per Philip N. - Metals = aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, copper, iron, lead, magnesium, manganese, mercury, nickel, potassium, selenium, sodium, silver, thallium, vanadium, zinc 3 day turn around time for Dr. Gx+BTEX	Liquid with Sediment Sample Multi-Phase Sample Test Selected: _____ Test Sensitivity: _____ Test Date: _____ Test Time: _____ Test Location: _____ Test Operator: _____	VOCs by EPA Method 8220B VPH by NWTFH-VPH EPH by NWTFH-EPH TPH-Gx+BTEX Diesel and Oil-Range TPH by NWTFH-DX Metals by EPA Method 8020 Thiocyanate by SM 4500 mod Total Cyanide by EPA Method 9014 Ammonia by SM 4500 mod Sulfate by EPA Method 9056 Sulfide by EPA Method 3762 mod TOC by EPA Method 5310 Soot Carbon by EPA Method 9050 mod LL PAHs and Homologs by EPA Method 8270D/8270D-M SVOCs (Full List) by EPA Method 8270D Number of Containers: _____ Water: _____ Other: _____	Remarks RUSH																																																																																																																																																																																																																																																																																																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Lab ID</th> <th>Sample #</th> <th>Date</th> <th>Time</th> <th>Sample Description</th> <th>Matrix</th> <th>Number of Containers</th> <th>SVOCs (Full List) by EPA Method 8270D</th> <th>LL PAHs and Homologs by EPA Method 8270D/8270D-M</th> <th>Soot Carbon by EPA Method 9050 mod</th> <th>TOC by EPA Method 5310</th> <th>Sulfide by EPA Method 3762 mod</th> <th>Sulfate by EPA Method 9056</th> <th>Ammonia by SM 4500 mod</th> <th>Total Cyanide by EPA Method 9014</th> <th>Thiocyanate by SM 4500 mod</th> <th>Metals by EPA Method 8020</th> <th>Diesel and Oil-Range TPH by NWTFH-DX</th> <th>TPH-Gx+BTEX</th> <th>EPH by NWTFH-EPH</th> <th>VPH by NWTFH-VPH</th> <th>VOCs by EPA Method 8220B</th> </tr> </thead> <tbody> <tr> <td></td> <td>EMB033G</td> <td>30-Mar-16</td> <td>11:00</td> <td>Soil Embankment (2.5')</td> <td>Soil</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>EMB033</td> <td>30-Mar-16</td> <td>11:00</td> <td>Soil Embankment (0-3.5')</td> <td>Soil</td> <td>5</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>EMB033G</td> <td>30-Mar-16</td> <td>11:40</td> <td>Soil Embankment (1.5')</td> <td>Soil</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>EMB032</td> <td>30-Mar-16</td> <td>11:40</td> <td>Soil Embankment (0-3.5')</td> <td>Soil</td> <td>5</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>EMB029G</td> <td>30-Mar-16</td> <td>12:15</td> <td>Soil Embankment (2.5')</td> <td>Soil</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>EMB029</td> <td>30-Mar-16</td> <td>12:15</td> <td>Soil Embankment (0-3.5')</td> <td>Soil</td> <td>5</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>EMB028G</td> <td>30-Mar-16</td> <td>13:00</td> <td>Soil Embankment (2.0')</td> <td>Soil</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>EMB028</td> <td>30-Mar-16</td> <td>13:00</td> <td>Soil Embankment (0-3.5')</td> <td>Soil</td> <td>5</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>EMB056G</td> <td>30-Mar-16</td> <td>14:15</td> <td>Soil Embankment (1.5')</td> <td>Soil</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>EMB056</td> <td>30-Mar-16</td> <td>14:15</td> <td>Soil Embankment (0-3.5')</td> <td>Soil</td> <td>5</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>EMB055G</td> <td>30-Mar-16</td> <td>14:16</td> <td>Soil Embankment (1.5')</td> <td>Soil</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>EMB055</td> <td>30-Mar-16</td> <td>14:16</td> <td>Soil Embankment (0-3.5')</td> <td>Soil</td> <td>5</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>	Lab ID	Sample #	Date	Time	Sample Description	Matrix	Number of Containers	SVOCs (Full List) by EPA Method 8270D	LL PAHs and Homologs by EPA Method 8270D/8270D-M	Soot Carbon by EPA Method 9050 mod	TOC by EPA Method 5310	Sulfide by EPA Method 3762 mod	Sulfate by EPA Method 9056	Ammonia by SM 4500 mod	Total Cyanide by EPA Method 9014	Thiocyanate by SM 4500 mod	Metals by EPA Method 8020	Diesel and Oil-Range TPH by NWTFH-DX	TPH-Gx+BTEX	EPH by NWTFH-EPH	VPH by NWTFH-VPH	VOCs by EPA Method 8220B		EMB033G	30-Mar-16	11:00	Soil Embankment (2.5')	Soil	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		EMB033	30-Mar-16	11:00	Soil Embankment (0-3.5')	Soil	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		EMB033G	30-Mar-16	11:40	Soil Embankment (1.5')	Soil	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		EMB032	30-Mar-16	11:40	Soil Embankment (0-3.5')	Soil	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		EMB029G	30-Mar-16	12:15	Soil Embankment (2.5')	Soil	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		EMB029	30-Mar-16	12:15	Soil Embankment (0-3.5')	Soil	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		EMB028G	30-Mar-16	13:00	Soil Embankment (2.0')	Soil	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		EMB028	30-Mar-16	13:00	Soil Embankment (0-3.5')	Soil	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		EMB056G	30-Mar-16	14:15	Soil Embankment (1.5')	Soil	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		EMB056	30-Mar-16	14:15	Soil Embankment (0-3.5')	Soil	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		EMB055G	30-Mar-16	14:16	Soil Embankment (1.5')	Soil	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		EMB055	30-Mar-16	14:16	Soil Embankment (0-3.5')	Soil	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Received by: <i>[Signature]</i> Received by: <i>[Signature]</i> Received by: <i>[Signature]</i> Received by: <i>[Signature]</i>
Lab ID	Sample #	Date	Time	Sample Description	Matrix	Number of Containers	SVOCs (Full List) by EPA Method 8270D	LL PAHs and Homologs by EPA Method 8270D/8270D-M	Soot Carbon by EPA Method 9050 mod	TOC by EPA Method 5310	Sulfide by EPA Method 3762 mod	Sulfate by EPA Method 9056	Ammonia by SM 4500 mod	Total Cyanide by EPA Method 9014	Thiocyanate by SM 4500 mod	Metals by EPA Method 8020	Diesel and Oil-Range TPH by NWTFH-DX	TPH-Gx+BTEX	EPH by NWTFH-EPH	VPH by NWTFH-VPH	VOCs by EPA Method 8220B																																																																																																																																																																																																																																																																																						
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Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Hahn and Associates
434 NW 6th Ave. Suite 203
Portland, OR 97209

Project: **Siltronic RI-Doane Creek**
Project Number: 5237-10dc
Project Manager: Rob Ede

Reported:
05/05/16 22:28

Handwritten: Acl 1134

Laboratory		APEX Laboratories		Tigard, Oregon																		
Hahn and Associates, Inc.		Environmental Management		434 NW 6th Avenue, Suite 203 - Portland, OR 97209																		
Project Manager		Rob Ede		Lab Project No.																		
Project No.		5237-10dc		Liquid with Sediment Sample																		
Project Name		Siltronic RI - Doane Creek		Multi-Phase Sample																		
Collected by		Ben Lhl / Jane Kerin		Test Date (month)																		
Sample Number Prefix: 5237-160330-DC		Anchor EDD and Full Data Validation Package		Test Date (year)																		
Target MDLs as per Philip N.		Metals = aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, copper, iron, lead, magnesium, manganese, mercury, molybdenum, selenium, sodium, silver, strontium, vanadium, zinc		Test Date (month)																		
3 day turn around time for D4, G4+BTEX				Test Date (year)																		
Lab ID	Sample #	Date	Time	Sample Description	Matrix	Number of Containers	SVOCA (Full List) by EPA Method 8270D	LL PAKS and Homologs by EPA Method 8270D/8270D-M	Soot Carbon by EPA Method 9060 mod	TOC by EPA Method 5310	Sulfate by EPA Method 378.2 mod	Sulfate by EPA Method 9056	Ammonia by SM 4500 mod	Total Cyanide by EPA Method 9014	Thiocyanate by SM 4500 mod	Metals by EPA Method 6020	Diesel and Oil-Range TPH by NWTPH-DX	TPH-G4+BTEX	EPH by NWTPH-EPH	VPH by NWTPH-VPH	VOCs by EPA Method 8260B	Remarks
	EMB051G	30-Mar-16	15:00	Soil Embankment (1.5')	Soil	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	RUSH
	EMB051	30-Mar-16	15:00	Soil Embankment (0-3.5')	Soil	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	EMB050G	30-Mar-16	15:30	Soil Embankment (1.5')	Soil	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	EMB050	30-Mar-16	15:30	Soil Embankment (0-3.5')	Soil	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	EMB050G	30-Mar-16	15:00	Soil Embankment (1.5')	Soil	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	EMB050S	30-Mar-16	15:00	Soil Embankment (0-3.5')	Soil	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	EMB050GD	30-Mar-16	15:10	Soil Embankment (1.5')	Soil	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	EMB050D	30-Mar-16	15:10	Soil Embankment (0-3.5')	Soil	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Apex Laboratories

Handwritten Signature: Philip Nerenberg

Philip Nerenberg, Lab Director

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