RETURN TO SER AR INDEX

ESI

EnviroSystems, Inc.
One Lafayette Road
P.O. Box 778
Hampton, N.H. 03843-0778
p 603 926 3345 · f 603 926 3521
envirosystems.com

Chet Myers
Apex Companies LLC
184 High Street
Suite 502
Boston, MA 02110

PO Number:	None
Report Number:	20488
Date Received:	12/08/10
Date Reported:	12/20/10

Project: PHASE IV 6690.008

Attached please find results for analyses performed on samples received on 12/08/10 at 0940.

Samples were received in acceptable condition and under chain of custody.

Instruments used in analysis were calibrated with the appropriate frequency and to the specifications of the referenced methods.

Analytes in blanks were below levels affecting sample results.

Matrix effects as monitored by matrix spike recovery or unusual physical properties were not apparent except that levels of PCBs in the samples required dilution of the extracts. Some spiked analyte recoveries were affected by the dilution and are reported for advisory purposes only. The sample data were not qualified.

Samples contained a complex mixture of PCB's. Congeners characteristic of Aroclors 1242, 1248, 1254 and 1260 were present but no individual Aroclor was clearly distinguishable. Total PCB by summation has been reported.

Accuracy and precision as monitored by laboratory control sample analyses were within acceptance limits.

GCMS SIM chromatograms for samples and Aroclors 1242, 1248, 1254 and 1260 have been included.

EnviroSystems, Incorporated

Russell Tesler

Date 12/21/10

Authorized
Signature

Attachment
Report

SDMS Doc ID 70004600

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	20488-001
Sample Designation:	FLOU-MIT 1
Date Sampled:	12/07/10 1122
Date Extracted:	12/08/10
Date Analyzed:	12/18/10
Matrix:	Solid
Moisture (%):	57
Sample Amount (g):	20
Final Volume (mL)	1.0
Dilution Factor:	10

Congener Number	PCB Congener		Concentration (ug/Kg)	Qualifier
8	2,4'-dichlorobiphenyl	*	41	
18	2,2',5-trichlorobiphenyl	*	18	
28	2,4,4'-trichlorobiphenyl	*	140	
44	2,2',3,5'-tetrachlorobiphenyl	*	31	
49	2,2',4,5'-tetrachlorobiphenyl	*	100	
52	2,2',5,5'-tetrachlorobiphenyl	*	150	
66	2,3',4,4'-tetrachlorobiphenyl	*	75	
87	2,2',3,4,5'-pentachlorobiphenyl		42	
101	2,2',4,5,5'-pentachlorobiphenyl	*	120	
105	2,3,3',4,4'-pentachlorobiphenyl		41	
118	2,3',4,4',5-pentachlorobiphenyl	*	150	
128	2,2',3,3',4,4'-hexachlorobiphenyl	*	21	
138	2,2',3,4,4',5'-hexachlorobiphenyl	*	120	
153	2,2',4,4',5,5'-hexachlorobiphenyl	*	92	
170	2,2',3,3',4,4',5-heptachlorobiphenyl	*	13	
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	*	14	
183	2,2',3,4,4',5',6-heptachlorobiphenyl		6	
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	*	2.3	U
187	2,2',3,4',5,5',6-heptachlorobiphenyl	*	13	
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	*	2.3	U
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	*	2.3	U
209	2,2',3,3',4,4',5,5',6,6'-decachlorobiphenyl	*	2.3	U

Summation multiplied by 2 2203

Surrogate Standard	Recovery (%)	Advisory Limits (%)
PCB 198	85	30 - 150

U = Not detected at value reported
* denotes analyte included in summation

ESI

EnviroSystems, Inc. One Lafayette Road Hampton, NH 03843-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	20488-002
Sample Designation:	FLOU-MIT 2
Date Sampled:	12/07/10 1137
Date Extracted:	12/08/10
Date Analyzed:	12/18/10
Matrix:	Solid
Moisture (%):	64
Sample Amount (g):	20
Final Volume (mL)	1.0
Dilution Factor:	10

Congener Number	PCB Congener		Concentration (ug/Kg)	Qualifier
8	2,4'-dichlorobiphenyl	*	49	
18	2,2',5-trichlorobiphenyl	*	22	
28	2,4,4'-trichlorobiphenyl	*	130	
44	2,2',3,5'-tetrachlorobiphenyl	*	37	
49	2,2',4,5'-tetrachlorobiphenyl	*	130	
52	2,2',5,5'-tetrachlorobiphenyl	*	190	
66	2,3',4,4'-tetrachlorobiphenyl	*	100	
87	2,2',3,4,5'-pentachlorobiphenyl		48	
101	2,2',4,5,5'-pentachlorobiphenyl	*	160	
105	2,3,3',4,4'-pentachlorobiphenyl		58	
118	2,3',4,4',5-pentachlorobiphenyl	*	200	
128	2,2',3,3',4,4'-hexachlorobiphenyl	*	32	
138	2,2',3,4,4',5'-hexachlorobiphenyl	*	160	
153	2,2',4,4',5,5'-hexachlorobiphenyl	*	120	
170	2,2',3,3',4,4',5-heptachlorobiphenyl	*	18	
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	*	19	
183	2,2',3,4,4',5',6-heptachlorobiphenyl		6.5	
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	*	1.4	U
187	2,2',3,4',5,5',6-heptachlorobiphenyl	*	19	
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	*	1.4	U
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	*	2	
209	2,2',3,3',4,4',5,5',6,6'-decachlorobiphenyl	*	1.4	U

Summation multiplied by 2 2785

Surrogate Standard	Recovery (%)	Advisory Limits (%)
PCB 198	92	30 - 150

U = Not detected at value reported
* denotes analyte included in summation

ESI

EnviroSystems, Inc. One Lafayette Road Hampton, NH 03843-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	20488-003
Sample Designation:	FLOU-MIT 3
Date Sampled:	12/07/10 1159
Date Extracted:	12/08/10
Date Analyzed:	12/18/10
Matrix:	Solid
Moisture (%):	66
Sample Amount (g):	20
Final Volume (mL)	1.0
Dilution Factor:	10

Congener Number	PCB Congener		Concentration (ug/Kg)	Qualifier
8	2,4'-dichlorobiphenyl	*	40	
18	2,2',5-trichlorobiphenyl	*	20	
28	2,4,4'-trichlorobiphenyl	*	120	
44	2,2',3,5'-tetrachlorobiphenyl	*	31	
49	2,2',4,5'-tetrachlorobiphenyl	*	110	
52	2,2',5,5'-tetrachlorobiphenyl	*	150	
66	2,3',4,4'-tetrachlorobiphenyl	*	90	
87	2,2',3,4,5'-pentachlorobiphenyl		49	
101	2,2',4,5,5'-pentachlorobiphenyl	*	140	
105	2,3,3',4,4'-pentachlorobiphenyl		53	
118	2,3',4,4',5-pentachlorobiphenyl	*	170	
128	2,2',3,3',4,4'-hexachlorobiphenyl	*	39	
138	2,2',3,4,4',5'-hexachlorobiphenyl	*	150	
153	2,2',4,4',5,5'-hexachlorobiphenyl	*	110	
170	2,2',3,3',4,4',5-heptachlorobiphenyl	*	16	
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	*	18	
183	2,2',3,4,4',5',6-heptachlorobiphenyl		7.1	
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	*	1.5	U
187	2,2',3,4',5,5',6-heptachlorobiphenyl	*	17	
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	*	1.5	U
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	*	1.5	U
209	2,2',3,3',4,4',5,5',6,6'-decachlorobiphenyl	*	1.5	U

Summation multiplied by 2 2475

Surrogate Standard	Recovery (%)	Advisory Limits (%)
PCB 198	92	30 - 150

U = Not detected at value reported
* denotes analyte included in summation

ESI
EnviroSystems, Inc. One Lafayette Road Hampton, NH 03843-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	20488-004
Sample Designation:	FLOU-MIT 4
Date Sampled:	12/07/10 1224
Date Extracted:	12/08/10
Date Analyzed:	12/18/10
Matrix:	Solid
Moisture (%):	62
Sample Amount (g):	20
Final Volume (mL)	1.0
Dilution Factor:	10

Congener Number	PCB Congener		Concentration (ug/Kg)	Qualifier
8	2,4'-dichlorobiphenyl	*	31	
18	2,2',5-trichlorobiphenyl	*	13	
28	2,4,4'-trichlorobiphenyl	*	74	
44	2,2',3,5'-tetrachlorobiphenyl	*	23	
49	2,2',4,5'-tetrachlorobiphenyl	*	68	
52	2,2',5,5'-tetrachlorobiphenyl	*	100	
66	2,3',4,4'-tetrachlorobiphenyl	*	58	
87	2,2',3,4,5'-pentachlorobiphenyl		37	
101	2,2',4,5,5'-pentachlorobiphenyl	*	100	
105	2,3,3',4,4'-pentachlorobiphenyl		39	
118	2,3',4,4',5-pentachlorobiphenyl	*	130	
128	2,2',3,3',4,4'-hexachlorobiphenyl	*	29	
138	2,2',3,4,4',5'-hexachlorobiphenyl	*	130	
153	2,2',4,4',5,5'-hexachlorobiphenyl	*	81	
170	2,2',3,3',4,4',5-heptachlorobiphenyl	*	12	
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	*	14	
183	2,2',3,4,4',5',6-heptachlorobiphenyl		4.5	
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	*	1.3	U
187	2,2',3,4',5,5',6-heptachlorobiphenyl	*	14	
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	*	1.3	U
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	*	1.3	U
209	2,2',3,3',4,4',5,5',6,6'-decachlorobiphenyl	*	1.3	U

Summation multiplied by 2 1785

Surrogate Standard	Recovery (%)	Advisory Limits (%)
PCB 198	105	30 - 150

U = Not detected at value reported
* denotes analyte included in summation

ESI
EnviroSystems, Inc. One Lafayette Road Hampton, NH 03843-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	20488-005
Sample Designation:	FLOU-MIT 5
Date Sampled:	12/07/10 1248
Date Extracted:	12/08/10
Date Analyzed:	12/18/10
Matrix:	Solid
Moisture (%):	66
Sample Amount (g):	20
Final Volume (mL)	1.0
Dilution Factor:	15

Congener Number	PCB Congener		Concentration (ug/Kg)	Qualifier
8	2,4'-dichlorobiphenyl	*	69	
18	2,2',5-trichlorobiphenyl	*	36	
28	2,4,4'-trichlorobiphenyl	*	180	
44	2,2',3,5'-tetrachlorobiphenyl	*	53	
49	2,2',4,5'-tetrachlorobiphenyl	*	150	
52	2,2',5,5'-tetrachlorobiphenyl	*	240	
66	2,3',4,4'-tetrachlorobiphenyl	*	140	
87	2,2',3,4,5'-pentachlorobiphenyl		91	
101	2,2',4,5,5'-pentachlorobiphenyl	*	220	
105	2,3,3',4,4'-pentachlorobiphenyl		74	
118	2,3',4,4',5-pentachlorobiphenyl	*	270	
128	2,2',3,3',4,4'-hexachlorobiphenyl	*	44	
138	2,2',3,4,4',5'-hexachlorobiphenyl	*	230	
153	2,2',4,4',5,5'-hexachlorobiphenyl	*	160	
170	2,2',3,3',4,4',5-heptachlorobiphenyl	*	26	
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	*	28	
183	2,2',3,4,4',5',6-heptachlorobiphenyl		10	
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	*	2.2	U
187	2,2',3,4',5,5',6-heptachlorobiphenyl	*	24	
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	*	2.2	U
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	*	2.2	U
209	2,2',3,3',4,4',5,5',6,6'-decachlorobiphenyl	*	2.2	U

Summation multiplied by 2 3789

Surrogate Standard	Recovery (%)	Advisory Limits (%)
PCB 198	102	30 - 150

U = Not detected at value reported
* denotes analyte included in summation

ESI
EnviroSystems, Inc. One Lafayette Road Hampton, NH 03843-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	20488-006
Sample Designation:	FLOU-MIT 6
Date Sampled:	12/07/10 1306
Date Extracted:	12/08/10
Date Analyzed:	12/18/10
Matrix:	Solid
Moisture (%):	61
Sample Amount (g):	20
Final Volume (mL)	1.0
Dilution Factor:	15

Congener Number	PCB Congener		Concentration (ug/Kg)	Qualifier
8	2,4'-dichlorobiphenyl	*	120	
18	2,2',5-trichlorobiphenyl	*	46	
28	2,4,4'-trichlorobiphenyl	*	180	
44	2,2',3,5'-tetrachlorobiphenyl	*	70	
49	2,2',4,5'-tetrachlorobiphenyl	*	170	
52	2,2',5,5'-tetrachlorobiphenyl	*	260	
66	2,3',4,4'-tetrachlorobiphenyl	*	160	
87	2,2',3,4,5'-pentachlorobiphenyl		110	
101	2,2',4,5,5'-pentachlorobiphenyl	*	230	
105	2,3,3',4,4'-pentachlorobiphenyl		83	
118	2,3',4,4',5-pentachlorobiphenyl	*	260	
128	2,2',3,3',4,4'-hexachlorobiphenyl	*	61	
138	2,2',3,4,4',5'-hexachlorobiphenyl	*	240	
153	2,2',4,4',5,5'-hexachlorobiphenyl	*	150	
170	2,2',3,3',4,4',5-heptachlorobiphenyl	*	26	
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	*	28	
183	2,2',3,4,4',5',6-heptachlorobiphenyl		11	
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	*	1.9	U
187	2,2',3,4',5,5',6-heptachlorobiphenyl	*	22	
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	*	2.4	
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	*	1.9	U
209	2,2',3,3',4,4',5,5',6,6'-decachlorobiphenyl	*	1.9	U

Summation multiplied by 2 4066

Surrogate Standard	Recovery (%)	Advisory Limits (%)
PCB 198	102	30 - 150

U = Not detected at value reported
* denotes analyte included in summation

ESI
EnviroSystems, Inc. One Lafayette Road Hampton, NH 03843-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	20488-007
Sample Designation:	FLOU-MIT 7
Date Sampled:	12/07/10 1333
Date Extracted:	12/08/10
Date Analyzed:	12/18/10
Matrix:	Solid
Moisture (%):	49
Sample Amount (g):	20
Final Volume (mL)	1.0
Dilution Factor:	80

Congener Number	PCB Congener		Concentration (ug/Kg)	Qualifier
8	2,4'-dichlorobiphenyl	*	67	
18	2,2',5-trichlorobiphenyl	*	59	
28	2,4,4'-trichlorobiphenyl	*	84	
44	2,2',3,5'-tetrachlorobiphenyl	*	140	
49	2,2',4,5'-tetrachlorobiphenyl	*	220	
52	2,2',5,5'-tetrachlorobiphenyl	*	500	
66	2,3',4,4'-tetrachlorobiphenyl	*	120	
87	2,2',3,4,5'-pentachlorobiphenyl		380	
101	2,2',4,5,5'-pentachlorobiphenyl	*	700	
105	2,3,3',4,4'-pentachlorobiphenyl		250	
118	2,3',4,4',5-pentachlorobiphenyl	*	610	
128	2,2',3,3',4,4'-hexachlorobiphenyl	*	180	
138	2,2',3,4,4',5'-hexachlorobiphenyl	*	770	
153	2,2',4,4',5,5'-hexachlorobiphenyl	*	380	
170	2,2',3,3',4,4',5-heptachlorobiphenyl	*	77	
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	*	81	
183	2,2',3,4,4',5',6-heptachlorobiphenyl		34	
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	*	7.9	U
187	2,2',3,4',5,5',6-heptachlorobiphenyl	*	49	
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	*	7.9	U
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	*	7.9	U
209	2,2',3,3',4,4',5,5',6,6'-decachlorobiphenyl	*	7.9	U

Summation multiplied by 2 8238

Surrogate Standard	Recovery (%)	Advisory Limits (%)
PCB 198	108	30 - 150

U = Not detected at value reported
* denotes analyte included in summation

ESI
EnviroSystems, Inc. One Lafayette Road Hampton, NH 03843-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	20488-008
Sample Designation:	FLOU-MIT 8
Date Sampled:	12/07/10 1357
Date Extracted:	12/08/10
Date Analyzed:	12/18/10
Matrix:	Solid
Moisture (%):	56
Sample Amount (g):	20
Final Volume (mL)	1.0
Dilution Factor:	15

Congener Number	PCB Congener		Concentration (ug/Kg)	Qualifier
8	2,4'-dichlorobiphenyl	*	120	
18	2,2',5-trichlorobiphenyl	*	44	
28	2,4,4'-trichlorobiphenyl	*	240	
44	2,2',3,5'-tetrachlorobiphenyl	*	64	
49	2,2',4,5'-tetrachlorobiphenyl	*	160	
52	2,2',5,5'-tetrachlorobiphenyl	*	250	
66	2,3',4,4'-tetrachlorobiphenyl	*	160	
87	2,2',3,4,5'-pentachlorobiphenyl		100	
101	2,2',4,5,5'-pentachlorobiphenyl	*	230	
105	2,3,3',4,4'-pentachlorobiphenyl		96	
118	2,3',4,4',5-pentachlorobiphenyl	*	270	
128	2,2',3,3',4,4'-hexachlorobiphenyl	*	70	
138	2,2',3,4,4',5'-hexachlorobiphenyl	*	240	
153	2,2',4,4',5,5'-hexachlorobiphenyl	*	150	
170	2,2',3,3',4,4',5-heptachlorobiphenyl	*	25	
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	*	28	
183	2,2',3,4,4',5',6-heptachlorobiphenyl		12	
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	*	1.7	U
187	2,2',3,4',5,5',6-heptachlorobiphenyl	*	24	
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	*	2.2	
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	*	2.3	
209	2,2',3,3',4,4',5,5',6,6'-decachlorobiphenyl	*	1.7	U

Summation multiplied by 2 4184

Surrogate Standard	Recovery (%)	Advisory Limits (%)
PCB 198	116	30 - 150

U = Not detected at value reported
* denotes analyte included in summation

ESI
EnviroSystems, Inc. One Lafayette Road Hampton, NH 03843-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	20488-009
Sample Designation:	FLOU-MIT 9
Date Sampled:	12/07/10 1426
Date Extracted:	12/08/10
Date Analyzed:	12/18/10
Matrix:	Solid
Moisture (%):	55
Sample Amount (g):	20
Final Volume (mL)	1.0
Dilution Factor:	15

Congener Number	PCB Congener		Concentration (ug/Kg)	Qualifier
8	2,4'-dichlorobiphenyl	*	100	
18	2,2',5-trichlorobiphenyl	*	45	
28	2,4,4'-trichlorobiphenyl	*	210	
44	2,2',3,5'-tetrachlorobiphenyl	*	85	
49	2,2',4,5'-tetrachlorobiphenyl	*	170	
52	2,2',5,5'-tetrachlorobiphenyl	*	330	
66	2,3',4,4'-tetrachlorobiphenyl	*	160	
87	2,2',3,4,5'-pentachlorobiphenyl		140	
101	2,2',4,5,5'-pentachlorobiphenyl	*	290	
105	2,3,3',4,4'-pentachlorobiphenyl		100	
118	2,3',4,4',5-pentachlorobiphenyl	*	320	
128	2,2',3,3',4,4'-hexachlorobiphenyl	*	87	
138	2,2',3,4,4',5'-hexachlorobiphenyl	*	310	
153	2,2',4,4',5,5'-hexachlorobiphenyl	*	190	
170	2,2',3,3',4,4',5-heptachlorobiphenyl	*	31	
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	*	33	
183	2,2',3,4,4',5',6-heptachlorobiphenyl		13	
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	*	1.7	U
187	2,2',3,4',5,5',6-heptachlorobiphenyl	*	28	
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	*	2.2	
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	*	2.5	
209	2,2',3,3',4,4',5,5',6,6'-decachlorobiphenyl	*	1.7	U

Summation multiplied by 2 4835

Surrogate Standard	Recovery (%)	Advisory Limits (%)
PCB 198	144	30 - 150

U = Not detected at value reported
* denotes analyte included in summation

ESI
EnviroSystems, Inc. One Lafayette Road Hampton, NH 03843-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	20488-010
Sample Designation:	FLOU-MIT 10
Date Sampled:	12/07/10 1451
Date Extracted:	12/08/10
Date Analyzed:	12/18/10
Matrix:	Solid
Moisture (%):	57
Sample Amount (g):	20
Final Volume (mL)	1.0
Dilution Factor:	8

Congener Number	PCB Congener		Concentration (ug/Kg)	Qualifier
8	2,4'-dichlorobiphenyl	*	24	
18	2,2',5-trichlorobiphenyl	*	11	
28	2,4,4'-trichlorobiphenyl	*	73	
44	2,2',3,5'-tetrachlorobiphenyl	*	17	
49	2,2',4,5'-tetrachlorobiphenyl	*	45	
52	2,2',5,5'-tetrachlorobiphenyl	*	76	
66	2,3',4,4'-tetrachlorobiphenyl	*	47	
87	2,2',3,4,5'-pentachlorobiphenyl		29	
101	2,2',4,5,5'-pentachlorobiphenyl	*	73	
105	2,3,3',4,4'-pentachlorobiphenyl		31	
118	2,3',4,4',5-pentachlorobiphenyl	*	100	
128	2,2',3,3',4,4'-hexachlorobiphenyl	*	24	
138	2,2',3,4,4',5'-hexachlorobiphenyl	*	87	
153	2,2',4,4',5,5'-hexachlorobiphenyl	*	57	
170	2,2',3,3',4,4',5-heptachlorobiphenyl	*	9	
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	*	10	
183	2,2',3,4,4',5',6-heptachlorobiphenyl		3.5	
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	*	0.94	U
187	2,2',3,4',5,5',6-heptachlorobiphenyl	*	9	
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	*	0.94	U
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	*	0.94	U
209	2,2',3,3',4,4',5,5',6,6'-decachlorobiphenyl	*	0.94	U

Summation multiplied by 2 1336

Surrogate Standard	Recovery (%)	Advisory Limits (%)
PCB 198	91	30 - 150

U = Not detected at value reported
* denotes analyte included in summation

ESI

EnviroSystems, Inc. One Lafayette Road Hampton, NH 03843-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	PB573S
Sample Designation:	Laboratory Blank PB573S
Date Sampled:	12/08/10
Date Extracted:	12/08/10
Date Analyzed:	12/17/10
Matrix:	Solid
Sample Amount (g):	20
Final Volume (mL)	1.00
Dilution Factor:	1

Congener Number	PCB Congener	Concentration (ug/Kg)	Qualifier
8	2,4'-dichlorobiphenyl	0.05	U
18	2,2',5-trichlorobiphenyl	0.05	U
28	2,4,4'-trichlorobiphenyl	0.05	U
44	2,2',3,5'-tetrachlorobiphenyl	0.05	U
49	2,2',4,5'-tetrachlorobiphenyl	0.05	U
52	2,2',5,5'-tetrachlorobiphenyl	0.05	U
66	2,3',4,4'-tetrachlorobiphenyl	0.05	U
87	2,2',3,4,5'-pentachlorobiphenyl	0.05	U
101	2,2',4,5,5'-pentachlorobiphenyl	0.05	U
105	2,3,3',4,4'-pentachlorobiphenyl	0.05	U
118	2,3',4,4',5-pentachlorobiphenyl	0.05	U
128	2,2',3,3',4,4'-hexachlorobiphenyl	0.05	U
138	2,2',3,4,4',5'-hexachlorobiphenyl	0.05	U
153	2,2',4,4',5,5'-hexachlorobiphenyl	0.05	U
170	2,2',3,3',4,4',5-heptachlorobiphenyl	0.05	U
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	0.05	U
183	2,2',3,4,4',5',6-heptachlorobiphenyl	0.05	U
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	0.05	U
187	2,2',3,4',5,5',6-heptachlorobiphenyl	0.05	U
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	0.05	U
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	0.05	U
209	2,2',3,3',4,4',5,5',6,6'-decachlorobiphenyl	0.05	U

Surrogate Standards	Recovery (%)	Advisory Limits (%)
PCB 198	109	30 - 150

ESI

EnviroSystems, Inc. One Lafayette Road Hampton, NH 03843-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	LCS573S / LCSD573S
Sample Designation:	Laboratory Control Sample Duplicate
Date Sampled:	12/08/10
Date Extracted:	12/08/10
Date Analyzed:	12/17/10
Matrix:	Solid
Sample Amount (g):	20
Final Volume (mL)	1.00
Dilution Factor:	1

Congener Number	PCB Congener	LCS Concentration (ug/Kg)	Recovery (%)	Recovery Limit (%)	LCSD Concentration (ug/Kg)	Recovery (%)	Recovery Limit (%)	Relative Difference (%)	RPD Limit (%)
8	2,4'-dichlorobiphenyl	4.73	95	30 - 150	4.9	99	30 - 150	4	30
18	2,2',5-trichlorobiphenyl	4.53	91	30 - 150	4.7	94	30 - 150	3	30
28	2,4,4'-trichlorobiphenyl	4.72	94	30 - 150	5	99	30 - 150	5	30
44	2,2',3,5'-tetrachlorobiphenyl	5	100	30 - 150	5.2	104	30 - 150	4	30
49	2,2',4,5'-tetrachlorobiphenyl	4.59	92	30 - 150	5	101	30 - 150	9	30
52	2,2',5,5'-tetrachlorobiphenyl	5.05	101	30 - 150	5.4	107	30 - 150	6	30
66	2,3',4,4'-tetrachlorobiphenyl	5.1	102	30 - 150	5.6	113	30 - 150	10	30
87	2,2',3,4,5'-pentachlorobiphenyl	4.85	97	30 - 150	5.4	108	30 - 150	11	30
101	2,2',4,5,5'-pentachlorobiphenyl	4.88	98	30 - 150	5.1	101	30 - 150	4	30
105	2,3,3',4,4'-pentachlorobiphenyl	5.24	105	30 - 150	5.5	109	30 - 150	4	30
118	2,3',4,4',5-pentachlorobiphenyl	5.44	109	30 - 150	5.5	111	30 - 150	2	30
128	2,2',3,3',4,4'-hexachlorobiphenyl	4.99	100	30 - 150	5.2	104	30 - 150	4	30
138	2,2',3,4,4',5'-hexachlorobiphenyl	5.09	102	30 - 150	5.1	103	30 - 150	1	30
153	2,2',4,4',5,5'-hexachlorobiphenyl	4.87	97	30 - 150	5	101	30 - 150	3	30
170	2,2',3,3',4,4',5-heptachlorobiphenyl	4.98	100	30 - 150	5	100	30 - 150	1	30
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	4.68	94	30 - 150	4.7	94	30 - 150	0	30
183	2,2',3,4,4',5',6-heptachlorobiphenyl	5.03	101	30 - 150	4.9	98	30 - 150	3	30
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	5.14	103	30 - 150	5.3	107	30 - 150	4	30
187	2,2',3,4',5,5',6-heptachlorobiphenyl	5.16	103	30 - 150	5	100	30 - 150	3	30
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	4.43	89	30 - 150	4.5	90	30 - 150	2	30
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	4.37	87	30 - 150	4.4	89	30 - 150	2	30
209	2,2',3,3',4,4',5,5',6,6'-decachlorobiphen	4.38	88	30 - 150	4.3	87	30 - 150	1	30

Surrogate Standard		Recovery (%)	Advisory Limits (%)	Recovery (%)	Advisory Limits (%)
198	2,2',3,3',4,5,5',6-octachlorobiphenyl	99	30 - 150	103	30 - 150

ESI

EnviroSystems, Inc. One Lafayette Road P.O. Box 778 Hampton, NH 03842-0788 603-926-3345 fax 603-926-3521 www.envirosystems.com

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	20488-001D
Sample Designation:	FLOU-MIT 1 (Laboratory Duplicate)
Date Sampled:	12/08/10
Date Extracted:	12/08/10
Date Analyzed:	12/18/10
Matrix:	Solid
Moisture (%):	57
Sample Amount (g):	20.00
Final Volume (mL)	1.00
Dilution Factor:	10

Congener Number	PCB Congener	Duplicate Result (ug/Kg)	Duplicate Qualifier	Sample Result (ug/Kg)	Sample Qualifier	Relative Difference (%)	Limit (%)	
8	2,4'-dichlorobiphenyl	44		41		7	30	
18	2,2',5-trichlorobiphenyl	18		18		4	30	
28	2,4,4'-trichlorobiphenyl	150		140		12	30	
44	2,2',3,5'-tetrachlorobiphenyl	34		31		10	30	
49	2,2',4,5'-tetrachlorobiphenyl	110		100		6	30	
52	2,2',5,5'-tetrachlorobiphenyl	160		150		5	30	
66	2,3',4,4'-tetrachlorobiphenyl	87		75		14	30	
87	2,2',3,4,5'-pentachlorobiphenyl	42		42		0	30	
101	2,2',4,5,5'-pentachlorobiphenyl	130		120		12	30	
105	2,3,3',4,4'-pentachlorobiphenyl	34		41		21	30	
118	2,3',4,4',5-pentachlorobiphenyl	160		150		5	30	
128	2,2',3,3',4,4'-hexachlorobiphenyl	31		21		39	30	J8
138	2,2',3,4,4',5'-hexachlorobiphenyl	120		120		2	30	
153	2,2',4,4',5,5'-hexachlorobiphenyl	98		92		6	30	
170	2,2',3,3',4,4',5-heptachlorobiphenyl	11		13		9	30	
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	15		14		3	30	
183	2,2',3,4,4',5',6-heptachlorobiphenyl	5.9		6		1	30	
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	1.2	U	1.2	U	NC	30	
187	2,2',3,4',5,5',6-heptachlorobiphenyl	13		13		6	30	
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	1.3		1.2	U	NC	30	
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	1.5		1.2	U	NC	30	
209	2,2',3,3',4,4',5,5',6,6'-decachlorobipheny	1.2	U	1.2	U	NC	30	

Surrogate Standard	Recovery (%)	Recovery (%)	Advisory Limits (%)
PCB 198	87	85	30 - 150

U = Not detected at reporting limit.
NC = Not calculated due to one or more values less than five times the reporting limit.
J8 = Estimate. Dup %RR above limit.

ESI
EnviroSystems, Inc. One Lafayette Road Hampton, NH 03843-0778 603-926-3345 fax 603-926-3521 www.envirosystems.com

PCB Congeners in Sediment
SW 846 8082/EPA 680 modified

Lab Number:	20488-001MSD
Sample Designation:	FLOU-MIT 2 (Matrix Spike Duplicate)
Date Sampled:	12/08/10
Date Extracted:	12/08/10
Date Analyzed:	12/17/10
Matrix:	Solid
Sample Amount (g):	20.00
Final Volume (mL)	1.00
Dilution Factor:	10.00

Congener Number	PCB Congener	Sample Result (ug/Kg)	Amount Added (ug/Kg)	MS Result (ug/Kg)	Recovery (%)	Recovery Limit (%)	MSD Result (ug/Kg)	Recovery (%)	Recovery Limit (%)	Relative Difference (%)	RPD Limit (%)	
8	2,4'-dichlorobiphenyl	41	12	54	107	30 - 150	51	83	30 - 150	5	30	
18	2,2',5-trichlorobiphenyl	18	12	23	45	30 - 150	19	18	30 - 150	20	30	J5
28	2,4,4'-trichlorobiphenyl	140	12	175		30 - 150	120		30 - 150	34	30	SNR
44	2,2',3,5'-tetrachlorobiphenyl	31	12	47		30 - 150	40		30 - 150	17	30	SNR
49	2,2',4,5'-tetrachlorobiphenyl	100	12	125		30 - 150	120		30 - 150	8	30	SNR
52	2,2',5,5'-tetrachlorobiphenyl	150	12	180		30 - 150	160		30 - 150	12	30	SNR
66	2,3',4,4'-tetrachlorobiphenyl	75	12	94		30 - 150	88		30 - 150	7	30	SNR
87	2,2',3,4,5'-pentachlorobiphenyl	42	12	54	106	30 - 150	48	52	30 - 150	12	30	
101	2,2',4,5,5'-pentachlorobiphenyl	120	12	152		30 - 150	130		30 - 150	18	30	SNR
105	2,3,3',4,4'-pentachlorobiphenyl	41	12	56	122	30 - 150	50	77	30 - 150	10	30	
118	2,3',4,4',5-pentachlorobiphenyl	150	12	186		30 - 150	160		30 - 150	16	30	SNR
128	2,2',3,3',4,4'-hexachlorobiphenyl	21.0	12	33	102	30 - 150	42	180	30 - 150	24	30	J5
138	2,2',3,4,4',5'-hexachlorobiphenyl	120	12	130		30 - 150	140		30 - 150	6	30	SNR
153	2,2',4,4',5,5'-hexachlorobiphenyl	92	12	117		30 - 150	98		30 - 150	18	30	SNR
170	2,2',3,3',4,4',5-heptachlorobiphenyl	13	12	25	111	30 - 150	24	102	30 - 150	4	30	
180	2,2',3,4,4',5,5'-heptachlorobiphenyl	14	12	26	100	30 - 150	24	87	30 - 150	6	30	
183	2,2',3,4,4',5',6-heptachlorobiphenyl	6	12	17	93	30 - 150	17	92	30 - 150	0	30	
184	2,2',3,4,4',6,6'-heptachlorobiphenyl	ND	12	10	90	30 - 150	9.9	86	30 - 150	4	30	
187	2,2',3,4',5,5',6-heptachlorobiphenyl	13	12	24	92	30 - 150	24	92	30 - 150	0	30	
195	2,2',3,3',4,4',5,6-octachlorobiphenyl	ND	12	12	101	30 - 150	11	96	30 - 150	5	30	
206	2,2',3,3',4,4',5,5',6-nonachlorobiphenyl	ND	12	12	101	30 - 150	11	91	30 - 150	10	30	
209	2,2',3,3',4,4',5,5',6,6'-decachlorobiphenyl	ND	12	10	90	30 - 150	10	90	30 - 150	0	30	

Surrogate Standard	MS Recovery (%)	Advisory Limits (%)	MSD Recovery (%)	Advisory Limits (%)
PCB 198	98	30 - 150	98	30 - 150

ND = Not detected

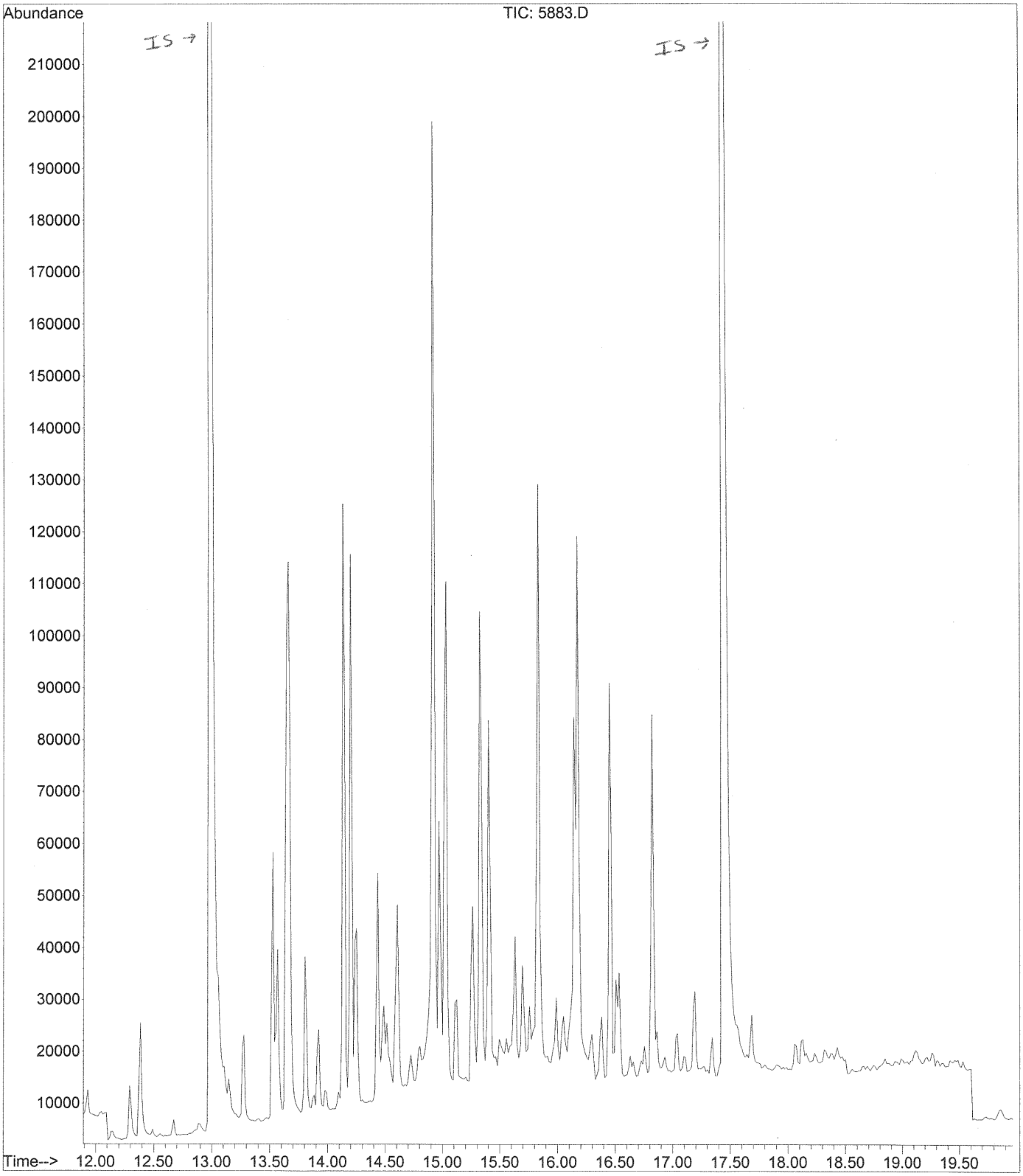
J5 = Estimate. MS or MSD % R outside limit

ESI

EnviroSystems, Inc. One Lafayette Road P.O. Box 778 Hampton, NH 03842-0788 603-926-3345 fax 603-926-3521 www.envirosystems.com

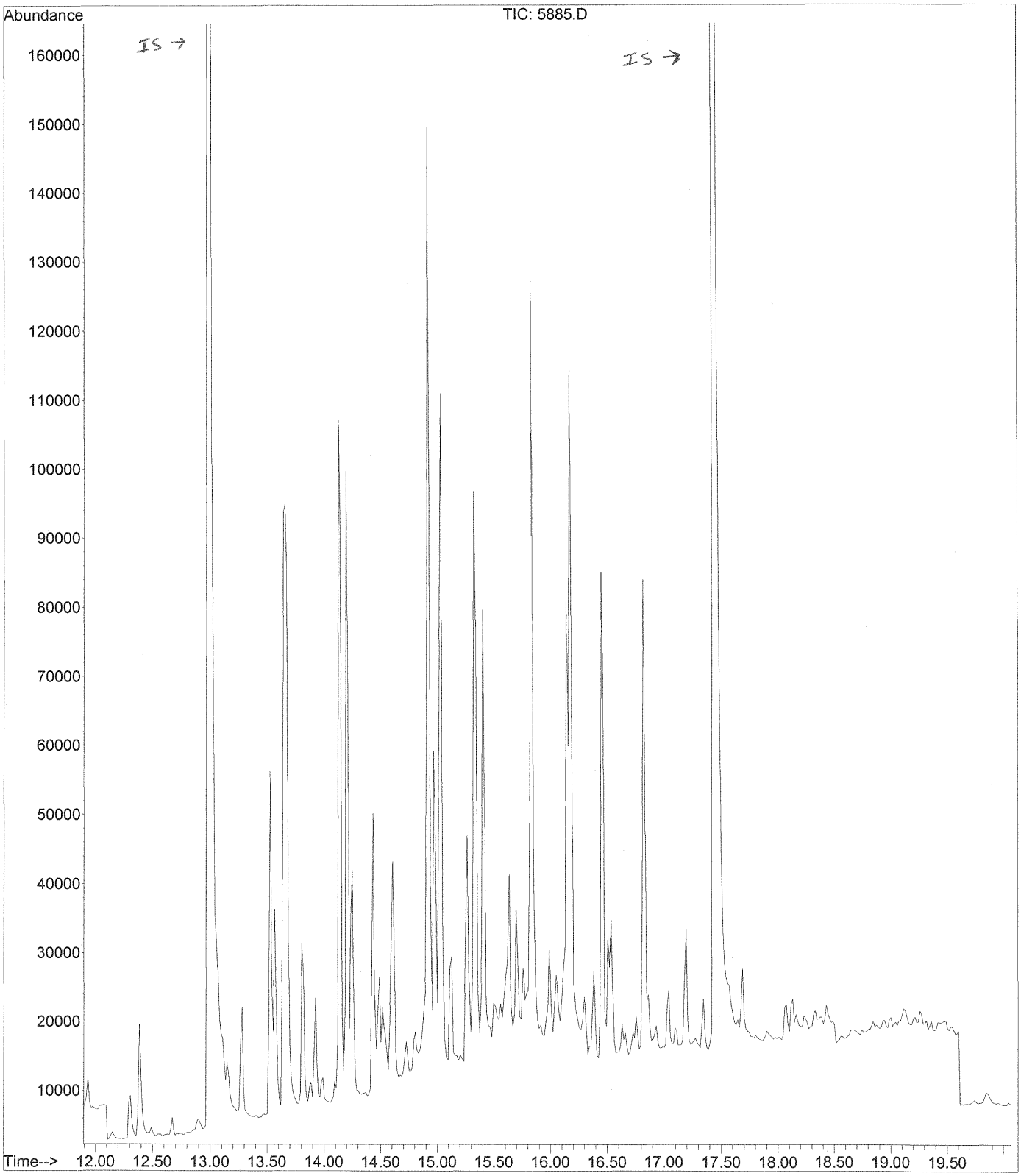
File : S:\SVOC\5700\5883.D
Operator : RDF/LCB
Acquired : 18 Dec 2010 9:43 am using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: 20488-001L10
Misc Info : IS 4681
Vial Number: 18

FLOU-MIT1



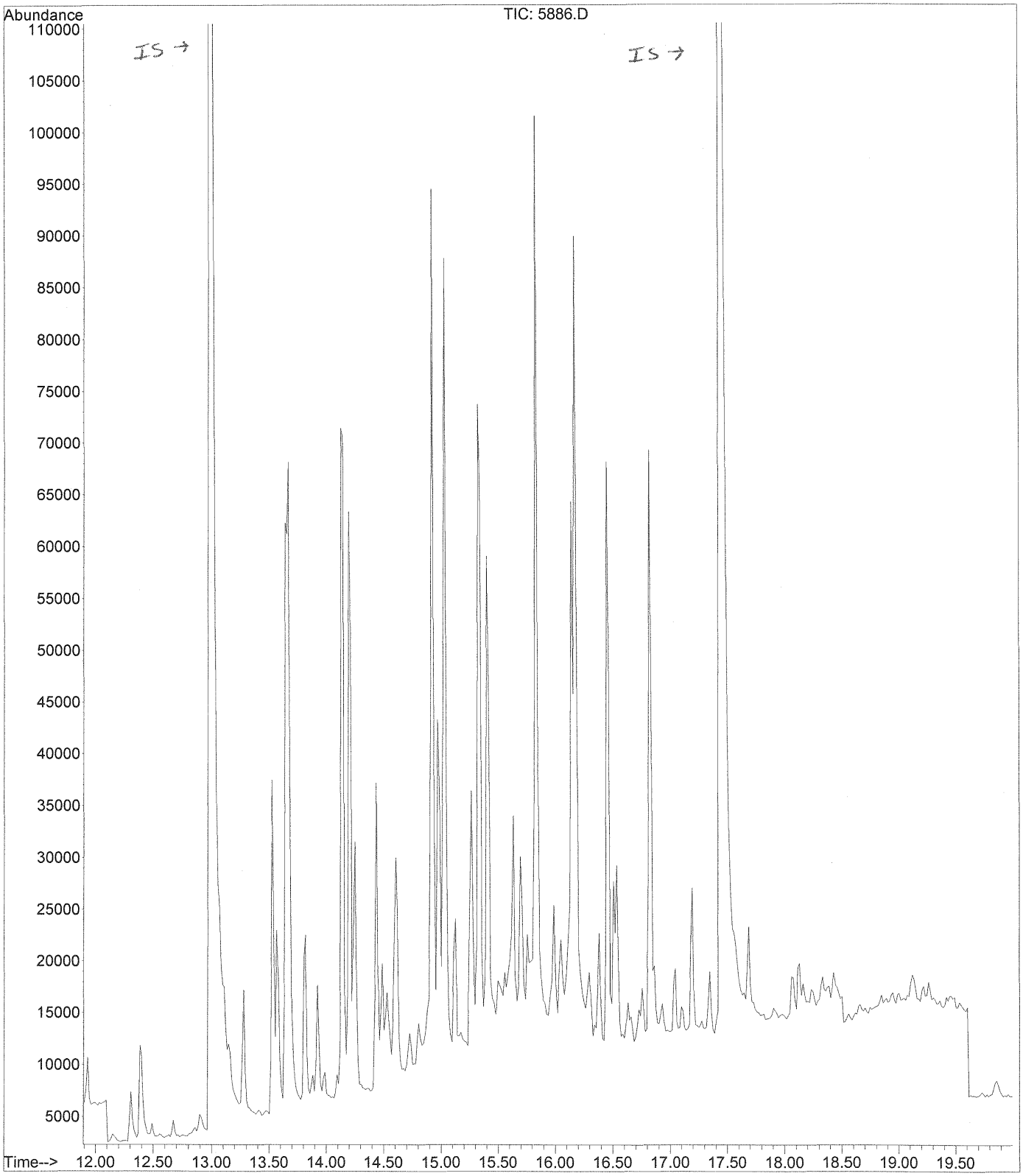
File : S:\SVOC\5700\5885.D
Operator : RDF/LCB
Acquired : 18 Dec 2010 10:56 am using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: 20488-002L10
Misc Info : IS 4681
Vial Number: 20

FLOW-MIT2



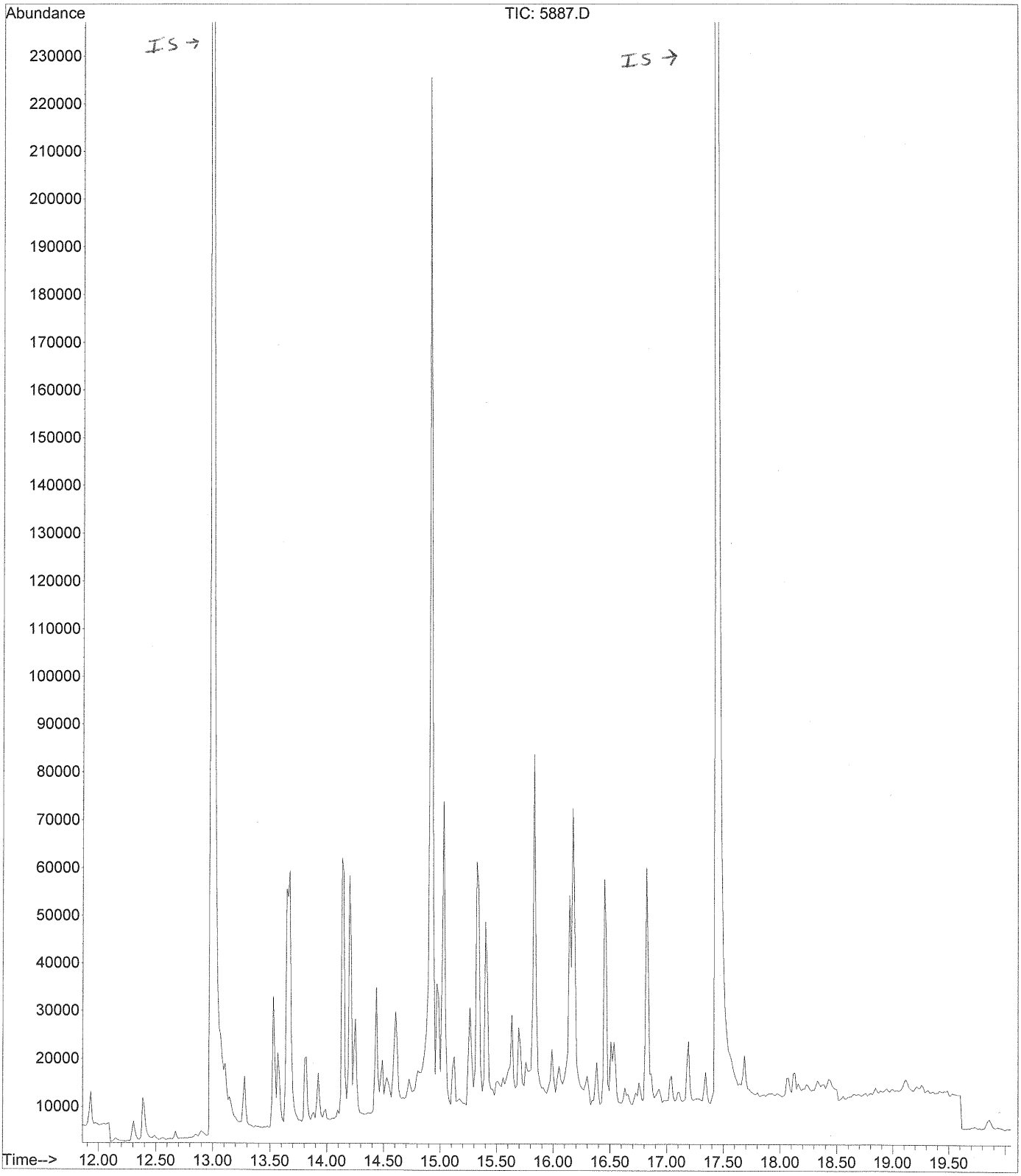
File : S:\SVOC\5700\5886.D
Operator : RDF/LCB
Acquired : 18 Dec 2010 11:33 am using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: 20488-003L10
Misc Info : IS 4681
Vial Number: 21

FLOU-MIT3



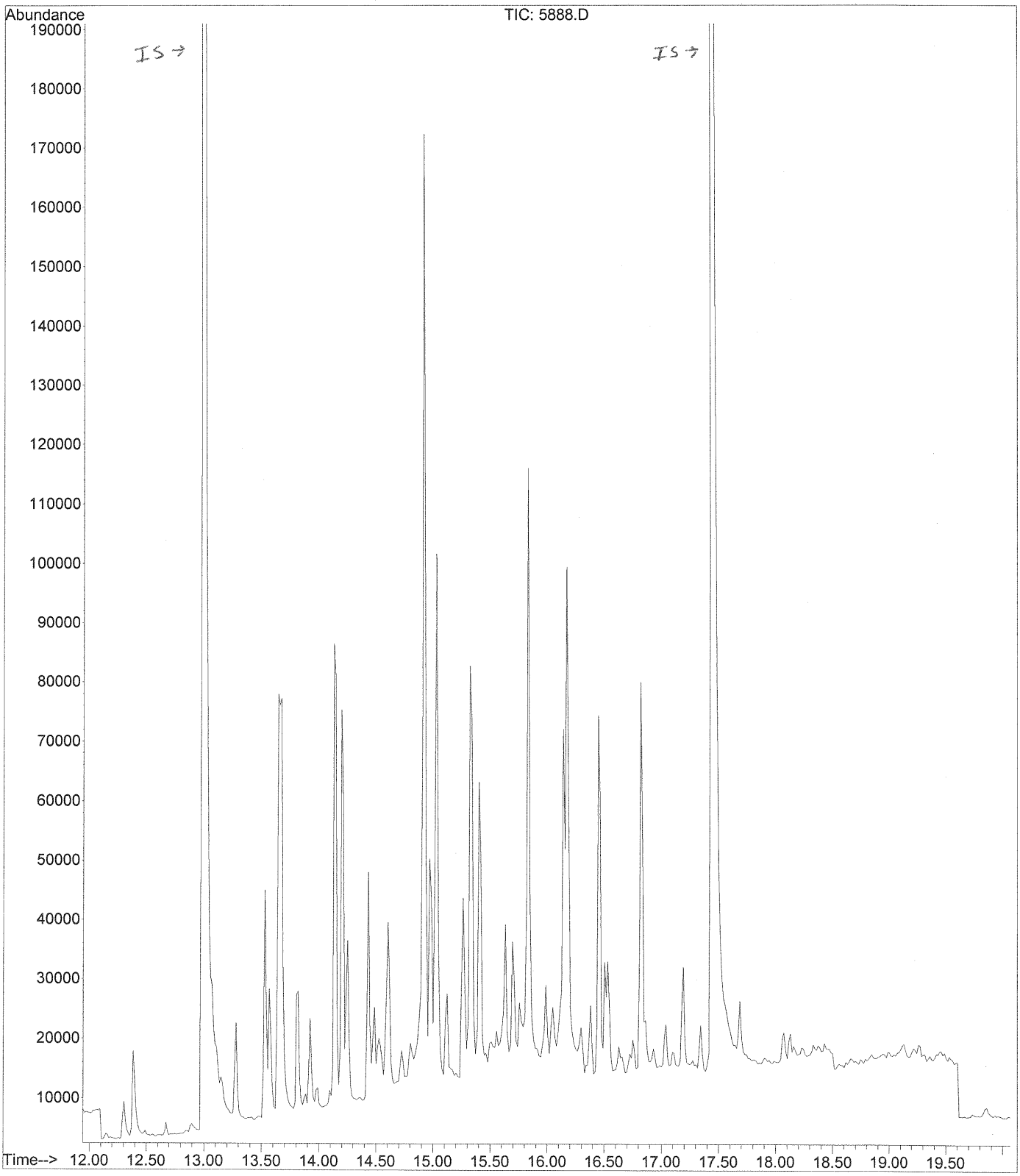
File : S:\SVOC\5700\5887.D
Operator : RDF/LCB
Acquired : 18 Dec 2010 12:10 pm using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: 20488-004L10
Misc Info : IS 4681
Vial Number: 22

FLOU-MITH



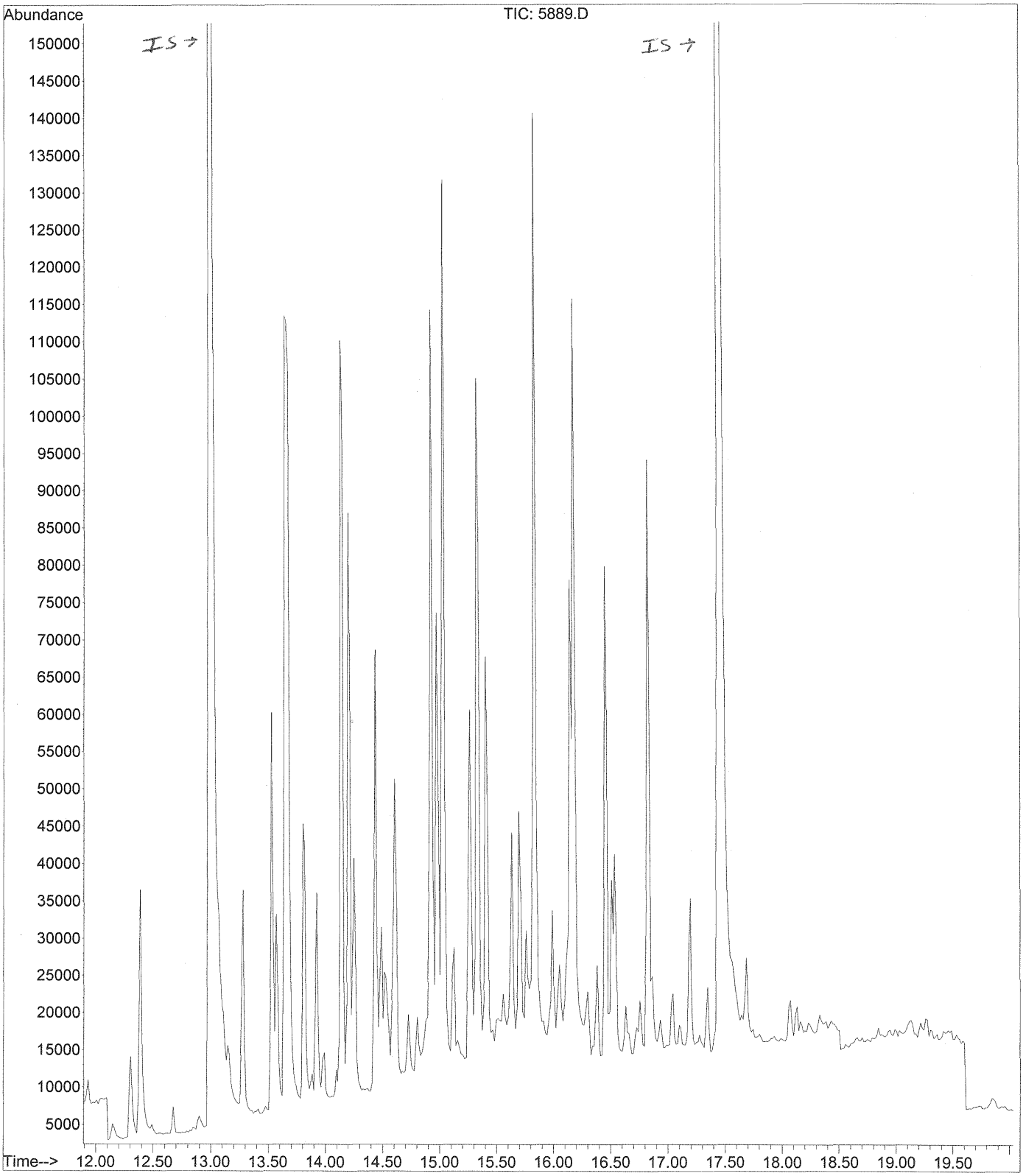
File : S:\SVOC\5700\5888.D
Operator : RDF/LCB
Acquired : 18 Dec 2010 12:47 pm using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: 20488-005L15
Misc Info : IS 4681
Vial Number: 23

FLOV-MITS



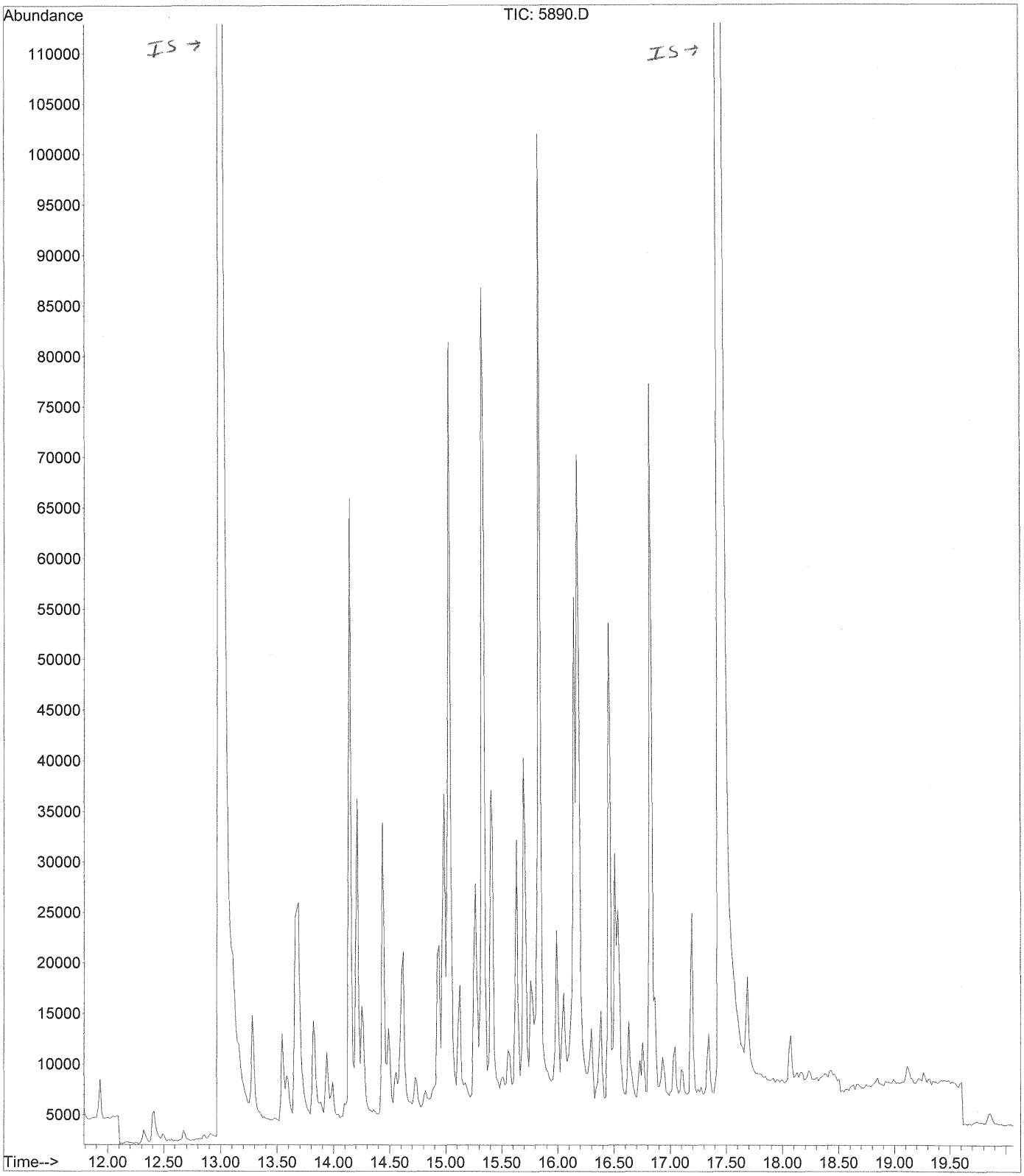
File : S:\SVOC\5700\5889.D
Operator : RDF/LCB
Acquired : 18 Dec 2010 1:24 pm using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: 20488-006L15
Misc Info : IS 4681
Vial Number: 24

FLOV-MITG



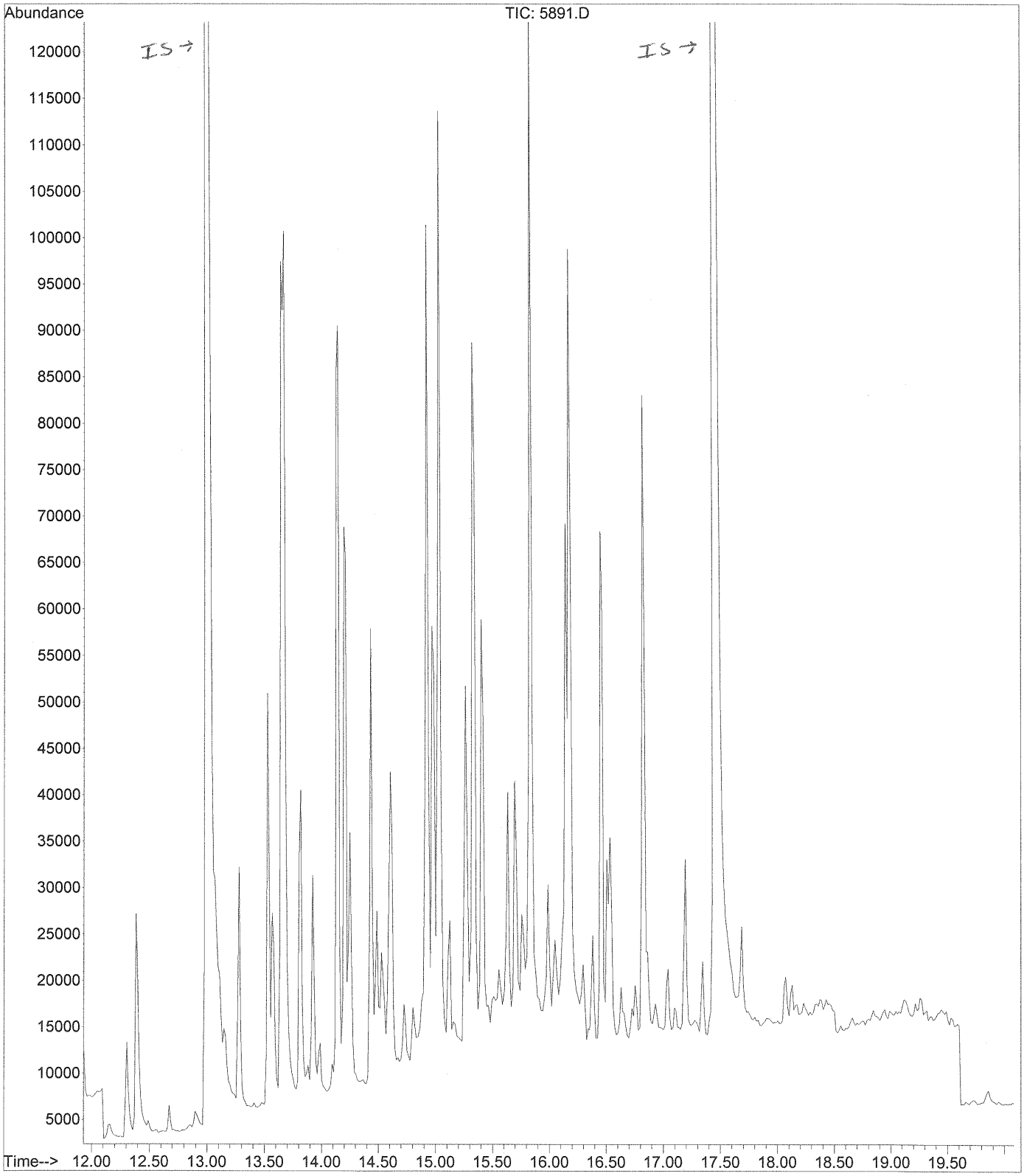
File : S:\SVOC\5700\5890.D
Operator : RDF/LCB
Acquired : 18 Dec 2010 2:01 pm using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: 20488-007L80
Misc Info : IS 4681
Vial Number: 25

FLOU-MIT7



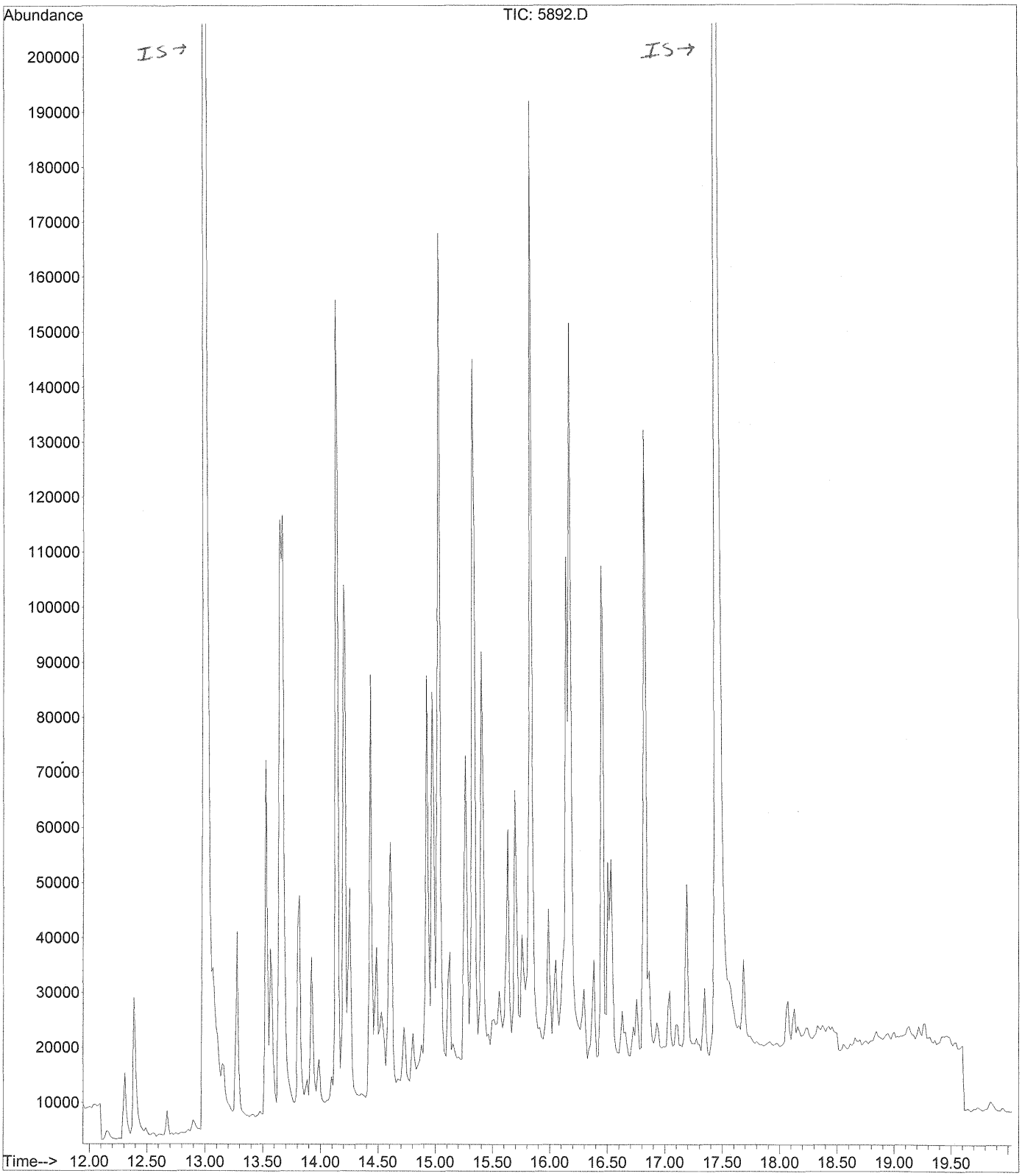
File : S:\SVOC\5700\5891.D
Operator : RDF/LCB
Acquired : 18 Dec 2010 2:37 pm using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: 20488-008L15
Misc Info : IS 4681
Vial Number: 26

FLOW-MIT 8



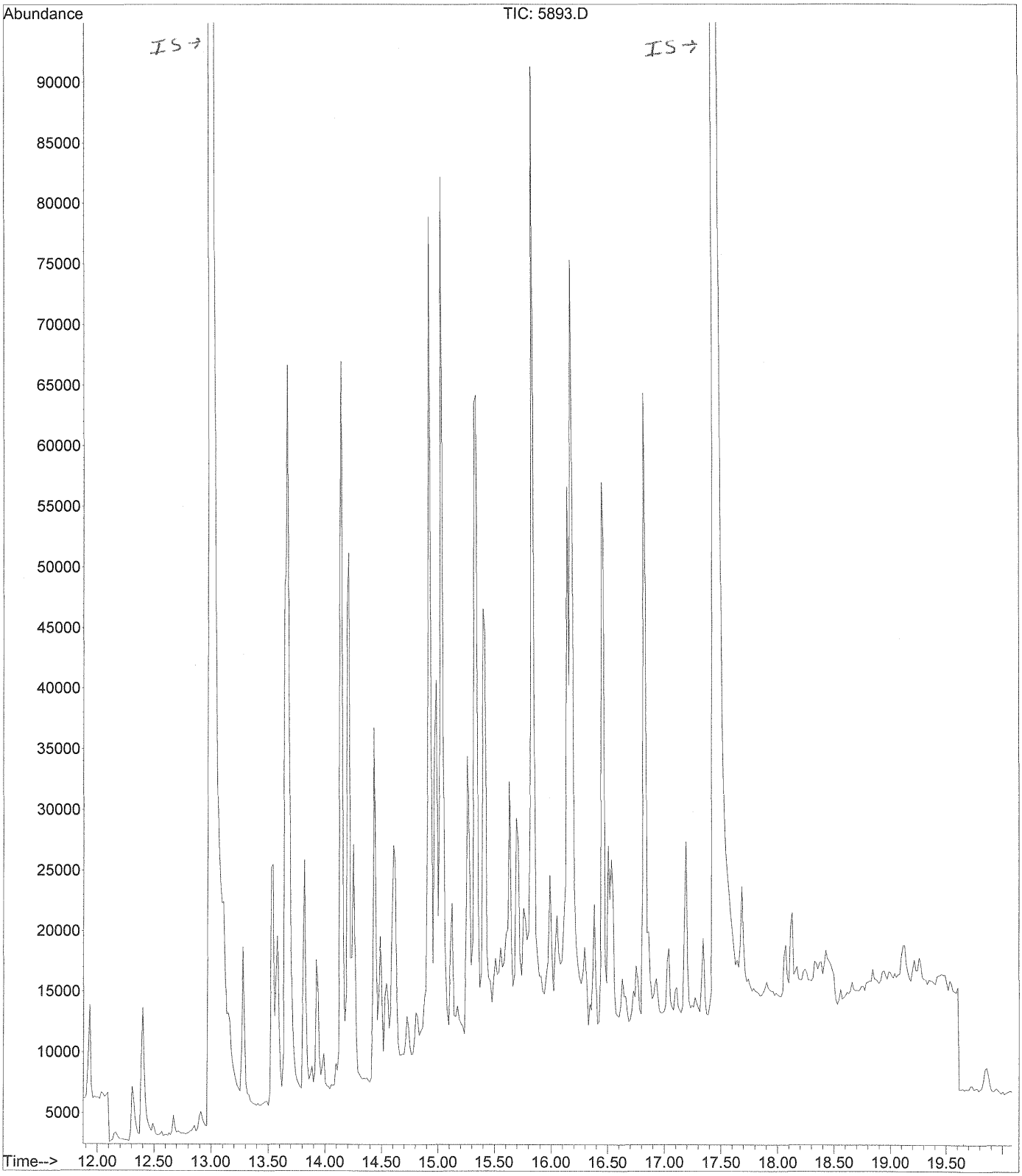
File : S:\SVOC\5700\5892.D
Operator : RDF/LCB
Acquired : 18 Dec 2010 3:14 pm using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: 20488-009L15
Misc Info : IS 4681
Vial Number: 27

FLOU-MIT9



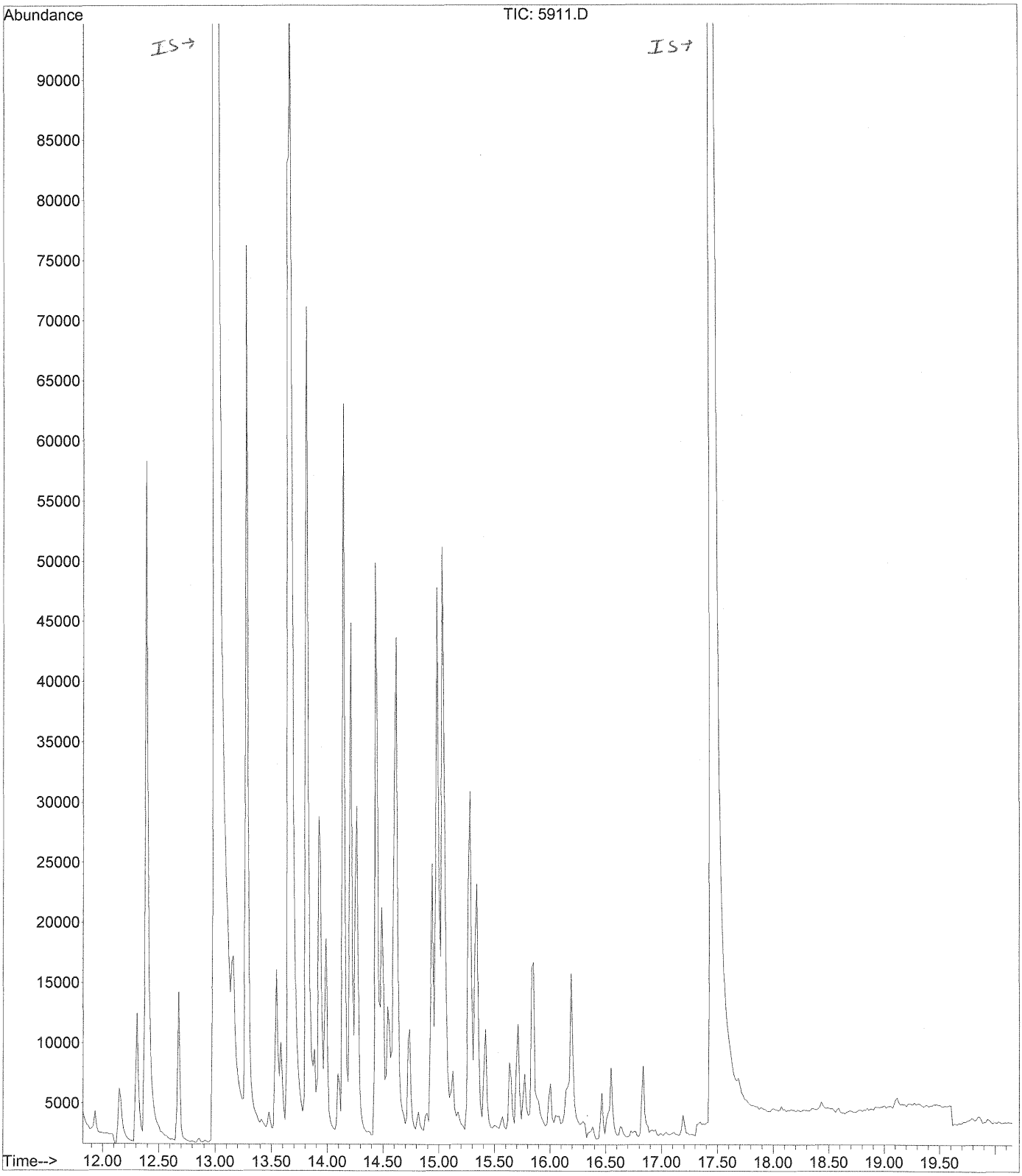
File : S:\SVOC\5700\5893.D
Operator : RDF/LCB
Acquired : 18 Dec 2010 3:51 pm using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: 20488-010L8
Misc Info : IS 4681
Vial Number: 28

FLOU-MITIO



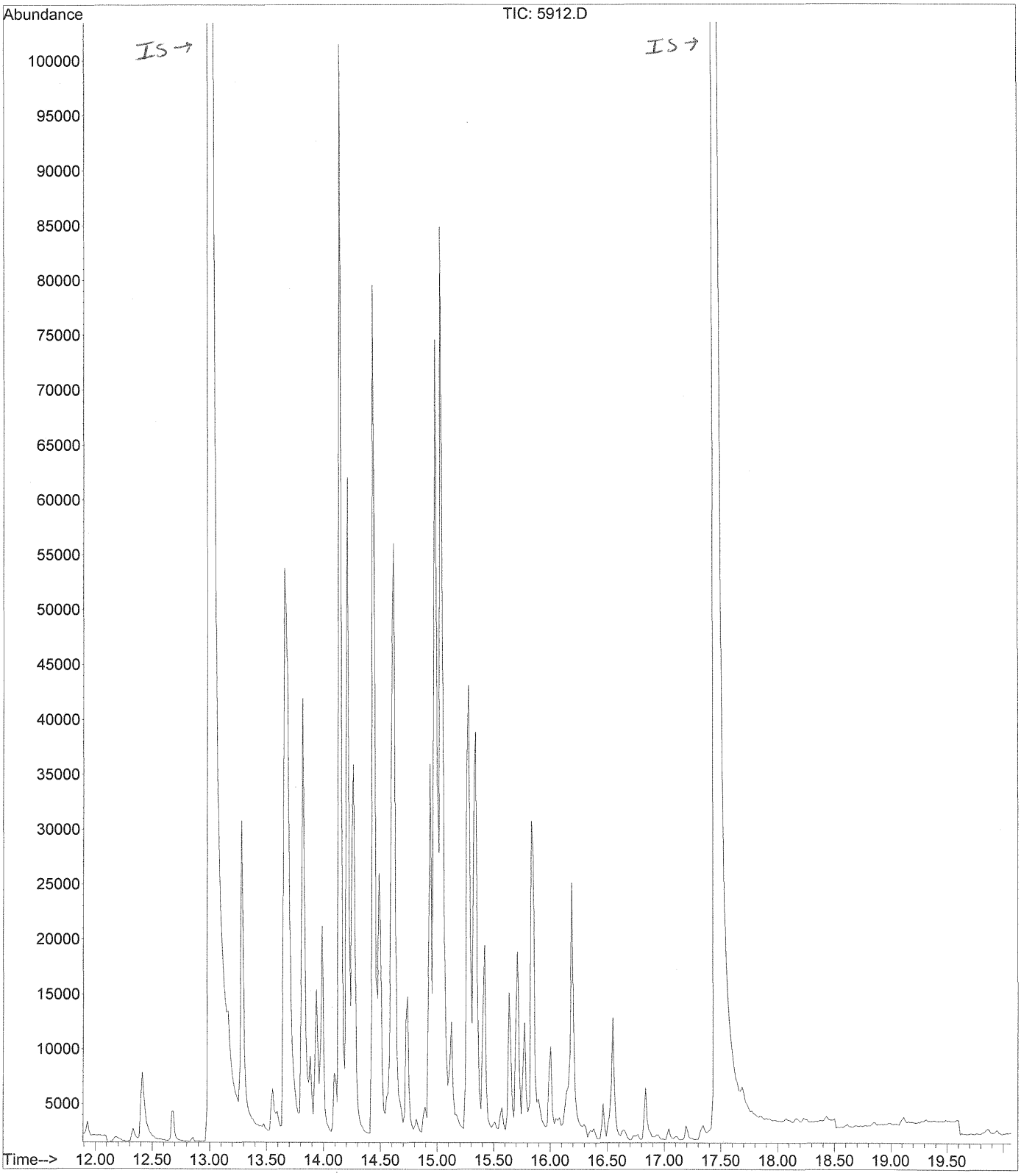
File : S:\SVOC\5700\5911.D
Operator : RDF/LCB
Acquired : 19 Dec 2010 2:41 am using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: AROCLOR 1242 o4486.2000
Misc Info : IS 4763
Vial Number: 91

PCB 1242



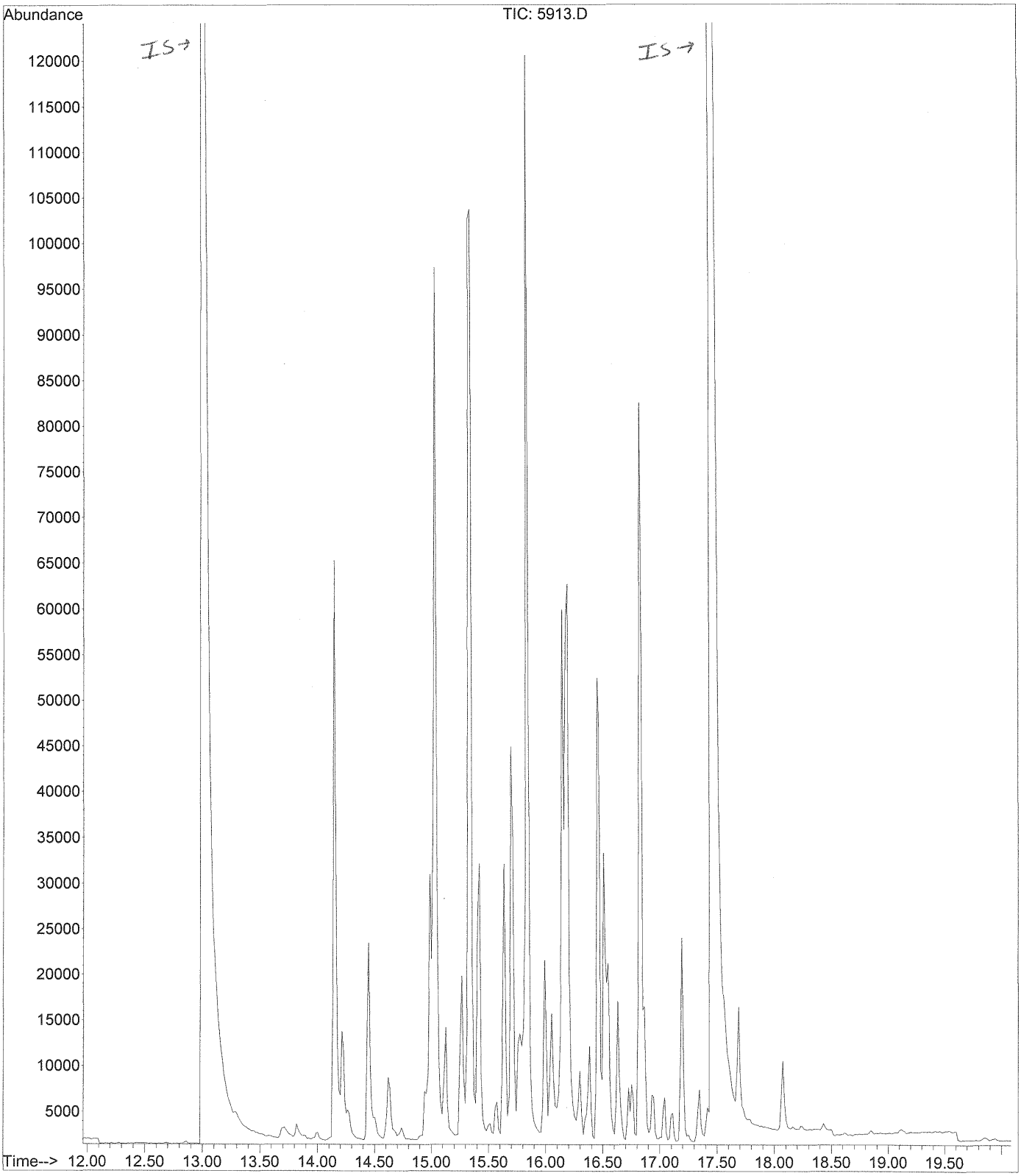
File : S:\SVOC\5700\5912.D
Operator : RDF/LCB
Acquired : 19 Dec 2010 3:17 am using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: AROCLOR 1248 o4551.2000
Misc Info : IS 4763
Vial Number: 92

PCB 1248



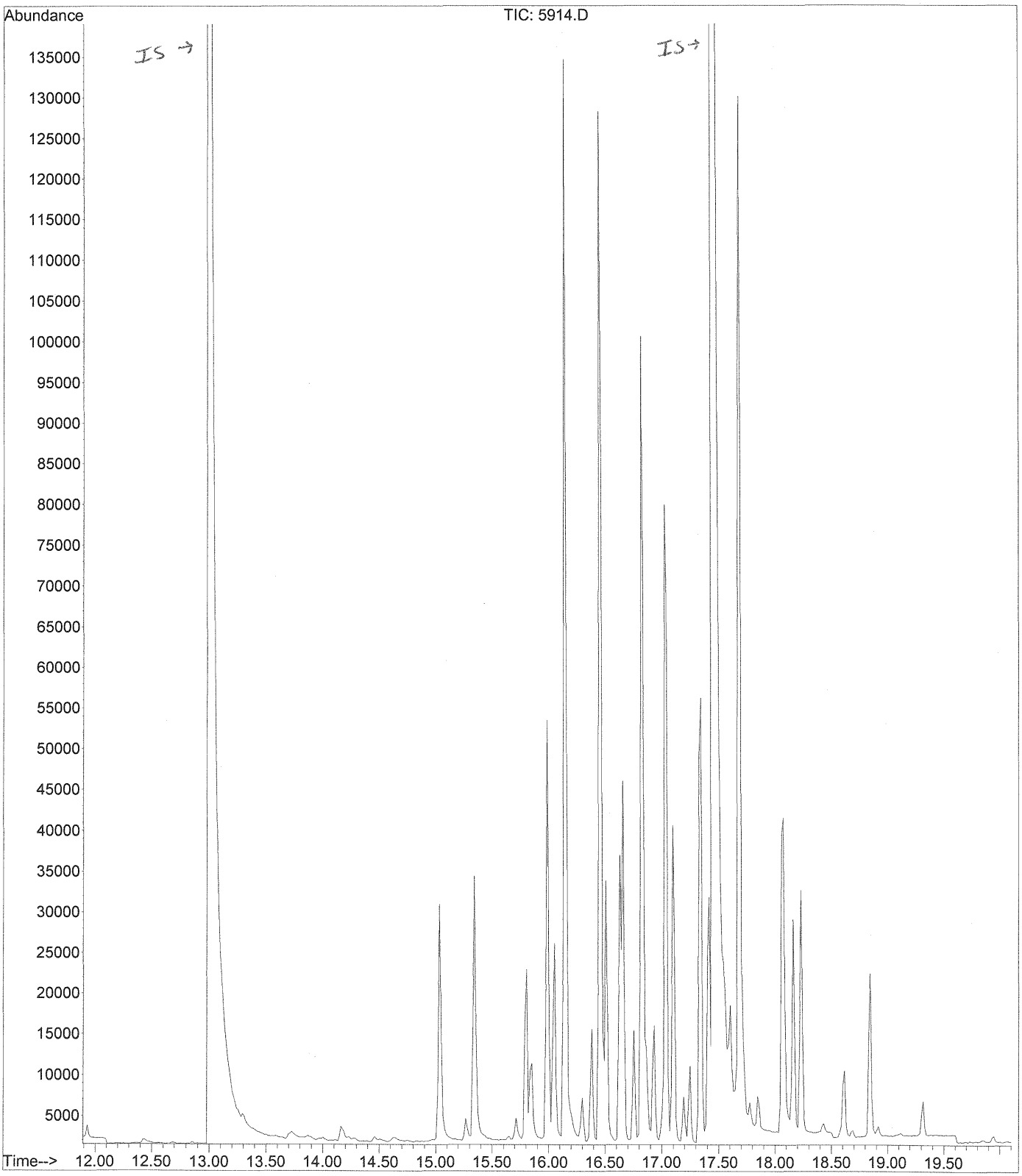
File : S:\SVOC\5700\5913.D
Operator : RDF/LCB
Acquired : 19 Dec 2010 3:53 am using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: AROCLOR 1254 o4458.2000
Misc Info : IS 4763
Vial Number: 93

PCB 1254



File : S:\SVOC\5700\5914.D
Operator : RDF/LCB
Acquired : 19 Dec 2010 4:29 am using AcqMethod CGR_EXC2
Instrument : Instrumen
Sample Name: AROCLOR 1260 o4547.2000
Misc Info : IS 4763
Vial Number: 94

PCB 1260



ESI

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	20488		
SDG No:	6690.008		
Project:	PHASE IV 6690.008		
Delivered via:	ESI		
Date and Time Received:	12/08/10 0940	Date and TIme Logged into Lab:	12/08/10 1418
Recieved By:	DW	Logged into Lab by:	JEB LCB
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	5	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):			
COC Complete:	Yes	Does the info on the COC match the samples?	Yes
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required		

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
FLOU-MIT 1	20488-001	S	CGR680	16oz G	4C	Yes
FLOU-MIT 2	20488-002	S	CGR680	16oz G	4C	Yes
FLOU-MIT 3	20488-003	S	CGR680	16oz G	4C	Yes
FLOU-MIT 4	20488-004	S	CGR680	16oz G	4C	Yes
FLOU-MIT 5	20488-005	S	CGR680	16oz G	4C	Yes
FLOU-MIT 6	20488-006	S	CGR680	16oz G	4C	Yes
FLOU-MIT 7	20488-007	S	CGR680	16oz G	4C	Yes
FLOU-MIT 8	20488-008	S	CGR680	16oz G	4C	Yes
FLOU-MIT 9	20488-009	S	CGR680	16oz G	4C	Yes
FLOU-MIT 10	20488-010	S	CGR680	16oz G	4C	Yes

Notes and qualifications:

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab:

ALPHA Job #: 20488

ALPHA ANALYTICAL
WESTBORO, MA TEL: 508-898-9220 FAX: 508-898-9193
MANSFIELD, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: APEX COMPANIES LLC
Address: 184 HIGH STREET SUITE 502 BOSTON MA
Phone: 617-728-0070
Fax: 617 728-0080
Email: GDOLAN@APEXCOS.COM

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: PHASE IV
Project Location: NEW BEDFORD MA
Project #: 6690.008
Project Manager: CHET MYERS
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: Time:

Report Information - Data Deliverables

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed Program: USACE RIM
Criteria:

MA MCP PRESUMPTIVE CERTAINTY - CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☐ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS: PCB-NOAA 22 CONGENER

SAMPLE HANDLING
Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PCB-NOAA 22 CONGENER	Sample Specific Comments	TOTAL # BOTTLES
001	FLOU-MIT 1	12/7/10	11:22	SED	GCD	X		
002	FLOU-MIT 2	12/7/10	11:37	↓	↓	X		
003	FLOU-MIT 3	↓	11:59	↓	↓	X		
004	FLOU-MIT 4	↓	12:24	↓	↓	X		
005	FLOU-MIT 5	↓	12:48	↓	↓	X		
006	FLOU-MIT 6	↓	13:06	↓	↓	X		
007	FLOU-MIT 7	↓	13:33	↓	↓	X		
008	FLOU-MIT 8	↓	13:57	↓	↓	X		
009	FLOU-MIT 9	↓	14:26	↓	↓	X		
010	FLOU-MIT 10	↓	14:51	↓	↓	X		

31 of 31

PLEASE ANSWER QUESTIONS ABOVE!

Container Type	BOZ/A
Preservative	ICE

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	940 12/8/10	D White	940 12/8/10

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 14-OCT-07)