

October 14, 2016

Mr. Conor Neal
Project Manager
EPA Region 5
Land & Chemicals Division
77 West Jackson Blvd, LU-9J
Chicago, IL 60604-3590

Subject: Quarterly Progress Report (July through September 2016)
Administrative Order on Consent (February 26, 2009)
Tyco Fire Products LP
Stanton Street Facility
Marinette, Wisconsin
WID 006 125 215

Dear Mr. Neal:

Section VI, 21, b (Page 10) of the Administrative Order on Consent (AOC), dated February 26, 2009, requires Tyco Fire Products LP (Tyco) to submit quarterly progress reports to the U.S. Environmental Protection Agency (USEPA) Region 5 and the Wisconsin Department of Natural Resources (WDNR). The reports are required to document activities conducted as part of the Resource Conservation and Recovery Act (RCRA) Corrective Actions at the Tyco facility in Marinette, Wisconsin. The enclosed report covers the period from July 1, 2016 through September 30, 2016, and presents a brief description of the work completed to date, data collected, problems encountered, and schedule of activities as required by the February 2009 AOC.

Work Completed During this Reporting Period

Operation of the groundwater collection and treatment system (GWCTS) continued through the third quarter of 2016. A summary of the operational data is included as Attachment 1. The Discharge Monitoring Reports (DMRs) are included in Attachment 2.

The Fall Phyto Plot Inspection was completed by Sand Creek Consultants on September 15, 2016. A write up of all work performed for the 2016 year will be given in the Phyto Plot End of Year Report submitted in the January 15, 2017 quarterly report.

Corrective actions were taken on all findings from the previous barrier wall, cover area, and monitoring well inspections.

Additional Activities

The extraction and management of impacted groundwater in the 8th Street slip and former Salt Vault areas of the site as part of the agreed upon pump down program began on June 23, 2016. The target groundwater elevation within the Salt Vault area was achieved on July 13th and within the 8th St. Slip on July 27th. Extraction is expected to continue until the week

of October 24th, at which point the system will be shut down for the winter. Tyco will monitor the groundwater elevations monthly until a determination can be made as to the need to continue any pump down operation. Through October 13, 2016, approximately 1,007,438 gallons of groundwater had been extracted and appropriately managed as part of this project.

Tyco, with the support of engineering consultant AECOM, completed a site assessment to evaluate the advantages and disadvantages of potential changes to surface water flow and the practicality of abandoning and/or sealing storm sewer lines. Tyco has shared a copy of the plan of proposed improvements with the agencies and has begun implementing this plan. During the week of September 26th, Tyco completed comprehensive improvements to the on-site industrial sewer system including abandonment, lining and replacement, as appropriate.

Data Collected

Extraction and treatment volumes, analytical testing, and discharge data are required as part of the Wisconsin Pollutant Discharge and Elimination System (WPDES) permits obtained from WDNR for operation of the GWCTS. The GWCTS operates under permit WPDES WI-0001040-07-0. Attachment 2 includes the monthly WPDES DMRs for June 2016 through August 2016 for the GWCTS. Additional data on the operation of the GWCTS is included in Attachment 1.

Groundwater elevation data recorded by installed transducers was downloaded on October 6, 2016 and is under evaluation. The site-wide data will be provided in the annual report.

Problems Encountered

On August 11th, Tyco discovered 3 samples from the GWCTS effluent monitoring had exceeded WPDES criteria. Tyco immediately shut down the process, notified the WDNR, and began investigation into the causes of the elevated levels of arsenic in the effluent stream. Tyco collected analytical data at various stages of system operation, verified all gauges and meters were operating correctly and replaced the membranes in both the Primary and Brine RO systems as a precaution. Tyco also completed analytical testing for speciation of arsenic in the water from the wells being utilized by the pump down program. The speciation results indicated higher than anticipated ratio of organic to inorganic arsenic. This explains why groundwater containing elevated concentrations of total arsenic did not have corresponding elevated conductivity values. As currently designed, the GWCTS system uses conductivity as an indicator of arsenic concentrations to prevent potential exceedances. The laboratory report for the speciation results is included as Attachment 4. Tyco has discontinued the processing of any water generated by the pump down program, and ran system trials with the process in recycle before resuming operation on August 26th. The system has operated without an exceedance since making this operational change.

Schedule of Upcoming Activities

The following is a summary of activities to be conducted during the next reporting period.

- Submit the quarterly progress report.
- Complete the second semi-annual barrier wall, cover area, and monitoring well inspections.
- Complete the second Semi-Annual Barrier wall monitoring event.
- Address inspection findings for the Vertical Barrier Wall, Cover Areas, and Monitoring Wells.
- Implement the planned storm water management improvements.

List of Key Correspondence and Document Submittals

Table 1

Documents Submitted

July to September 2016, Tyco Fire Products LP Facility, Marinette, Wisconsin

Description of Submittal	Submitted To	Date Submitted
Quarterly Progress Report	USEPA	July 15, 2016
Extension Request – Response to Comments to EPA Review of Tyco Outfall Investigation Report	USEPA	August 2, 2016
Bi-Weekly Pump Down Program Status report	USEPA	August 17, 2016
Bi-Weekly Pump Down Program Status report	USEPA	August 30, 2016
Response to Comments on Outfall Investigation Report	USEPA	September 8, 2016
Bi-Weekly Pump Down Program Status Report	WDNR	September 15, 2016
Bi-Weekly Pump Down Program Status Report	USEPA	September 27, 2016
Bi-Weekly Pump Down Program Status Report	USEPA	October 11, 2016

Table 2

Correspondence from Agency

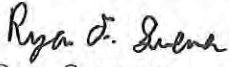
July to September 2016, Tyco Fire Products LP Facility, Marinette, Wisconsin

Description of Correspondence	Received From	Date Received
Notification of change in Project Manager	USEPA	July 25, 2016

Please contact me at 715-587-6670 if you have any questions or require additional information.

Respectfully Yours,

Tyco Fire Products LP



Ryan Suennen
Environmental Field Projects

Attachments

- 1 GWCTS Operation Summary
- 2 DMRs for the GWCTS
- 3 Arsenic Speciation Laboratory Results

cc: Kristin DuFresne, WDNR
Jim Killian, WDNR
Joe Janeczek, Johnson Controls
Rich Mator, Johnson Controls
Scott Stacy, Tyco Fire Products LP
Jeff Danko, Tyco
Mariel Carter, Stephenson Public Library
Document Control No.: 20161014 US10.11014

Attachment 1
GWCTS Operation Summary

MEMORANDUM

Groundwater Collection and Treatment System Operation

SUBJECT: Groundwater Collection and Treatment System Operation for Tyco
Fire Products LP, Marinette, Wisconsin

DATE: October 14, 2016

Operation of the groundwater collection and treatment system (GWCTS) occurring from July 1, 2016 through September 30, 2016 is summarized below:

- The GWCTS operated for 25 days in July, 16 days in August, and 25 days in September, for a total of 66 days. The plant did not operate during the WPDES exceedance investigation.
- Approximately 204,450 gallons of reject water was produced during system operations and subsequently disposed of offsite.
- The precipitation recorded from the weather station in Marinette, Wisconsin was 11.41 inches. (<http://www.ncdc.noaa.gov/cdo-web/datasets/GHCND/stations/GHCND:USC00475091/detail>).
- An estimated total of 995,771 gallons was discharged to the Menominee River as effluent under WPDES permit.
- An estimated total of 795,651 gallons of groundwater were extracted (not including volumes extracted as part of the pump down program) from the site during the reporting period. Details of water volumes extracted from each area of the site and changes in water levels are shown in the Table 1 below.

Table 1 - Extraction Well Data Summary

Extraction Well	Gallons Run Q3 2016 (7/01/2016-9/30/2016)	Gallons Run Q3 2015 (7/01/2015-9/30/2015)
EW-1	28,093	391,872
EW-2	2,588	64,381
EW-3	0	20,248
EW-4	10,254	26,862
EW-5	141,679	156,643
EW-6	358,944	365,837
EW-7	254,093	752,196
Total	795,651	1,778,039

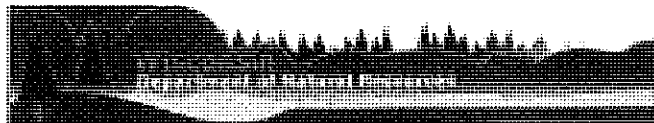
Attachment 2
DMRs for the GWCTS

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LP - 388105

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Form Type

Wastewater Discharge Monitoring Long Report

DOC ID

362102

Reporting Period

6/1/2016 to 6/30/2016

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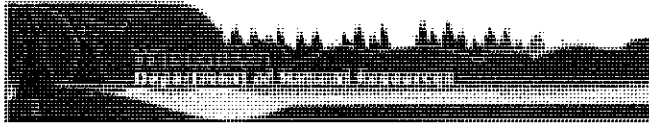
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Submittal of this form is required by section 283.55, Wis. Stats., and chapters NR 205 and NR 214 or NR 204, Wis. Admin. Code.

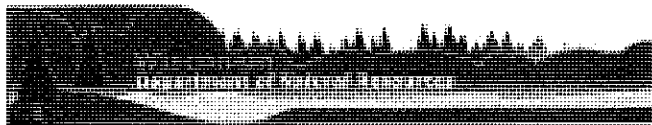
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I certify under penalty of law that this form submitted to DNR on 7/18/2016 for the period 6/1/2016 to 6/30/2016 and identified by the DOC ID number listed above was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Wastewater Discharge Monitoring Long Report

For DNR Use Only

Facility Name: TYCO FIRE PROTECTION PRODUCTS LP
 Contact Address: One Stanton Street
 Marinette, WI 54143
 Facility Contact: Judith Rost, Sr Lab Tech
 Phone Number: (715) 735-7411
 Reporting Period: 06/01/2016 - 06/30/2016
 Form Due Date: 07/21/2016
 Permit Number: 0001040

Date Received:
 DOC: 362102
 FIN: 7245
 FID: 438039470
 Region: Northeast Region
 Permit Drafter: Jeff W. Brauer
 Reviewer: Bruce S. Oman
 Office: Peshtigo

	Sample Point	001	703	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	211	280	487	374	373
	Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)
	Units	MGD	ng/L	degF	su	su
	Sample Type	CONTINUOUS	GRAB	GRAB	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1	0.24148		78	6.8	7.1
	2	0.24489		71	6.9	7.1
	3	0.35572		70	6.8	7.2
	4	0.15332		67	7.0	7.2
	5	0.08186		66	7.1	7.3
	6	0.21606		69	7.0	7.1
	7	0.22846		70	6.9	7.1
	8	0.24484		70	6.9	7.6
	9	0.22814		72	7.2	7.4
	10	0.26037		73	7.0	7.4
	11	0.09176		73	7.2	7.4
	12	0.09257		70	6.8	7.4
	13	0.22225		74	6.8	7.2
	14	0.34345		75	6.8	7.4
	15	0.42497		73	6.4	7.2
	16	0.22594		74	7.0	7.2
	17	0.22694		80	7.0	7.2
	18	0.11857		78	7.1	7.3
	19	0.10200		72	7.2	7.3
	20	0.24407		75	7.1	7.2
	21	0.26389		76	7.2	7.4
	22	0.26932		73	7.1	7.3
	23	0.25705		74	7.1	7.3
	24	0.18685		77	7.1	7.2
	25	0.45555		75	6.3	7.4
	26	0.13295		74	6.6	7.3
	27	0.26022	6.8	73	7.1	7.2
	28	0.26564		72	7.0	7.2
	29	0.28292		74	6.9	7.2
	30	0.19381		76	7.1	7.4
	31					

	Sample Point	001	703	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	211	280	487	374	373
	Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)
	Units	MGD	ng/L	degF	su	su
Summary Values	Monthly Avg	0.230528667	6.8	73.133333333	6.95	7.273333333
	Monthly Total					
	Daily Max	0.45555	6.8	80	7.2	7.6
	Daily Min	0.08186	6.8	66	6.3	7.1
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					11 0
	Daily Min				4 0	
	Rolling 12 Month Avg					
QA/QC Information	LOD		0.2			
	LOQ		0.5			
	QC Exceedance	N	N	N	N	N
	Lab Certification		721026460			

Sample Point	001	001	001	001	001	
Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	
Parameter	379	376	388	231	35	
Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Phosphorus, Total	Hardness, Total as CaCO3	Arsenic, Total Recoverable	
Units	minutes	Number	mg/L	mg/L	ug/L	
Sample Type	CONTINUOUS	CONTINUOUS	24 HR COMP	24 HR COMP	24 HR COMP	
Frequency	DAILY	DAILY	WEEKLY	MONTHLY	MONTHLY	
Sample Results	Day 1		0.315	260	300	
	2					
	3					
	4					
	5					
	6					
	7					
	8			0.352	230	250
	9					
	10					
	11					
	12					
	13					
	14					
	15			0.278	130	200
	16					
	17					
	18					
	19					
	20					
	21					
	22			0.174	200	230
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	379		376		388		231		35	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Phosphorus, Total		Hardness, Total as CaCO3		Arsenic, Total Recoverable	
	Units	minutes		Number		mg/L		mg/L		ug/L	
Summary Values	Monthly Avg					0.27975		205		245	
	Monthly Total										
	Daily Max					0.352		260		300	
	Daily Min					0.174		130		200	
	Rolling 12 Month Avg					0.3					
Limit(s) in Effect	Monthly Avg										
	Monthly Total	446	0								
	Daily Max			0	0					680	0
	Daily Min										
	Rolling 12 Month Avg					1	0				
QA/QC Information	LOD					0.008				1	
	LOQ					0.027				2	
	QC Exceedance	N		N		N		N		N	
	Lab Certification					438039470		721026460		721026460	

Sample Point	001	001	001	001	001	
Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	
Parameter	35	147	147	87	152	
Description	Arsenic, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cadmium, Total Recoverable	Cyanide, Amenable	
Units	lbs/day	ug/L	lbs/day	ug/L	ug/L	
Sample Type	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	
Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY	
Sample Results	Day 1	0.603	16	0.03216	<0.14	
	2					
	3					
	4					
	5					
	6					
	7					
	8	0.51	8.8	0.017952	<0.14	
	9					
	10					
	11					
	12					
	13					
	14					
	15	0.708	6.9	0.024426	0.15	<5.0
	16					
	17					
	18					
	19					
	20					
	21					
	22	0.5175	5.8	0.01305	<0.14	
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	35		147		147		87		152	
	Description	Arsenic, Total Recoverable		Copper, Total Recoverable		Copper, Total Recoverable		Cadmium, Total Recoverable		Cyanide, Amenable	
	Units	lbs/day		ug/L		lbs/day		ug/L		ug/L	
Summary Values	Monthly Avg	0.584625		9.375		0.021897		0.0375		0	
	Monthly Total										
	Daily Max	0.708		16		0.03216		0.15		<5	
	Daily Min	0.51		5.8		0.01305		<0.14		<5	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total										
	Daily Max	12	0	69	0	0.98	0				
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD			1.3				0.14		5	
	LOQ			4				0.45		15	
	QC Exceedance	N		N		N		N		N	
	Lab Certification			721026460				721026460		721026460	

	Sample Point	001	001	101	101	101	
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	
	Parameter	112	280	211	457	342	
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)	
	Units	ug/L	ng/L	MGD	mg/L	mg/L	
	Sample Type	GRAB	GRAB	CONTINUOUS	24 HR COMP	GRAB	
	Frequency	MONTHLY	MONTHLY	DAILY	DAILY	2WEEK	
Sample Results	Day 1			0.02582	4.2	<0.99	
	2			0.02628	4.0	<0.99	
	3			0.03197	5.6		
	4			0.01993	5.8		
	5						
	6			0.02303	6.2		
	7			0.02046	5.5		
	8			0.02818	7.0	<0.99	
	9			0.02382	7.6	<0.99	
	10			0.02302	8.3		
	11			0.01725	19.3		
	12						
	13			0.02404	10.3		
	14			0.02350	8.0		
	15			0.02491	6.6	<0.99	
	16			0.02063	9.5	<0.99	
	17			0.02277	4.4		
	18			0.00991	10.3		
	19						
	20			0.02074	9.0		
	21			0.02219	9.4		
	22			0.02263	10.0	<0.99	
	23			0.01547	9.8	<0.99	
	24			0.01221	17.5		
	25						
	26						
	27		10	3.0	0.02352	12.5	
	28				0.01612	9.7	
	29				0.02229	6.4	
	30				0.01275	8.8	
	31						

	Sample Point	001	001	101	101	101		
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent		
	Parameter	112	280	211	457	342		
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)		
	Units	ug/L	ng/L	MGD	mg/L	mg/L		
Summary Values	Monthly Avg	10	3	0.0213376	8.628	0		
	Monthly Total							
	Daily Max	10	3	0.03197	19.3	<0.99		
	Daily Min	10	3	0.00991	4	<0.99		
	Rolling 12 Month Avg							
Limit(s) in Effect	Monthly Avg				31	0	26	0
	Monthly Total							
	Daily Max				60	0	52	0
	Daily Min							
	Rolling 12 Month Avg							
QA/QC Information	LOD	30	0.2				0.99	
	LOQ	100	0.5				3.1	
	QC Exceedance	N	N	N	N	N	N	
	Lab Certification		721026460		438039470	721026460		

Sample Point	101	101	101	101	101	
Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	
Parameter	87	133	315	553	155	
Description	Cadmium, Total Recoverable	Chromium, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Cyanide, Total	
Units	ug/L	ug/L	ug/L	ug/L	ug/L	
Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	GRAB	
Frequency	2/WEEK	MONTHLY	2/WEEK	2/WEEK	MONTHLY	
Sample Results	Day 1	<0.14	<0.67	1.7	32	
	2	<0.14	<0.67	2.3	23	
	3					
	4					
	5					
	6					
	7					
	8	<0.14	<0.67	3.4	39	
	9	<0.14	<0.67	4.0	39	
	10					
	11					
	12					
	13					
	14					
	15	<0.14	<0.67	3.3	37	19
	16	0.32	<0.67	4.0	30	
	17					
	18					
	19					
	20					
	21					
	22	0.22	<0.67	2.3	42	
	23	<0.14	<0.67	2.3	31	
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	87		133		315		553		155	
	Description	Cadmium, Total Recoverable		Chromium, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Cyanide, Total	
	Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Summary Values	Monthly Avg	0.0675		0		2.9125		34.125		19	
	Monthly Total										
	Daily Max	0.32		<0.67		4		42		19	
	Daily Min	<0.14		<0.67		1.7		23		19	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	260	0	1710	0	2380	0	1480	0	650	0
	Monthly Total										
	Daily Max	690	0	2770	0	3980	0	2610	0	1200	0
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD	0.14		0.67		1.1		5		5	
	LOQ	0.45		2		3.4		10		15	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	721026460		721026460		721026460		721026460		721026460	

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	147	264	430	374	373
	Description	Copper, Total Recoverable	Lead, Total Recoverable	Silver, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	ug/L	ug/L	ug/L	su	su
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	2WEEK	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1	4.8	<1.5	<0.37	6.4	7.7
	2	3.3	<1.5	<0.37	6.4	7.6
	3				6.6	7.0
	4				6.4	7.2
	5					
	6				6.3	7.4
	7				6.1	6.7
	8	5.6	<1.5	<0.37	6.0	6.6
	9	4.5	<1.5	<0.37	6.4	7.4
	10				6.3	7.0
	11				6.2	6.8
	12					
	13				7.0	7.6
	14				6.7	7.7
	15	5.5	<1.5	<0.37	6.6	7.2
	16	4.9	<1.5	<0.37	6.8	7.6
	17				6.4	7.1
	18				6.1	6.6
	19					
	20				7.2	8.4
	21				6.6	7.8
	22	5.2	<1.5	<0.37	6.2	7.0
	23	5.4	<1.5	<0.37	6.8	7.2
	24				6.8	7.4
	25					
	26					
	27				7.0	7.7
	28				6.1	7.3
	29				6.2	6.8
	30				6.2	7.4
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	147		264		430		374		373	
	Description	Copper, Total Recoverable		Lead, Total Recoverable		Silver, Total Recoverable		pH (Minimum)		pH (Maximum)	
	Units	ug/L		ug/L		ug/L		su		su	
Summary Values	Monthly Avg	4.9		0		0		6.472		7.288	
	Monthly Total										
	Daily Max	5.6		<1.5		<0.37		7.2		8.4	
	Daily Min	3.3		<1.5		<0.37		6		6.6	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	2070	0	430	0	240	0				
	Monthly Total										
	Daily Max	3380	0	690	0	430	0			11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	LOD	1.3		1.5		0.37					
	LOQ	4		4.9		1.2					
	QC Exceedance	N		N		N		N		N	
	Lab Certification	721026460		721026460		721026460					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	379	376	507	40	490
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Total Toxic Organics	Benzene	Tetrachloroethylene
	Units	minutes	Number	ug/L	ug/L	ug/L
	Sample Type	CALCULATED	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	379		376		507		40		490	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Total Toxic Organics		Benzene		Tetrachloroethylene	
	Units	minutes		Number		ug/L		ug/L		ug/L	
Summary Values	Monthly Avg										
	Monthly Total										
	Daily Max										
	Daily Min										
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total	446	0	0	0						
	Daily Max					2130					
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD										
	LOQ										
	QC Exceedance	N		N		N		N		N	
	Lab Certification										

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
Summary Values	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					
	LOQ					
	QC Exceedance					
	Lab Certification					

Sample Point	101	106	106	106	107	
Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results	
Parameter	167	211	35	457	280	
Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable	
Units	ug/L	gpd	ug/L	mg/L	ng/L	
Sample Type	24 HR COMP	CONTINUOUS	24 HR COMP	24 HR COMP	GRAB	
Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	MONTHLY	
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					<0.20
	28					
	29					
	30					
	31					

Sample Point	101	106	106	106	107
Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
Parameter	167	211	35	457	280
Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
Units	ug/L	gpd	ug/L	mg/L	ng/L
Summary Values	Monthly Avg				0
	Monthly Total				
	Daily Max				<0.2
	Daily Min				<0.2
	Rolling 12 Month Avg				
Limit(s) in Effect	Monthly Avg				
	Monthly Total				
	Daily Max				
	Daily Min				
	Rolling 12 Month Avg				
QA/QC Information	LOD				0.2
	LOQ				0.5
	QC Exceedance	N	N	N	N
	Lab Certification				721026460

	Sample Point	003	003	003	003	003
	Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg
	Parameter	211	457	35	374	373
	Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	MGD	mg/L	ug/L	su	su
	Sample Type	CONTINUOUS	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	WEEKLY	WEEKLY	DAILY	DAILY
Sample Results	Day 1	0.005786			6.7	7.0
	2	0.011277	1.4	66	6.7	7.1
	3	0.021220			6.1	7.9
	4	0.010507			6.8	7.3
	5	0.001282			6.1	7.7
	6	0.024516			7.1	8.3
	7	0.013323			6.1	7.5
	8	0.023067			7.0	7.6
	9	0.021169			7.1	7.3
	10	0.015994			7.1	7.4
	11	0.014253			6.0	7.4
	12	0.015801			6.5	6.6
	13	0.011463	2.0	60	6.2	7.3
	14	0.019454			6.3	7.0
	15	0.012688			6.4	7.7
	16	0.014311			6.4	6.8
	17	0.009057			6.0	7.9
	18	0.009679			8.0	8.1
	19	0.014347			7.2	8.4
	20	0.010083	1.1	74	6.7	7.7
	21	0.023862			6.4	7.6
	22	0.021244			7.2	7.5
	23	0.017985	1.2	200	7.1	7.4
	24	0.011563			6.1	8.6
	25	0.012782			7.6	8.6
	26	0.014163			6.7	8.6
	27	0.009465			6.0	7.8
	28	0.018964			6.8	7.9
	29	0.010016			6.6	7.1
	30	0.002931			7.1	7.1
	31					

	Sample Point	003		003		003		003	
	Description	Future remedial action dischg		Future remedial action dischg		Future remedial action dischg		Future remedial action dischg	
	Parameter	211		457		35		374	
	Description	Flow Rate		Suspended Solids, Total		Arsenic, Total Recoverable		pH (Minimum)	
	Units	MGD		mg/L		ug/L		su	
Summary Values	Monthly Avg	0.014075067		1.425		100		6.67	
	Monthly Total								
	Daily Max	0.024516		2		200		8	
	Daily Min	0.001282		1.1		60		6	
	Rolling 12 Month Avg								
Limit(s) in Effect	Monthly Avg								
	Monthly Total								
	Daily Max					680	0		11 0
	Daily Min							4 0	
	Rolling 12 Month Avg								
QA/QC Information	LOD					1			
	LOQ					2			
	QC Exceedance	N		N		N		N	
	Lab Certification			438039470		721026460			

	Sample Point	003	003
	Description	Future remedial action dischg	Future remedial action dischg
	Parameter	379	376
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes
	Units	minutes	Number
	Sample Type	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	DAILY
Sample Results	Day 1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		
	26		
	27		
	28		
	29		
	30		
	31		

	Sample Point	003		003	
	Description	Future remedial action dischg		Future remedial action dischg	
	Parameter	379		376	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes	
	Units	minutes		Number	
Summary Values	Monthly Avg				
	Monthly Total				
	Daily Max				
	Daily Min				
	Rolling 12 Month Avg				
Limit(s) in Effect	Monthly Avg				
	Monthly Total	446	0		
	Daily Max			0	0
	Daily Min				
	Rolling 12 Month Avg				
QA/QC Information	LOD				
	LOQ				
	QC Exceedance	N		N	
	Lab Certification				

Footnotes (DNR Use Only; Instructions for completing this form that are unique for your facility may be displayed here.)

1. Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for TTO I certify that to the best of my knowledge and belief no dumping of concentrated toxic organics into the wastewaters has
2. occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the department.

General Remarks

CN- always done as a grab sample per WDNR.
CI- done only once a month

Laboratory Quality Control Comments



eReport Certify - TYCO FIRE PROTECTION PRODUCTS LP

- 393825

Facility Name

TYCO FIRE PROTECTION PRODUCTS LP

Form Type

Wastewater Discharge Monitoring Long Report

DOC ID

367819

Reporting Period

7/1/2016 to 7/31/2016

Enter Certification Code

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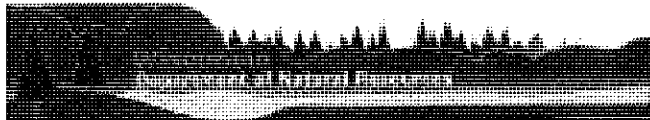
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eReport Certify - TYCO FIRE PROTECTION PRODUCTS LP

- 393825

Facility Name

TYCO FIRE PROTECTION PRODUCTS LP

Form Type

Wastewater Discharge Monitoring Long Report

DOC ID

367819

Reporting Period

7/1/2016 to 7/31/2016

Enter Certification Code

E-Mail was sent to

afleury@tycoint.com

Without leaving THIS page, check E-Mail address for message containing Certification code. Enter code and click 'Certify' button to complete Submittal.

Submittal of this form is required by section 283.55, Wis. Stats., and chapters NR 205 and NR 214 or NR 204, Wis. Admin. Code.

Personally identifiable information collected on this form may be used for purposes other than that for which it was originally collected. Under Wisconsin's open records laws, DNR is required to provide all non-confidential information to any person who requests it. Such information may be provided to the public in written or electronic form. Information reported may be made available to the public via a DNR web page.

I certify under penalty of law that this form submitted to DNR on 8/20/2016 for the period 7/1/2016 to 7/31/2016 and identified by the DOC ID number listed above was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Wastewater Discharge Monitoring Long Report

For DNR Use Only

Facility Name: TYCO FIRE PROTECTION PRODUCTS LP
 Contact Address: One Stanton Street
 Marinette, WI 54143
 Facility Contact: Judith Rost, Sr Lab Tech
 Phone Number: (715) 735-7411
 Reporting Period: 07/01/2016 - 07/31/2016
 Form Due Date: 08/21/2016
 Permit Number: 0001040

Date Received:
 DOC: 367819
 FIN: 7245
 FID: 438039470
 Region: Northeast Region
 Permit Drafter: Trevor J Moen
 Reviewer: Bruce S. Oman
 Office: Peshtigo

Sample Point	001	703	001	001	001	
	DESCRIPTION	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	
Parameter	211	280	487	374	373	
Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)	
Units	MGD	ng/L	degF	su	su	
Sample Type	CONTINUOUS	GRAB	GRAB	CONTINUOUS	CONTINUOUS	
Frequency	DAILY	MONTHLY	MONTHLY	DAILY	DAILY	
Sample Results	Day 1	0.08087		70	7.2	7.4
	2	0.08823		72	7.3	7.4
	3	0.08822		73	7.3	7.4
	4	0.09591		77	7.2	7.4
	5	0.25056		77	7.1	7.3
	6	0.31477		78	6.7	7.3
	7	0.21462		74	7.1	7.3
	8	0.09243		76	7.2	7.5
	9	0.19023		73	7.3	7.5
	10	0.11726		72	7.3	7.5
	11	0.23388		78	6.9	7.4
	12	0.26292		80	7.1	7.4
	13	0.29372		77	7.1	7.2
	14	0.23513		75	7.0	7.2
	15	0.11708		69	7.2	7.4
	16	0.09022		74	7.3	7.5
	17	0.20485		72	6.7	7.4
	18	0.25258		76	7.2	7.3
	19	0.24846		76	7.1	7.3
	20	0.26355		80	7.1	7.2
	21	0.29126		81	6.7	7.3
	22	0.14517		79	7.2	7.4
	23	0.06905		82	7.2	7.4
	24	0.09649		78	7.3	7.4
	25	0.23505		80	7.3	7.4
	26	0.24260		81	7.3	7.4
	27	0.30890	7.9	76	7.3	7.4
	28	0.26453		74	7.1	7.4
	29	0.14433		77	7.1	7.3
	30	0.06796			7.3	7.4
	31	0.10245			7.3	7.5

	Sample Point	001	703	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	211	280	487	374	373
	Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)
	Units	MGD	ng/L	degF	su	su
Summary Values	Monthly Avg	0.183976774	7.9	76.103448276	7.14516129	7.374193548
	Monthly Total					
	Daily Max	0.31477	7.9	82	7.3	7.5
	Daily Min	0.06796	7.9	69	6.7	7.2
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					11 0
	Daily Min				4 0	
	Rolling 12 Month Avg					
QA/QC Information	LOD		0.2			
	LOQ		0.5			
	QC Exceedance	N	N	N	N	N
	Lab Certification		721026460			

Sample Point	001	001	001	001	001	
Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	
Parameter	379	376	388	231	35	
Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Phosphorus, Total	Hardness, Total as CaCO3	Arsenic, Total Recoverable	
Units	minutes	Number	mg/L	mg/L	ug/L	
Sample Type	CONTINUOUS	CONTINUOUS	24 HR COMP	24 HR COMP	24 HR COMP	
Frequency	DAILY	DAILY	WEEKLY	MONTHLY	MONTHLY	
Sample Results	Day 1					
	2					
	3					
	4					
	5			0.085	450	<1.0
	6					
	7					
	8					
	9					
	10					
	11			0.124	270	360
	12					
	13					
	14					
	15					
	16					
	17					
	18			0.076	250	340
	19					
	20					
	21					
	22					
	23					
	24					
	25			0.113	330	2700
	26					
	27					
	28					
	29					
	30					
	31					

Sample Point	001		001		001		001		001		
Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		
Parameter	379		376		388		231		35		
Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Phosphorus, Total		Hardness, Total as CaCO3		Arsenic, Total Recoverable		
Units	minutes		Number		mg/L		mg/L		ug/L		
Summary Values	Monthly Avg				0.0995		325		850		
	Monthly Total										
	Daily Max				0.124		450		2700		
	Daily Min				0.076		250		<1		
	Rolling 12 Month Avg				0.3						
Limit(s) in Effect	Monthly Avg										
	Monthly Total	446	0								
	Daily Max			0	0				680	1	
	Daily Min										
	Rolling 12 Month Avg					1	0				
QA/QC Information	LOD				0.008				1		
	LOQ				0.027				2		
	QC Exceedance	N		N		N		N		N	
	Lab Certification					438039470		721026460		721026460	

Sample Point	001	001	001	001	001	
Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	
Parameter	35	147	147	87	152	
Description	Arsenic, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cadmium, Total Recoverable	Cyanide, Amenable	
Units	lbs/day	ug/L	lbs/day	ug/L	ug/L	
Sample Type	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	
Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY	
Sample Results	Day 1					
	2					
	3					
	4					
	5	2.09	4.5	0.009405	<0.14	
	6					
	7					
	8					
	9					
	10					
	11	0.702	5.6	0.01092	<0.14	
	12					
	13					
	14					
	15					
	16					
	17					
	18	0.714	6.2	0.01302	<0.14	<5.0
	19					
	20					
	21					
	22					
	23					
	24					
	25	5.292	6.0	0.01176	<0.14	
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	35		147		147		87		152	
	Description	Arsenic, Total Recoverable		Copper, Total Recoverable		Copper, Total Recoverable		Cadmium, Total Recoverable		Cyanide, Amenable	
	Units	lbs/day		ug/L		lbs/day		ug/L		ug/L	
Summary Values	Monthly Avg	2.1995		5.575		0.01127625		0		0	
	Monthly Total										
	Daily Max	5.292		6.2		0.01302		<0.14		<5	
	Daily Min	0.702		4.5		0.009405		<0.14		<5	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total										
	Daily Max	12	0	69	0	0.98	0				
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD			1.3				0.14		5	
	LOQ			4				0.45		15	
	QC Exceedance	N		N		N		N		N	
	Lab Certification			721026460				721026460		721026460	

Sample Point	001	001	101	101	101	
Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	
Parameter	112	280	211	457	342	
Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)	
Units	ug/L	ng/L	MGD	mg/L	mg/L	
Sample Type	GRAB	GRAB	CONTINUOUS	24 HR COMP	GRAB	
Frequency	MONTHLY	MONTHLY	DAILY	DAILY	2/WEEK	
Sample Results	Day 1					
	2					
	3					
	4					
	5			0.02116	8.6	<0.99
	6			0.02110	7.2	<0.99
	7			0.01846	5.4	
	8			0.00280	10.0	
	9					
	10					
	11			0.01076	15.0	1.9
	12			0.02094	62.8	<0.99
	13			0.01510	19.5	
	14			0.01891	24.3	
	15					
	16					
	17					
	18			0.01894	15.7	<0.99
	19			0.02958	13.0	<0.99
	20			0.02105	6.0	
	21			0.02405	22.3	
	22			0.01059	30.0	
	23					
	24					
	25			0.02199	15.0	1.1
	26			0.01946	12.3	<0.99
	27	10	0.80	0.02271	16.3	
	28			0.01991	19.3	
	29			0.01182	12.3	
	30					
	31					

Sample Point	001	001	101	101	101			
Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent			
Parameter	112	280	211	457	342			
Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)			
Units	ug/L	ng/L	MGD	mg/L	mg/L			
Summary Values	Monthly Avg	10	0.8	0.018296111	17.5	0.375		
	Monthly Total							
	Daily Max	10	0.8	0.02958	62.8	1.9		
	Daily Min	10	0.8	0.0028	5.4	<0.99		
	Rolling 12 Month Avg							
Limit(s) in Effect	Monthly Avg				31	0	26	0
	Monthly Total							
	Daily Max				60	1	52	0
	Daily Min							
	Rolling 12 Month Avg							
QA/QC Information	LOD	30	0.2				0.99	
	LOQ	100	0.5				3.1	
	QC Exceedance	N	N	N	Y		N	
	Lab Certification		721026460		438039470		721026460	

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	87	133	315	553	155
	Description	Cadmium, Total Recoverable	Chromium, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Cyanide, Total
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	GRAB
	Frequency	2WEEK	MONTHLY	2WEEK	2WEEK	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5	<0.14	<0.67	2.4	21	
	6	<0.14	0.72	1.3	45	
	7					
	8	0.15	0.71	9.2	64	
	9					
	10					
	11	<0.14	<0.67	12.0	56	
	12					
	13					
	14					
	15					
	16					
	17					
	18	<0.14	1.1	3.0	41	<5.0
	19	<0.14	0.88	1.6	23	
	20					
	21					
	22	<0.14	0.76	2.2	29	
	23					
	24					
	25	<0.14	<0.67	1.7	28	
	26					
	27					
	28					
	29					
	30					
	31					

Sample Point	101		101		101		101		101		
Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		
Parameter	87		133		315		553		155		
Description	Cadmium, Total Recoverable		Chromium, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Cyanide, Total		
Units	ug/L		ug/L		ug/L		ug/L		ug/L		
Summary Values	Monthly Avg	0.01875		0.52125		4.175		38.375		0	
	Monthly Total										
	Daily Max	0.15		1.1		12		64		<5	
	Daily Min	<0.14		<0.67		1.3		21		<5	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	260	0	1710	0	2380	0	1480	0	650	0
	Monthly Total										
	Daily Max	690	0	2770	0	3980	0	2610	0	1200	0
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD	0.14		0.67		1.1		5		5	
	LOQ	0.45		2		3.4		10		15	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	721026460		721026460		721026460		721026460		721026460	

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	147	264	430	374	373
	Description	Copper, Total Recoverable	Lead, Total Recoverable	Silver, Total Recoverable	pH (Minimum)	pH (Maximum)
	Units	ug/L	ug/L	ug/L	su	su
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS
	Frequency	2WEEK	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1					
	2					
	3					
	4					
	5	6.1	<1.5	<0.37	6.6	8.6
	6	2.1	<1.5	<0.37	6.4	7.6
	7				6.2	6.8
	8	4.1	<1.5	<0.37	6.3	6.3
	9					
	10					
	11	6.0	<1.5	<0.37	7.0	8.4
	12				6.8	8.2
	13				6.4	7.9
	14				7.0	7.2
	15					
	16					
	17					
	18	3.8	<1.5	<0.37	8.3	8.9
	19	5.4	<1.5	<0.37	8.2	8.6
	20				7.9	8.8
	21				8.0	8.4
	22	3.5	<1.5	<0.37	8.2	8.4
	23					
	24					
	25	3.7	<1.5	<0.37	8.2	9.0
	26				7.8	8.7
	27				7.7	8.5
	28				7.8	8.5
	29				7.4	8.4
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	147		264		430		374		373	
	Description	Copper, Total Recoverable		Lead, Total Recoverable		Silver, Total Recoverable		pH (Minimum)		pH (Maximum)	
	Units	ug/L		ug/L		ug/L		su		su	
Summary Values	Monthly Avg	4.3375		0		0		7.344444444		8.177777778	
	Monthly Total										
	Daily Max	6.1		<1.5		<0.37		8.3		9	
	Daily Min	2.1		<1.5		<0.37		6.2		6.3	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	2070	0	430	0	240	0				
	Monthly Total										
	Daily Max	3380	0	690	0	430	0			11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	LOD	1.3		1.5		0.37					
	LOQ	4		4.9		1.2					
	QC Exceedance	N		N		N		N		N	
	Lab Certification	721026460		721026460		721026460					

Sample Point	101	101	101	101	101
Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
Parameter	379	376	507	40	490
Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Total Toxic Organics	Benzene	Tetrachloroethylene
Units	minutes	Number	ug/L	ug/L	ug/L
Sample Type	CALCULATED	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP
Frequency	DAILY	DAILY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				
	21				
	22				
	23				
	24				
	25				
	26				
	27				
	28				
	29				
	30				
	31				

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	379		376		507		40		490	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Total Toxic Organics		Benzene		Tetrachloroethylene	
	Units	minutes		Number		ug/L		ug/L		ug/L	
Summary Values	Monthly Avg										
	Monthly Total										
	Daily Max										
	Daily Min										
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total	446	0	0	0						
	Daily Max					2130					
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD										
	LOQ										
	QC Exceedance	N		N		N		N		N	
	Lab Certification										

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
Summary Values	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					
	LOQ					
	QC Exceedance	N	N	N	N	N
	Lab Certification					

Sample Point	101	106	106	106	107	
Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results	
Parameter	167	211	35	457	280	
Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable	
Units	ug/L	gpd	ug/L	mg/L	ng/L	
Sample Type	24 HR COMP	CONTINUOUS	24 HR COMP	24 HR COMP	GRAB	
Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	MONTHLY	
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					<0.20
	28					
	29					
	30					
	31					

Sample Point	101	106	106	106	107
Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
Parameter	167	211	35	457	280
Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
Units	ug/L	gpd	ug/L	mg/L	ng/L
Summary Values	Monthly Avg				0
	Monthly Total				
	Daily Max				<0.2
	Daily Min				<0.2
	Rolling 12 Month Avg				
Limit(s) in Effect	Monthly Avg				
	Monthly Total				
	Daily Max				
	Daily Min				
	Rolling 12 Month Avg				
QA/QC Information	LOD				0.2
	LOQ				0.5
	QC Exceedance	N	N	N	N
	Lab Certification				721026460

Sample Point	003	003	003	003	003	
Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	
Parameter	211	457	35	374	373	
Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)	
Units	MGD	mg/L	ug/L	su	su	
Sample Type	CONTINUOUS	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS	
Frequency	DAILY	WEEKLY	WEEKLY	DAILY	DAILY	
Sample Results	Day 1	0.006133		7.1	7.1	
	2					
	3					
	4					
	5					
	6					
	7					
	8	0.015232			8.3	8.4
	9	0.008871			8.3	8.5
	10	0.009938			6.0	8.9
	11	0.010701			6.3	8.5
	12	0.011160	4.3	5000	7.3	8.2
	13	0.013570			6.7	8.3
	14	0.016935			6.4	7.2
	15	0.016452			6.7	7.2
	16	0.006335			6.4	6.5
	17	0.005414			6.5	6.6
	18	0.011888			6.5	6.7
	19	0.017345	3.6	3200	6.4	6.9
	20	0.010393			6.4	6.6
	21	0.012627			6.6	6.7
	22	0.007289			6.7	7.0
	23	0.006484			6.8	9.0
	24	0.005376			6.5	8.9
	25	0.012480			6.3	7.4
	26	0.009432	2.7	3000	6.2	7.2
	27	0.011843			6.8	7.3
	28	0.007387			6.7	7.6
	29	0.011146			6.1	7.7
	30	0.004726			6.6	7.3
	31	0.013920			6.0	6.6

	Sample Point	003	003	003	003	003	
	Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	
	Parameter	211	457	35	374	373	
	Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)	
	Units	MGD	mg/L	ug/L	su	su	
Summary Values	Monthly Avg	0.01052308	3.533333333	3733.333333333	6.664	7.532	
	Monthly Total						
	Daily Max	0.017345	4.3	5000	8.3	9	
	Daily Min	0.004726	2.7	3000	6	6.5	
	Rolling 12 Month Avg						
Limit(s) in Effect	Monthly Avg						
	Monthly Total						
	Daily Max			680	3	11	0
	Daily Min					4	0
	Rolling 12 Month Avg						
QA/QC Information	LOD			1			
	LOQ			2			
	QC Exceedance	N	N	Y	N	N	
	Lab Certification		438039470	721026460			

	Sample Point	003	003
	Description	Future remedial action dischg	Future remedial action dischg
	Parameter	379	376
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes
	Units	minutes	Number
	Sample Type	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	DAILY
Sample Results	Day 1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		
	26		
	27		
	28		
	29		
	30		
	31		

	Sample Point	003		003	
	Description	Future remedial action dischg		Future remedial action dischg	
	Parameter	379		376	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes	
	Units	minutes		Number	
Summary Values	Monthly Avg				
	Monthly Total				
	Daily Max				
	Daily Min				
	Rolling 12 Month Avg				
Limit(s) in Effect	Monthly Avg				
	Monthly Total	446	0		
	Daily Max			0	0
	Daily Min				
	Rolling 12 Month Avg				
QA/QC Information	LOD				
	LOQ				
	QC Exceedance	N		N	
	Lab Certification				

Footnotes (DNR Use Only; Instructions for completing this form that are unique for your facility may be displayed here.)

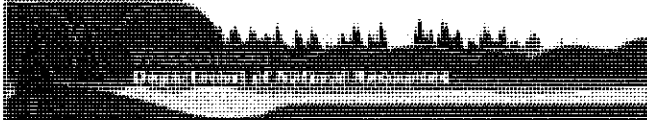
1. Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for TTO I certify that to the best of my knowledge and belief no dumping of concentrated toxic organics into the wastewaters has
2. occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the department.

General Remarks

Outfall OF001 temperature chart was stuck and did not run on July 30-31 so, you will not have a temperature reading. The first week of July OF003 sampler was not taken because the system did not run all week because of maintenance issues.
CN- is always a grab sample per WDNR

Laboratory Quality Control Comments

On July 25th, 2016 OF001 the Arsenic was out of range, we have been working on the problem ever since sending different samples out to other Labs for Analysis.
July 12th we had an exceedance of TSS for that day of 62.8.
The three weeks that we ran the sampler on OF003 we had an exceedance of Arsenic and we have been shut down since then and working with other labs to solve the problem.



eReport Certify - TYCO FIRE PROTECTION PRODUCTS LP

- 393163

Facility Name

TYCO FIRE PROTECTION PRODUCTS LP

Form Type

Wastewater Discharge Monitoring Long Report

DOC ID

367820

Reporting Period

8/1/2016 to 8/31/2016

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Wastewater Discharge Monitoring Long Report

For DNR Use Only

Facility Name: TYCO FIRE PROTECTION PRODUCTS LP
 Contact Address: One Stanton Street
 Marinette, WI 54143
 Facility Contact: Judith Rost, Sr Lab Tech
 Phone Number: (715) 735-7411
 Reporting Period: 08/01/2016 - 08/31/2016
 Form Due Date: 09/21/2016
 Permit Number: 0001040

Date Received:	
DOC:	367820
FIN:	7245
FID:	438039470
Region:	Northeast Region
Permit Drafter:	Trevor J Moen
Reviewer:	Bruce S. Oman
Office:	Peshtigo

	Sample Point	001	703	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	211	280	487	374	373
	Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)
	Units	MGD	ng/L	degF	su	su
	Sample Type	CONTINUOUS	GRAB	GRAB	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	MONTHLY	MONTHLY	DAILY	DAILY
Sample Results	Day 1	0.25257		80	7.1	7.3
	2	0.23976		83	7.0	7.3
	3	0.24910		84	6.9	7.3
	4	0.20950		84	7.0	7.1
	5	0.13841		83	7.0	7.7
	6	0.00904		80	7.7	7.9
	7	0.05457		79	7.4	7.9
	8	0.22159		79	7.3	7.6
	9	0.21639		82	7.3	7.6
	10	0.22361		84	7.2	7.5
	11	0.22643		84	7.1	7.4
	12	0.20241		79	6.8	7.3
	13	0.07661		78	6.8	7.5
	14	0.11398		79	6.6	7.5
	15	0.21831		84	7.1	7.2
	16	0.30649		90	6.7	7.4
	17	0.23163		82	7.0	7.2
	18	0.22913		83	6.9	7.0
	19	0.26925		75	6.4	7.1
	20	0.24351		71	6.3	7.2
	21	0.10522		74	7.1	7.2
	22	0.21820		77	6.8	7.0
	23	0.31805		79	6.8	7.0
	24	0.25802	6.4	75	6.4	7.2
	25	0.14667		72	6.8	7.2
	26	0.10929		72	6.6	7.2
	27	0.12596		77	6.6	7.1
	28	0.10815		76	7.0	7.2
	29	0.21743		77	6.9	7.0
	30	0.25150		79	6.8	7.1
	31	0.25498		83	6.9	7.3

	Sample Point	001	703	001	001	001
	Description	PRIOR TO MENOMINEE RIVER	Intake Water Monitoring	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER
	Parameter	211	280	487	374	373
	Description	Flow Rate	Mercury, Total Recoverable	Temperature	pH (Minimum)	pH (Maximum)
	Units	MGD	ng/L	degF	su	su
Summary Values	Monthly Avg	0.195024516	6.4	79.483870968	6.912903226	7.306451613
	Monthly Total					
	Daily Max	0.31805	6.4	90	7.7	7.9
	Daily Min	0.00904	6.4	71	6.3	7
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					11 0
	Daily Min				4 0	
	Rolling 12 Month Avg					
QA/QC Information	LOD		0.2			
	LOQ		0.5			
	QC Exceedance	N	N	N	N	N
	Lab Certification		721026460			

Sample Point	001	001	001	001	001	
Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	
Parameter	379	376	388	231	35	
Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Phosphorus, Total	Hardness, Total as CaCO3	Arsenic, Total Recoverable	
Units	minutes	Number	mg/L	mg/L	ug/L	
Sample Type	CONTINUOUS	CONTINUOUS	24 HR COMP	24 HR COMP	24 HR COMP	
Frequency	DAILY	DAILY	WEEKLY	MONTHLY	MONTHLY	
Sample Results	Day 1		0.432	250	790	
	2					
	3					
	4					
	5					
	6					
	7					
	8			0.694	300	1200
	9					
	10					
	11					
	12					
	13					
	14					
	15			0.166	240	270
	16					
	17					
	18					
	19					
	20					
	21					
	22			0.338	210	380
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

Sample Point	001		001		001		001		001	
Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
Parameter	379		376		388		231		35	
Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Phosphorus, Total		Hardness, Total as CaCO3		Arsenic, Total Recoverable	
Units	minutes		Number		mg/L		mg/L		ug/L	
Summary Values	Monthly Avg				0.4075		250		660	
	Monthly Total									
	Daily Max				0.694		300		1200	
	Daily Min				0.166		210		270	
	Rolling 12 Month Avg				0.3					
Limit(s) in Effect	Monthly Avg									
	Monthly Total	446	0							
	Daily Max			0	0				680	2
	Daily Min									
	Rolling 12 Month Avg					1	0			
QA/QC Information	LOD				0.008				1	
	LOQ				0.027				2	
	QC Exceedance	N		N		N		N		Y
	Lab Certification					438039470		721026460		721026460

Sample Point	001	001	001	001	001	
Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	
Parameter	35	147	147	87	152	
Description	Arsenic, Total Recoverable	Copper, Total Recoverable	Copper, Total Recoverable	Cadmium, Total Recoverable	Cyanide, Amenable	
Units	lbs/day	ug/L	lbs/day	ug/L	ug/L	
Sample Type	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	
Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY	
Sample Results	Day 1	1.6669	4.1	0.008651	<0.14	
	2					
	3					
	4					
	5					
	6					
	7					
	8	2.22	5.9	0.010915	<0.14	
	9					
	10					
	11					
	12					
	13					
	14					
	15	0.4914	6.1	0.011102	<0.14	<5.0
	16					
	17					
	18					
	19					
	20					
	21					
	22	0.6916	12	0.02184	<0.14	
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	001		001		001		001		001	
	Description	PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER		PRIOR TO MENOMINEE RIVER	
	Parameter	35		147		147		87		152	
	Description	Arsenic, Total Recoverable		Copper, Total Recoverable		Copper, Total Recoverable		Cadmium, Total Recoverable		Cyanide, Amenable	
	Units	lbs/day		ug/L		lbs/day		ug/L		ug/L	
Summary Values	Monthly Avg	1.267475		7.025		0.013127		0		0	
	Monthly Total										
	Daily Max	2.22		12		0.02184		<0.14		<5	
	Daily Min	0.4914		4.1		0.008651		<0.14		<5	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total										
	Daily Max	12	0	69	0	0.98	0				
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD			1.3				0.14		5	
	LOQ			4				0.45		15	
	QC Exceedance	N		N		N		N		N	
	Lab Certification			721026460				721026460		721026460	

Sample Point	001	001	101	101	101	
Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	
Parameter	112	280	211	457	342	
Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)	
Units	ug/L	ng/L	MGD	mg/L	mg/L	
Sample Type	GRAB	GRAB	CONTINUOUS	24 HR COMP	GRAB	
Frequency	MONTHLY	MONTHLY	DAILY	DAILY	2/WEEK	
Sample Results	Day 1		0.022097	27.3	1.9	
	2		0.020139	35.0	1.7	
	3		0.019338	44.0		
	4		0.012388	39.3		
	5		0.013383	29.0		
	6					
	7					
	8			0.018504	12.2	<0.99
	9			0.014068	15.3	<0.99
	10			0.016738	17.5	
	11			0.015621	12.0	
	12			0.008871	13.3	
	13			0.002512	18.3	
	14					
	15			0.016219	7.8	<0.99
	16			0.018068	7.5	<0.99
	17			0.016841	8.8	
	18			0.011578	6.8	
	19			0.011716	7.5	
	20			0.004465	13.0	
	21					
	22	20		0.011781	16.3	<0.99
	23			0.013079	10.3	<0.99
	24		1.9	0.015688	11.0	
	25			0.014301	11.3	
	26			0.010783	13.3	
	27			0.00539	15.3	
	28					
	29			0.010675	17.3	
	30			0.012479	8.7	
	31			0.014245	18.7	

	Sample Point	001	001	101	101	101		
	Description	PRIOR TO MENOMINEE RIVER	PRIOR TO MENOMINEE RIVER	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent		
	Parameter	112	280	211	457	342		
	Description	Chlorine, Total Residual	Mercury, Total Recoverable	Flow Rate	Suspended Solids, Total	Oil & Grease (Freon)		
	Units	ug/L	ng/L	MGD	mg/L	mg/L		
Summary Values	Monthly Avg	20	1.9	0.013498731	16.8	0.45		
	Monthly Total							
	Daily Max	20	1.9	0.022097	44	1.9		
	Daily Min	20	1.9	0.002512	6.8	<0.99		
	Rolling 12 Month Avg							
Limit(s) in Effect	Monthly Avg				31	0	26	0
	Monthly Total							
	Daily Max				60	0	52	0
	Daily Min							
	Rolling 12 Month Avg							
QA/QC Information	LOD	30	0.2				0.99	
	LOQ	100	0.5				3.1	
	QC Exceedance	N	N	N	N	N	N	
	Lab Certification		721026460		438039470	721026460		

Sample Point	101	101	101	101	101	
Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	
Parameter	87	133	315	553	155	
Description	Cadmium, Total Recoverable	Chromium, Total Recoverable	Nickel, Total Recoverable	Zinc, Total Recoverable	Cyanide, Total	
Units	ug/L	ug/L	ug/L	ug/L	ug/L	
Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	GRAB	
Frequency	2WEEK	MONTHLY	2WEEK	2WEEK	MONTHLY	
Sample Results	Day 1	<0.14	3.2	2.5	31	
	2	<0.14	1.4	2.4	44	
	3					
	4					
	5					
	6					
	7					
	8	0.16	<0.67	2.3	110	
	9	<0.14	<0.67	1.5	61	<5.0
	10					
	11					
	12					
	13					
	14					
	15	0.22	<0.67	<1.1	59	
	16	<0.14	0.96	1.3	49	
	17					
	18					
	19					
	20					
	21					
	22	<0.14	<0.67	7.4	89	
	23	0.24	0.90	10	77	
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	87		133		315		553		155	
	Description	Cadmium, Total Recoverable		Chromium, Total Recoverable		Nickel, Total Recoverable		Zinc, Total Recoverable		Cyanide, Total	
	Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Summary Values	Monthly Avg	0.0775		0.8075		3.425		65		0	
	Monthly Total										
	Daily Max	0.24		3.2		10		110		<5	
	Daily Min	<0.14		<0.67		<1.1		31		<5	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	260	0	1710	0	2380	0	1480	0	650	0
	Monthly Total										
	Daily Max	690	0	2770	0	3980	0	2610	0	1200	0
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD	0.14		0.67		1.1		5		5	
	LOQ	0.45		2		3.4		10		15	
	QC Exceedance	N		N		N		N		N	
	Lab Certification	721026460		721026460		721026460		721026460		721026460	

Sample Point	101	101	101	101	101	
Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	
Parameter	147	264	430	374	373	
Description	Copper, Total Recoverable	Lead, Total Recoverable	Silver, Total Recoverable	pH (Minimum)	pH (Maximum)	
Units	ug/L	ug/L	ug/L	su	su	
Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS	
Frequency	2WEEK	MONTHLY	MONTHLY	DAILY	DAILY	
Sample Results	Day 1	8.2	<1.5	<0.37	7.1	7.8
	2	5.8	<1.5	<0.37	7.0	7.4
	3				7.0	7.7
	4				7.1	7.9
	5				7.4	8.2
	6					
	7					
	8	7.6	<1.5	<0.37	7.8	8.7
	9	5.9	<1.5	<0.37	8.0	8.6
	10				7.9	8.4
	11				7.4	8.2
	12				7.2	8.4
	13				7.2	8.1
	14					
	15	2.2	<1.5	<0.37	7.3	8.1
	16	3.5	<1.5	<0.37	6.7	7.9
	17				6.5	7.4
	18				6.9	7.7
	19				7.6	8.1
	20				7.4	8.3
	21					
	22	9.3	<1.5	<0.37	7.2	8.0
	23	8.9	<1.5	<0.37	7.4	7.9
	24				6.8	7.7
	25				6.8	7.2
	26				7.3	7.7
	27				7.4	8.0
	28					
	29				7.6	8.1
	30				7.4	7.9
	31				7.5	8.4

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	147		264		430		374		373	
	Description	Copper, Total Recoverable		Lead, Total Recoverable		Silver, Total Recoverable		pH (Minimum)		pH (Maximum)	
	Units	ug/L		ug/L		ug/L		su		su	
Summary Values	Monthly Avg	6.425		0		0		7.265384615		7.992307692	
	Monthly Total										
	Daily Max	9.3		<1.5		<0.37		8		8.7	
	Daily Min	2.2		<1.5		<0.37		6.5		7.2	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg	2070	0	430	0	240	0				
	Monthly Total										
	Daily Max	3380	0	690	0	430	0			11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	LOD	1.3		1.5		0.37					
	LOQ	4		4.9		1.2					
	QC Exceedance	N		N		N		N		N	
	Lab Certification	721026460		721026460		721026460					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	379	376	507	40	490
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes	Total Toxic Organics	Benzene	Tetrachloroethylene
	Units	minutes	Number	ug/L	ug/L	ug/L
	Sample Type	CALCULATED	CALCULATED	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	DAILY	DAILY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101		101		101		101		101	
	Description	Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent		Metal Finishing Effluent	
	Parameter	379		376		507		40		490	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes		Total Toxic Organics		Benzene		Tetrachloroethylene	
	Units	minutes		Number		ug/L		ug/L		ug/L	
Summary Values	Monthly Avg										
	Monthly Total										
	Daily Max										
	Daily Min										
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total	446	0	0	0						
	Daily Max					2130					
	Daily Min										
	Rolling 12 Month Avg										
QA/QC Information	LOD										
	LOQ										
	QC Exceedance	N		N		N		N		N	
	Lab Certification										

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Sample Type	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP	24 HR COMP
	Frequency	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
Sample Results	Day 1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					

	Sample Point	101	101	101	101	101
	Description	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent	Metal Finishing Effluent
	Parameter	500	561	200	508	285
	Description	Toluene	1,1,1-Trichloro- ethane	Ethylbenzene	Trichloro- ethylene	Methylene chloride
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
Summary Values	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					
	LOQ					
	QC Exceedance	N	N	N	N	N
	Lab Certification					

Sample Point	101	106	106	106	107
Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
Parameter	167	211	35	457	280
Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
Units	ug/L	gpd	ug/L	mg/L	ng/L
Sample Type	24 HR COMP	CONTINUOUS	24 HR COMP	24 HR COMP	GRAB
Frequency	MONTHLY	DAILY	WEEKLY	WEEKLY	MONTHLY
Sample Results	Day 1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				
	21				
	22				
	23				
	24				
	25				
	26				
	27				
	28				
	29				
	30				
	31				

<0.20

	Sample Point	101	106	106	106	107
	Description	Metal Finishing Effluent	Future remedial action ww	Future remedial action ww	Future remedial action ww	Mercury Field Blank Results
	Parameter	167	211	35	457	280
	Description	Di-n-butyl phthalate (dibutyl phthalate)	Flow Rate	Arsenic, Total Recoverable	Suspended Solids, Total	Mercury, Total Recoverable
	Units	ug/L	gpd	ug/L	mg/L	ng/L
Summary Values	Monthly Avg					0
	Monthly Total					
	Daily Max					<0.2
	Daily Min					<0.2
	Rolling 12 Month Avg					
Limit(s) in Effect	Monthly Avg					
	Monthly Total					
	Daily Max					
	Daily Min					
	Rolling 12 Month Avg					
QA/QC Information	LOD					0.2
	LOQ					0.5
	QC Exceedance	N	N	N	N	N
	Lab Certification					721026460

Sample Point	003	003	003	003	003	
Description	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	Future remedial action dischg	
Parameter	211	457	35	374	373	
Description	Flow Rate	Suspended Solids, Total	Arsenic, Total Recoverable	pH (Minimum)	pH (Maximum)	
Units	MGD	mg/L	ug/L	su	su	
Sample Type	CONTINUOUS	24 HR COMP	24 HR COMP	CONTINUOUS	CONTINUOUS	
Frequency	DAILY	WEEKLY	WEEKLY	DAILY	DAILY	
Sample Results	Day 1	0.013744	1.3	4600	6.1	6.7
	2	0.006780			6.6	6.8
	3	0.016324			6.6	7.0
	4	0.014006			6.6	6.8
	5	0.008679			6.5	6.7
	6	0.007356			6.5	6.7
	7	0.014718			6.4	6.8
	8	0.011956	<1.0	1900	6.6	7.4
	9	0.013017			6.5	6.8
	10	0.019338			6.4	6.5
	11	0.008024			6.5	6.6
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26	0.023726	1.0	62	6.0	7.4
	27	0.000748			6.0	6.2
	28	0.008843			6.0	9.2
	29	0.018991			6.0	8.9
	30	0.019418			6.7	8.8
	31	0.033385			6.0	8.1

	Sample Point	003		003		003		003		003	
	Description	Future remedial action dischg		Future remedial action dischg		Future remedial action dischg		Future remedial action dischg		Future remedial action dischg	
	Parameter	211		457		35		374		373	
	Description	Flow Rate		Suspended Solids, Total		Arsenic, Total Recoverable		pH (Minimum)		pH (Maximum)	
	Units	MGD		mg/L		ug/L		su		su	
Summary Values	Monthly Avg	0.014061941		0.766666667		2187.333333333		6.352941176		7.258823529	
	Monthly Total										
	Daily Max	0.033385		1.3		4600		6.7		9.2	
	Daily Min	0.000748		<1		62		6		6.2	
	Rolling 12 Month Avg										
Limit(s) in Effect	Monthly Avg										
	Monthly Total										
	Daily Max					680	2			11	0
	Daily Min							4	0		
	Rolling 12 Month Avg										
QA/QC Information	LOD					1					
	LOQ					2					
	QC Exceedance	N		N		Y		N		N	
	Lab Certification			438039470		721026460					

	Sample Point	003	003
	Description	Future remedial action dischg	Future remedial action dischg
	Parameter	379	376
	Description	pH Total Exceedance Time Minutes	pH Exceedances Greater Than 60 Minutes
	Units	minutes	Number
	Sample Type	CONTINUOUS	CONTINUOUS
	Frequency	DAILY	DAILY
Sample Results	Day 1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		
	26		
	27		
	28	50	
	29		
	30		
	31		

	Sample Point	003		003	
	Description	Future remedial action dischg		Future remedial action dischg	
	Parameter	379		376	
	Description	pH Total Exceedance Time Minutes		pH Exceedances Greater Than 60 Minutes	
	Units	minutes		Number	
Summary Values	Monthly Avg	50			
	Monthly Total	50			
	Daily Max	50			
	Daily Min	50			
	Rolling 12 Month Avg				
Limit(s) in Effect	Monthly Avg				
	Monthly Total	446	0		
	Daily Max			0	0
	Daily Min				
	Rolling 12 Month Avg				
QA/QC Information	LOD				
	LOQ				
	QC Exceedance	N		N	
	Lab Certification				

Footnotes (DNR Use Only; Instructions for completing this form that are unique for your facility may be displayed here.)

1. Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for TTO I certify that to the best of my knowledge and belief no dumping of concentrated toxic organics into the wastewaters has
2. occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the solvent management plan submitted to the department.

General Remarks

CN- is always taken as a grab sample per WDNR.

Laboratory Quality Control Comments

OF001 had an Arsenic exceedance on August 1 and August 8. The results indicated that the sewer had multiple areas that had failed, allowing arsenic impacted groundwater to enter the Industrial Sewer system and discharge at the Outfall OF-001. Lining, repairing and abandoning portions of the sewer are in process to correct this problem. Repairs are expected to be completed by October 7, 2016.

OF003 had an Arsenic exceedance on August 1 and August 8 also. The investigation resulted in that the cause was due to higher concentrations of organic arsenic that were greater than the system itself could handle at that time. Corrective actions were: Temporarily suspended operation of the GWCT, Replace the membranes of the Primary RO Unit and Brine RO Unit, Suspend treating the water from the Remediation Pump Down Program, and Implemented the new chemistry for the GWCT which was planned, but not yet implemented.

Attachment 3
Laboratory Speciation Report



18804 North Creek Parkway, Ste 100, Bothell, WA 98011 • USA • T: 206 632 6206 F: 206 632 6017 • info@brooksapplied.com

Report of Arsenic Speciation in Groundwater

Project Name: Tyco – Marinette 2016

Project Number: 676354

Samples Collected: August 22 and August 23, 2016

Report Date: August 30, 2016

Prepared for:

Kaye Walker

CH2M

4121 Carmichael Road, Suite 400

Montgomery, AL 36106

kaye.walker@ch2m.com

Brooks Applied Labs

Project ID: CHM-MN1601

Work Order: 1635021

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Case Narrative

Sample Reception

Seven (7) water samples were received by Brooks Applied Labs (BAL) on August 24, 2016 in a sealed cooler at ambient temperature. The samples were logged in for the analyses of total recoverable arsenic (As) and dissolved arsenic speciation in accordance with the submitted chain of custody (COC) forms. All samples were received and stored securely according to BAL standard operating procedures (SOP).

In accordance with the client's request, all total recoverable arsenic fractions were placed on hold upon receipt. Consequently, no total recoverable arsenic results have been included in this report.

It should be noted that the samples were received at ambient temperature instead of at 4°C as recommended by BAL. While refrigeration of the arsenic speciation fractions is recommended to minimize any potential molecular conversions, no qualification of the data was required.

Arsenic Speciation

All samples for arsenic speciation were directly analyzed by ion chromatography inductively coupled plasma collision reaction cell mass spectrometry (IC-ICP-CRC-MS). In accordance with the quotation issued for this project, arsenic speciation was defined as the dissolved concentrations of arsenite [As(III)], arsenate [As(V)], monomethylarsonic acid [MMAs], and dimethylarsinic acid [DMAs].

The principles of IC-ICP-CRC-MS are as follows: aliquots of each sample are injected onto an anion exchange column and are mobilized by an alkaline (pH > 7) gradient. The eluting arsenic species are then introduced into a radio frequency (RF) plasma where energy-transfer processes cause desolvation, atomization, and ionization. The ions are extracted from the plasma through a differentially-pumped vacuum interface and travel through a pressurized chamber (CRC) containing a specific collision gas. Polyatomic interferences, due to their inherently larger size, collide more frequently with the collision gas and therefore may be separated from the analyte of interest via kinetic energy discrimination (KED). A solid-state detector detects ions transmitted through the mass analyzer on the basis of their mass-to-charge ratio (m/z), and the resulting current is processed by a data handling system. Retention times for each eluting species are compared to known standards for species identification.

Analytical Issues and Discussion

Sequence 1600966 – Batch B162062 – Arsenic Speciation

The COC form submitted by the client requested an MS/MSD set on the sample identified as EW-14. This request was mistakenly overlooked by the analyst when preparing the samples for arsenic speciation, and an MS/MSD set was instead performed on the sample identified as EW-8. The client was contacted about this issue and stated that no re-analyses should be necessary. Since all quality control results were within acceptance limits, no further action was taken.

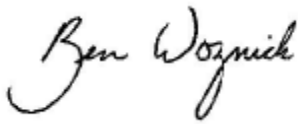
It should be noted that all submitted samples contained additional, unidentified arsenic species. While their identities are unknown at this time, the estimated concentration of arsenic associated with each unknown species is provided in the attached raw data (chromatograms). Upon client

request Brooks Applied Labs may be able to pursue identification of these additional arsenical species.

All sample results were *not* method blank corrected, as described in the calculations section of the relevant BAL SOPs, and have been evaluated using method detection limits (MDLs) and method reporting limits (MRLs) that have been adjusted to account for sample aliquot size. Please refer to the *Sample Results* page for sample-specific MDLs, MRLs, and other details.

We certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. BAL, an accredited laboratory, certifies that the reported results of all analyses for which BAL is NELAP accredited meet all NELAP requirements. For more details, please see the *Report Information* page in your report. Please feel free to contact us if you have any questions regarding this report.

Sincerely,

A handwritten signature in black ink that reads "Ben Wozniak". The signature is written in a cursive style with a large, looping initial "B".

Ben Wozniak
Project Manager
ben@brooksapplied.com



Report Information

Laboratory Accreditation

BAL is accredited by the *National Environmental Laboratory Accreditation Program* (NELAP) through the State of Florida Department of Health, Bureau of Laboratories (E87982) and is certified to perform many environmental analyses. BAL is also certified by many other states to perform environmental analyses. For a current list of our accreditations/certifications, please visit our website at <http://www.brooksapplied.com/resources/certificates-permits/>. Results reported relate only to the samples listed in the report.

Field Quality Control Samples

Please be notified that certain EPA methods require the collection of field quality control samples of an appropriate type and frequency; failure to do so is considered a deviation from some methods and for compliance purposes should only be done with the approval of regulatory authorities. Please see the specific EPA methods for details regarding required field quality control samples.

Common Abbreviations

BAL	Brooks Applied Labs	MS	matrix spike
BLK	method blank	MSD	matrix spike duplicate
BS	laboratory fortified blank	ND	non-detect
CAL	calibration standard	NR	non-reportable
CCB	continuing calibration blank	N/C	not calculated
CCV	continuing calibration verification	PS	post preparation spike
COC	chain of custody record	REC	percent recovery
D	dissolved fraction	RPD	relative percent difference
DUP	duplicate	SCV	secondary calibration verification
IBL	instrument blank	SOP	standard operating procedure
ICV	initial calibration verification	SRM	standard reference material
MDL	method detection limit	T	total fraction
MRL	method reporting limit	TR	total recoverable fraction

Definition of Data Qualifiers

(Effective 9/23/09)

J	Detected by the instrument, the result is > the MDL but ≤ the MRL. Result is reported and considered an estimate.
E	An estimated value due to the presence of interferences. A full explanation is presented in the narrative.
H	Holding time and/or preservation requirements not met. Result is estimated.
J-1	Estimated value. A full explanation is presented in the narrative.
J-M	Duplicate precision (RPD) for associated QC sample was not within acceptance criteria. Result is estimated.
J-N	Spike recovery for associated QC sample was not within acceptance criteria. Result is estimated.
M	Duplicate precision (RPD) was not within acceptance criteria. Result is estimated.
N	Spike recovery was not within acceptance criteria. Result is estimated.
R	Rejected, unusable value. A full explanation is presented in the narrative.
U	Result is ≤ the MDL or client requested reporting limit (CRRL). Result reported as the MDL or CRRL.
X	Result is not BLK-corrected and is within 10x the absolute value of the highest detectable BLK in the batch. Result is estimated.

These qualifiers are based on those previously utilized by Brooks Applied Labs, those found in the EPA SOW_ILM03.0, Exhibit B, Section III, pg. B-18, and the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review; USEPA; January 2010. These supersede all previous qualifiers ever employed by BAL.



Sample Information

Sample	Lab ID	Report Matrix	Type	Sampled	Received
EW-10	1635021-01	Water	Sample	08/23/2016	08/24/2016
EW-10	1635021-02	Water	Sample	08/23/2016	08/24/2016
EW-14	1635021-03	Water	QC Sample	08/23/2016	08/24/2016
EW-14	1635021-04	Water	QC Sample	08/23/2016	08/24/2016
EW-13	1635021-05	Water	Sample	08/23/2016	08/24/2016
EW-13	1635021-06	Water	Sample	08/23/2016	08/24/2016
EW-9	1635021-07	Water	Sample	08/23/2016	08/24/2016
EW-9	1635021-08	Water	Sample	08/23/2016	08/24/2016
EW-11	1635021-09	Water	Sample	08/22/2016	08/24/2016
EW-11	1635021-10	Water	Sample	08/22/2016	08/24/2016
EW-11/D	1635021-11	Water	Field Duplicate	08/22/2016	08/24/2016
EW-11/D	1635021-12	Water	Field Duplicate	08/22/2016	08/24/2016
EW-8	1635021-13	Water	Sample	08/22/2016	08/24/2016
EW-8	1635021-14	Water	Sample	08/22/2016	08/24/2016

Batch Summary

Analyte	Lab Matrix	Method	Prepared	Analyzed	Batch	Sequence
As(III)	Water	IC-ICP-MS	08/24/2016	08/26/2016	B162062	1600966
As(V)	Water	IC-ICP-MS	08/24/2016	08/26/2016	B162062	1600966
DMAs	Water	IC-ICP-MS	08/24/2016	08/26/2016	B162062	1600966
MMAs	Water	IC-ICP-MS	08/24/2016	08/26/2016	B162062	1600966



Sample Results

Sample	Analyte	Report Matrix	Basis	Result	Qualifier	MDL	MRL	Unit	Batch	Sequence
EW-10										
1635021-02	As(III)	Water	D	149000		200	2000	µg/L	B162062	1600966
1635021-02	As(V)	Water	D	≤ 200	U	200	2000	µg/L	B162062	1600966
1635021-02	DMAs	Water	D	97500		300	2100	µg/L	B162062	1600966
1635021-02	MMAAs	Water	D	1380000		300	2300	µg/L	B162062	1600966
EW-11										
1635021-10	As(III)	Water	D	6030		100	1000	µg/L	B162062	1600966
1635021-10	As(V)	Water	D	≤ 100	U	100	1000	µg/L	B162062	1600966
1635021-10	DMAs	Water	D	6740		150	1050	µg/L	B162062	1600966
1635021-10	MMAAs	Water	D	64600		150	1150	µg/L	B162062	1600966
EW-11/D										
1635021-12	As(III)	Water	D	5770		100	1000	µg/L	B162062	1600966
1635021-12	As(V)	Water	D	≤ 100	U	100	1000	µg/L	B162062	1600966
1635021-12	DMAs	Water	D	6270		150	1050	µg/L	B162062	1600966
1635021-12	MMAAs	Water	D	59300		150	1150	µg/L	B162062	1600966
EW-13										
1635021-06	As(III)	Water	D	164000		200	2000	µg/L	B162062	1600966
1635021-06	As(V)	Water	D	≤ 200	U	200	2000	µg/L	B162062	1600966
1635021-06	DMAs	Water	D	151000		300	2100	µg/L	B162062	1600966
1635021-06	MMAAs	Water	D	1770000		300	2300	µg/L	B162062	1600966
EW-14										
1635021-04	As(III)	Water	D	25100		20.0	200	µg/L	B162062	1600966
1635021-04	As(V)	Water	D	18300		20.0	200	µg/L	B162062	1600966
1635021-04	DMAs	Water	D	9450		30.0	210	µg/L	B162062	1600966
1635021-04	MMAAs	Water	D	199000		30.0	230	µg/L	B162062	1600966
EW-8										
1635021-14	As(III)	Water	D	21400		20.0	200	µg/L	B162062	1600966
1635021-14	As(V)	Water	D	1130		20.0	200	µg/L	B162062	1600966
1635021-14	DMAs	Water	D	1160		30.0	210	µg/L	B162062	1600966
1635021-14	MMAAs	Water	D	17200		30.0	230	µg/L	B162062	1600966



Sample Results

Sample	Analyte	Report Matrix	Basis	Result	Qualifier	MDL	MRL	Unit	Batch	Sequence
EW-9										
1635021-08	As(III)	Water	D	1570		10.0	100	µg/L	B162062	1600966
1635021-08	As(V)	Water	D	228		10.0	100	µg/L	B162062	1600966
1635021-08	DMAs	Water	D	≤ 15.0	U	15.0	105	µg/L	B162062	1600966
1635021-08	MMAs	Water	D	200		15.0	115	µg/L	B162062	1600966



Accuracy & Precision Summary

Batch: B162062
 Lab Matrix: Water
 Method: IC-ICP-MS

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B162062-BS1	Laboratory Fortified Blank, (NC00024)						
	As(III)		5.000	5.081	µg/L	102% 75-125	
	As(V)		5.000	5.206	µg/L	104% 75-125	
	DMAs		3.198	3.361	µg/L	105% 75-125	
B162062-BS2	Laboratory Fortified Blank, (1545039)						
	MMAAs		5.270	4.544	µg/L	86% 75-125	
B162062-DUP1	Duplicate, (1635021-14)						
	As(III)	21350		21030	µg/L		2% 25
	As(V)	1135		929.1	µg/L		20% 25
	DMAs	1157		1144	µg/L		1% 25
	MMAAs	17210		17260	µg/L		0.3% 25
B162062-MS1	Matrix Spike, (1635021-14)						
	As(III)	21350	10000	31000	µg/L	97% 75-125	
	As(V)	1135	10000	12000	µg/L	109% 75-125	
	DMAs	1157	10420	11340	µg/L	98% 75-125	
	MMAAs	17210	11730	28750	µg/L	98% 75-125	
B162062-MSD1	Matrix Spike Duplicate, (1635021-14)						
	As(III)	21350	10000	31030	µg/L	97% 75-125	0.09% 25
	As(V)	1135	10000	12240	µg/L	111% 75-125	2% 25
	DMAs	1157	10420	11370	µg/L	98% 75-125	0.3% 25
	MMAAs	17210	11730	28630	µg/L	97% 75-125	0.4% 25



Method Blanks & Reporting Limits

Batch: B162062
Matrix: Water
Method: IC-ICP-MS
Analyte: As(III)

Sample	Result	Units	
B162062-BLK1	0.00	µg/L	
B162062-BLK2	0.00	µg/L	
B162062-BLK3	0.00	µg/L	
B162062-BLK4	0.00	µg/L	
Average:	0.000		MDL: 0.002
Limit:	0.020		MRL: 0.020

Analyte: As(V)

Sample	Result	Units	
B162062-BLK1	0.001	µg/L	
B162062-BLK2	0.001	µg/L	
B162062-BLK3	0.001	µg/L	
B162062-BLK4	0.0006	µg/L	
Average:	0.001		MDL: 0.002
Limit:	0.020		MRL: 0.020

Analyte: DMAs

Sample	Result	Units	
B162062-BLK1	0.001	µg/L	
B162062-BLK2	0.005	µg/L	
B162062-BLK3	0.001	µg/L	
B162062-BLK4	0.0005	µg/L	
Average:	0.002		MDL: 0.003
Limit:	0.021		MRL: 0.021



Method Blanks & Reporting Limits

Analyte: MMAs

Sample	Result	Units	
B162062-BLK1	0.00	µg/L	
B162062-BLK2	0.0005	µg/L	
B162062-BLK3	0.0007	µg/L	
B162062-BLK4	0.0005	µg/L	
Average:	0.000		MDL: 0.003
Limit:	0.023		MRL: 0.023



Instrument Calibration

Sequence: 1600966
Instrument: ICPMS6
Date: 08/26/2016
Analyte: As(III)

Arsenic Speciation by IC-ICPMS

Lab ID	True Value	Result	Units	REC & Limits	
1600966-ICB1		0.000	µg/L		
1600966-CAL1	0.02000	0.022	µg/L	109%	
1600966-CAL2	0.02000	0.021	µg/L	105%	
1600966-CAL3	0.02000	0.021	µg/L	105%	
1600966-CAL4	0.02000	0.020	µg/L	98%	
1600966-CAL5	0.2000	0.195	µg/L	98%	
1600966-CAL6	0.5000	0.478	µg/L	96%	
1600966-CAL7	2.000	1.941	µg/L	97%	
1600966-CAL8	5.000	4.994	µg/L	100%	
1600966-CAL9	20.00	20.01	µg/L	100%	
1600966-ICB2		0.002	µg/L		
1600966-ICV1	5.000	5.081	µg/L	102%	80-120
1600966-ICB3		0.000	µg/L		
1600966-CCV1	1.000	0.981	µg/L	98%	75-125
1600966-CCB1		0.00	µg/L		
1600966-CCV2	1.000	0.989	µg/L	99%	75-125
1600966-CCB2		0.00	µg/L		
1600966-CCV3	1.000	0.985	µg/L	98%	75-125
1600966-CCB3		0.00	µg/L		
1600966-CCV4	1.000	1.002	µg/L	100%	75-125
1600966-CCB4		0.00	µg/L		
1600966-CCV5	1.000	1.001	µg/L	100%	75-125
1600966-CCB5		0.00	µg/L		
1600966-CCV6	1.000	0.994	µg/L	99%	75-125
1600966-CCB6		0.00	µg/L		



Instrument Calibration

Sequence: 1600966
 Instrument: ICPMS6
 Date: 08/26/2016
 Analyte: As(V)

Arsenic Speciation by IC-ICPMS

Lab ID	True Value	Result	Units	REC & Limits	
1600966-ICB1		-0.000001	µg/L		
1600966-CAL1	0.02000	0.023	µg/L	115%	
1600966-CAL2	0.02000	0.020	µg/L	102%	
1600966-CAL3	0.02000	0.021	µg/L	107%	
1600966-CAL4	0.02000	0.021	µg/L	104%	
1600966-CAL5	0.2000	0.193	µg/L	97%	
1600966-CAL6	0.5000	0.489	µg/L	98%	
1600966-CAL7	2.000	1.940	µg/L	97%	
1600966-CAL8	5.000	5.008	µg/L	100%	
1600966-CAL9	20.00	20.00	µg/L	100%	
1600966-ICB2		0.013	µg/L		
1600966-ICV1	5.000	5.206	µg/L	104%	80-120
1600966-ICB3		0.002	µg/L		
1600966-CCV1	1.000	0.986	µg/L	99%	75-125
1600966-CCB1		0.001	µg/L		
1600966-CCV2	1.000	0.994	µg/L	99%	75-125
1600966-CCB2		0.001	µg/L		
1600966-CCV3	1.000	0.994	µg/L	99%	75-125
1600966-CCB3		0.001	µg/L		
1600966-CCV4	1.000	1.003	µg/L	100%	75-125
1600966-CCB4		0.0009	µg/L		
1600966-CCV5	1.000	1.006	µg/L	101%	75-125
1600966-CCB5		0.001	µg/L		
1600966-CCV6	1.000	1.010	µg/L	101%	75-125
1600966-CCB6		0.002	µg/L		



Instrument Calibration

Sequence: 1600966
 Instrument: ICPMS6
 Date: 08/26/2016
 Analyte: DMAs

Arsenic Speciation by IC-ICPMS

Lab ID	True Value	Result	Units	REC & Limits	
1600966-ICB1		0.000	µg/L		
1600966-CAL1	0.02084	0.023	µg/L	110%	
1600966-CAL2	0.02084	0.022	µg/L	107%	
1600966-CAL3	0.02084	0.023	µg/L	111%	
1600966-CAL4	0.02084	0.022	µg/L	107%	
1600966-CAL5	0.2084	0.201	µg/L	96%	
1600966-CAL6	0.5210	0.497	µg/L	95%	
1600966-CAL7	2.084	2.029	µg/L	97%	
1600966-CAL8	5.210	5.200	µg/L	100%	
1600966-CAL9	20.84	20.85	µg/L	100%	
1600966-ICB2		0.0009	µg/L		
1600966-ICV1	3.198	3.361	µg/L	105%	80-120
1600966-ICB3		0.000	µg/L		
1600966-CCV1	1.042	1.009	µg/L	97%	75-125
1600966-CCB1		0.00	µg/L		
1600966-CCV2	1.042	1.023	µg/L	98%	75-125
1600966-CCB2		0.00	µg/L		
1600966-CCV3	1.042	1.018	µg/L	98%	75-125
1600966-CCB3		0.00	µg/L		
1600966-CCV4	1.042	1.026	µg/L	98%	75-125
1600966-CCB4		0.00	µg/L		
1600966-CCV5	1.042	1.039	µg/L	100%	75-125
1600966-CCB5		0.001	µg/L		
1600966-CCV6	1.042	1.040	µg/L	100%	75-125
1600966-CCB6		0.00	µg/L		



Instrument Calibration

Sequence: 1600966
 Instrument: ICPMS6
 Date: 08/26/2016
 Analyte: MMAs

Arsenic Speciation by IC-ICPMS

Lab ID	True Value	Result	Units	REC & Limits	
1600966-ICB1		0.000	µg/L		
1600966-CAL1	0.02346	0.027	µg/L	116%	
1600966-CAL2	0.02346	0.026	µg/L	109%	
1600966-CAL3	0.02346	0.026	µg/L	109%	
1600966-CAL4	0.02346	0.025	µg/L	107%	
1600966-CAL5	0.2346	0.224	µg/L	95%	
1600966-CAL6	0.5865	0.568	µg/L	97%	
1600966-CAL7	2.346	2.298	µg/L	98%	
1600966-CAL8	5.865	5.899	µg/L	101%	
1600966-CAL9	23.46	23.45	µg/L	100%	
1600966-ICB2		0.001	µg/L		
1600966-ICV2	5.270	4.544	µg/L	86%	80-120
1600966-ICB3		0.000	µg/L		
1600966-CCV1	1.173	1.159	µg/L	99%	75-125
1600966-CCB1		0.00	µg/L		
1600966-CCV2	1.173	1.174	µg/L	100%	75-125
1600966-CCB2		0.001	µg/L		
1600966-CCV3	1.173	1.164	µg/L	99%	75-125
1600966-CCB3		0.0004	µg/L		
1600966-CCV4	1.173	1.164	µg/L	99%	75-125
1600966-CCB4		0.0005	µg/L		
1600966-CCV5	1.173	1.175	µg/L	100%	75-125
1600966-CCB5		0.0006	µg/L		
1600966-CCV6	1.173	1.176	µg/L	100%	75-125
1600966-CCB6		0.00	µg/L		



Sample Containers

Lab ID: 1635021-01	Report Matrix: Water	Collected: 08/23/2016
Sample: EW-10	Sample Type: Sample	Received: 08/24/2016
Des Container	Size	Lot
A Bottle HDPE ICP-W	60mL	15-0056
	Preservation	P-Lot
	1% HNO3 (BAL)	1630022
	pH	Ship. Cont.
	<2	Cooler

Comments: HIGH LEVEL

Lab ID: 1635021-02	Report Matrix: Water	Collected: 08/23/2016
Sample: EW-10	Sample Type: Sample	Received: 08/24/2016
Des Container	Size	Lot
A Vacutainer	10mL	16-0133
	Preservation	P-Lot
	EDTA (PP)	Not Provided
	pH	Ship. Cont.
		Cooler

Comments: HIGH LEVEL

Lab ID: 1635021-03	Report Matrix: Water	Collected: 08/23/2016
Sample: EW-14	Sample Type: QC Sample	Received: 08/24/2016
Comments: MS/MSD labeled as native sample per client. Original samples labeled as extra vol.		
Des Container	Size	Lot
A Bottle HDPE ICP-W	60mL	15-0056
	Preservation	P-Lot
	1% HNO3 (BAL)	1630022
	pH	Ship. Cont.
	<2	Cooler
B EXTRA_VOL	60mL	15-0056
	Preservation	P-Lot
	1% HNO3 (BAL)	1630022
	pH	Ship. Cont.
	<2	Cooler

Comments: HIGH LEVEL

Lab ID: 1635021-04	Report Matrix: Water	Collected: 08/23/2016
Sample: EW-14	Sample Type: QC Sample	Received: 08/24/2016
Comments: MS/MSD labeled as native sample per client. Original samples labeled as extra vol.		
Des Container	Size	Lot
A Vacutainer	10mL	16-0133
	Preservation	P-Lot
	EDTA (PP)	Not Provided
	pH	Ship. Cont.
		Cooler
B EXTRA_VOL	10mL	16-0133
	Preservation	P-Lot
	EDTA (PP)	Not Provided
	pH	Ship. Cont.
		Cooler

Comments: HIGH LEVEL



Sample Containers

Lab ID: 1635021-05	Report Matrix: Water	Collected: 08/23/2016				
Sample: EW-13	Sample Type: Sample	Received: 08/24/2016				
Des Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A Bottle HDPE ICP-W	60mL	15-0056	1% HNO3 (BAL)	1630022	<2	Cooler

Comments: HIGH LEVEL

Lab ID: 1635021-06	Report Matrix: Water	Collected: 08/23/2016				
Sample: EW-13	Sample Type: Sample	Received: 08/24/2016				
Des Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A Vacutainer	10mL	16-0133	EDTA (PP)	Not Provided		Cooler

Comments: HIGH LEVEL

Lab ID: 1635021-07	Report Matrix: Water	Collected: 08/23/2016				
Sample: EW-9	Sample Type: Sample	Received: 08/24/2016				
Des Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A Bottle HDPE ICP-W	60mL	15-0056	1% HNO3 (BAL)	1630022	<2	Cooler

Comments: HIGH LEVEL

Lab ID: 1635021-08	Report Matrix: Water	Collected: 08/23/2016				
Sample: EW-9	Sample Type: Sample	Received: 08/24/2016				
Des Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A Vacutainer	10mL	16-0133	EDTA (PP)	Not Provided		Cooler

Comments: HIGH LEVEL

Lab ID: 1635021-09	Report Matrix: Water	Collected: 08/22/2016				
Sample: EW-11	Sample Type: Sample	Received: 08/24/2016				
Des Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A Bottle HDPE ICP-W	60mL	15-0056	1% HNO3 (BAL)	1630022	<2	Cooler

Comments: HIGH LEVEL



Sample Containers

Lab ID: 1635021-10	Report Matrix: Water	Collected: 08/22/2016				
Sample: EW-11	Sample Type: Sample	Received: 08/24/2016				
Des Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A Vacutainer	10mL	16-0133	EDTA (PP)	Not Provided		Cooler

Comments: HIGH LEVEL

Lab ID: 1635021-11	Report Matrix: Water	Collected: 08/22/2016				
Sample: EW-11/D	Sample Type: Field Duplicate	Received: 08/24/2016				
Des Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A Bottle HDPE ICP-W	60mL	15-0056	1% HNO3 (BAL)	1630022	<2	Cooler

Comments: HIGH LEVEL

Lab ID: 1635021-12	Report Matrix: Water	Collected: 08/22/2016				
Sample: EW-11/D	Sample Type: Field Duplicate	Received: 08/24/2016				
Des Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A Vacutainer	10mL	16-0133	EDTA (PP)	Not Provided		Cooler

Comments: HIGH LEVEL

Lab ID: 1635021-13	Report Matrix: Water	Collected: 08/22/2016				
Sample: EW-8	Sample Type: Sample	Received: 08/24/2016				
Des Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A Bottle HDPE ICP-W	60mL	15-0056	1% HNO3 (BAL)	1630022	<2	Cooler

Comments: HIGH LEVEL

Lab ID: 1635021-14	Report Matrix: Water	Collected: 08/22/2016				
Sample: EW-8	Sample Type: Sample	Received: 08/24/2016				
Des Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A Vacutainer	10mL	16-0133	EDTA (PP)	Not Provided		Cooler

Comments: HIGH LEVEL

Project ID: CHM-MN1601
PM: Ben Wozniak



BAL Report 1635021
Client PM: Kaye Walker

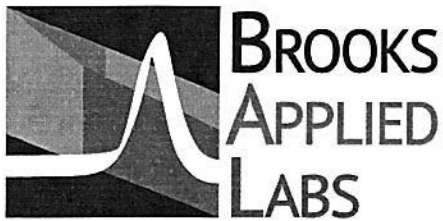
Shipping Containers

Cooler

Received: August 24, 2016 9:15
Tracking No: 532177812010 via FedEx
Coolant Type: None
Temperature: ambient

Description: Cooler
Damaged in transit? No
Returned to client? No
Comments: Ambient

Custody seals present? Yes
Custody seals intact? Yes
COC present? Yes



Chain-of-Custody Form

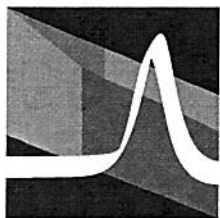
Ship samples to:
18804 North Creek Parkway, Suite 100
Bothell, WA 98011

For BAL use only BAL Report 1635021
 Received by: Jason Miller Date: 8/24/16
 Work Order ID: _____ Time: 0915
 Project ID: _____

Client: Tyco Fire Protection Products PO Number: _____ Mailing Address: One Stanton St
 Contact: Ryan Suennen Phone: 715-735-7411 Marinette, WI 54143
 Client Project ID: _____ Email: ryansuennen@tycoint.com Email Receipt Confirmation? (Yes/No)
 Samples Collected By: Ryan Suennen / Jeff Danko BAL PM: Ben W.

Requested TAT (business days)	Collection		Client Sample Info				BAL Analyses Required						Comments		
	Date	Time	Matrix Type	Number of Containers	Field Filtered? (Yes/No)	Preservation Type HCl/HNO ₃ /Other	Total Hg, EPA 1631	Methyl Hg, EPA 163D	ICP-MS Metals (specify) Total As	As Species (specify) InOrg, II, V, MMA, DMA	Se Species (specify) Se(IV), Se(VI), SeCN, Unknown	Filtration		Other (specify)	Other (specify)
<input type="checkbox"/> 20 (standard) <input type="checkbox"/> 15* <input type="checkbox"/> 10* <input type="checkbox"/> 5* <input checked="" type="checkbox"/> Other <u>3 day</u> <small>*Surcharges may apply to expedited TATs</small>	Sample ID														Specify Here
	1	EW-10	8/23/16	1243	Water	1	N			X					
	2	EW-10	8/23/16	1243	W	1	Y			X					
	3	EW-14	8/23/16	1155	W	2	N			X					MS/MSD
	4	EW-14	8/23/16	1155	W	2	Y			X					MS/MSD
	5	EW-13	8/23/16	1285	W	1	N			X					
	6	EW-13	8/23/16	1285	W	1	Y			X					
	7	EW-8	8/23/16	1128	W	1	N			X					
	8	EW-9	8/23/16	1128	W	1	Y			X					
	9	EW-11	8/22/16	1449	W	1	N			X					
	10	EW-11	8/22/16	1449	W	1	Y			X					
	Trip Blank														

Relinquished By: Ryan Suennen Date: 8-23-16 Time: 13:00 Relinquished By: _____ Date: _____ Time: _____
 Received By: _____ Date: _____ Time: _____ Total Number of Packages: _____



**BROOKS
APPLIED
LABS**

Chain-of-Custody Form

Ship samples to:
18804 North Creek Parkway, Suite 100
Bothell, WA 98011

BAL Report 1635021

Received by: Lawrence For BAL use only Date: 8/24/16
 Work Order ID: _____ Time: 09:15
 Project ID: _____

Client: Tyco Fire Protection Products PO Number: _____
 Contact: Ryan Swennen Phone: 715-735-7411
 Client Project ID: CAM-MN1601 Email: ryanswennen@tyco.int.com
 Samples Collected By: Ryan Swennen / Jeff Danko

Mailing Address: One Stanton St
Marinette, WI
 Email Receipt Confirmation? (Yes/No) _____
 BAL PM: Ben W.

Requested TAT (business days)	Collection		Client Sample Info					BAL Analyses Required						Comments	
	Date	Time	Matrix Type	Number of Containers	Field Filtered? (Yes/No)	Preservation Type HCl/HNO ₃ /Other	Total Hg, EPA 1631	Methyl Hg, EPA 1630	ICP-MS Metals (specify) Total As	As Species (specify) InOrg, III, V, MMA, DMA	Se Species (specify) Se(IV), Se(VI), SeCN, Unknown	Filtration	Other (specify)		Other (specify)
<input type="checkbox"/> 20 (standard) <input type="checkbox"/> 15* <input type="checkbox"/> 10* <input type="checkbox"/> 5* <input checked="" type="checkbox"/> Other <u>3 day</u> <small>*Surcharges may apply to expedited TATs</small>	Specify Here														
Sample ID															
1	<u>EW-11/D</u>	<u>8/22/16</u>	<u>1449</u>	<u>W</u>	<u>1</u>	<u>N</u>			<u>X</u>						
2	<u>EW-11/D</u>	<u>8/22/16</u>	<u>1449</u>	<u>W</u>	<u>1</u>	<u>Y</u>				<u>X</u>					
3	<u>EW-8</u>	<u>8/22/16</u>	<u>1440</u>	<u>W</u>	<u>1</u>	<u>N</u>			<u>X</u>						
4	<u>EW-8</u>	<u>8/22/16</u>	<u>1440</u>	<u>W</u>	<u>1</u>	<u>Y</u>				<u>X</u>					
5															
6															
7															
8															
9															
10															
	Trip Blank														
Relinquished By: <u>Ryan Swennen</u>		Date: <u>8-23-16</u>		Time: <u>13:00</u>		Relinquished By: _____				Date: _____		Time: _____			
Received By: _____		Date: _____		Time: _____		Total Number of Packages: _____									

Page 2 of 2 List Hazardous Contaminants: _____

ORIGIN ID:GRBA (715) 735-7411
MAILROOM
TYCO FIRE PROTECTION PRODUCTS
ONE STANTON STREET

SHIP DATE: 23AUG16
ACTWGT: 7.6 LB
CAD: 0344887/CAFE2912

MARINETTE, WI 54143
UNITED STATES US

BILL SENDER

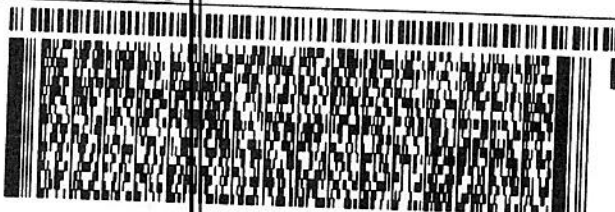
TO

BROOKS APPLIED LABS
18804 NORTH CREEK PARKWAY
SUITE 100
BOTHELL WA 98011

cooler (PS) ✓
ambient
10ml vials 16-0133 (As Spec.)
60ml 15-0056 (sm)

8562/0267/3298

REF: SR19859



FedEx
Express



J1513150813016

TRK# 5321 7781 2010
0201

WED - 24 AUG 10:30A
PRIORITY OVERNIGHT

NH PAEA

98011
WA-US SEA

Part # 150146V-434 RIT2 10015 3.



As Speciation (Basic Anion Exchange) Analysis Benchsheet SOP: BAL-4100-001

Sequence: <u>1600966</u> Analyst: <u>JMA</u> Date: <u>8/24/2016</u> Instrument ID: <u>ICP-6</u> Batch #: <u>B162046, B162047, B162062</u> Diluent: <u>1629009</u> Eluent: <u>1628022</u> Eluent: <u>1628023</u> Pipette ID: <u>ICP Purple</u> Balance ID: <u>BL-14</u>							
	Sample ID	Comments	Dilution	Spike Info	LIMS ID	Aliquot (uL)	STD conc. (ppb)
8	SEQ-ICB1		1				
9	SEQ-CAL1		1		1545040	5uL of 1545038	0.02
10	SEQ-CAL2		1		1545040	5uL of 1545038	0.02
11	SEQ-CAL3		1	As3 Cal - NC00007	1545040	5uL of 1545038	0.02
12	SEQ-CAL4		1	As5 Cal - NC00006	1545040	5uL of 1545038	0.02
13	SEQ-CAL5		1	DMA Cal - NC00012	1545041	50uL of 1545038	0.2
14	SEQ-CAL6		1	MMA CAL - NC00011	1545042	125uL of 1545038	0.5
15	SEQ-CAL7		1		1545043	500uL of 1545038	2
16	SEQ-CAL8		1		1545044	25uL of 1545037	5
17	SEQ-CAL9		1	As3 ICV - NC00009	1545045	100uL of 1545037	20
18	SEQ-ICB2		1	As5 ICV - NC00008			
19	SEQ-ICV1		1	DMA ICV - NC00013	NC00034	25uL of NC00024	5
20	SEQ-ICV2		1	MMA ICV - NC00010	1547081	25uL of 1545039	5
21	SEQ-ICV3		1	AsB ICV - NC00014	NC00036	25uL of NC00026	5
22	SEQ-ICV4		1	TMAO ICV - NC00015	NC00037	25uL of NC00015	5
23	SEQ-ICB3		1			5000	
24	SEQ-SCV1		50	TMDA 70.2 - NC00360	NC00360	100uL of NC00360	
25	SEQ-CCV1		1	CCV (1ppb)	1619062	250uL of 1545038	
26	SEQ-CCB1		1				
27	B162062-BLK1	Diluent	1				
28	B162062-BLK2	B162062	1				
29	B162062-BLK3		1				
30	B162062-BLK4		1				
31	1635021-02		100000	100x (50uL), 1000x (5uL)			
32	1635021-04		10000	(50uL) 100x, 100x			
33	1635021-06		100000	100x (50uL), 1000x (5uL)			
34	1635021-08		5000	100x (50uL), 500x (10uL)			
35	SEQ-CCV2		1	CCV (1ppb)	1619062	250uL of 1545038	
36	SEQ-CCB2		1				
37	1635021-10		50000	500x (10uL), 1000x (5uL)			
38	1635021-12		50000	500x (10uL), 1000x (5uL)			
39	1635021-14		10000	(50uL) 100x, 100x			
40	B162062-DUP1	1635021-14	10000	(50uL) 100x, 100x			
41	B162062-MS1	1635021-14	10000	(50uL) 100x, 100x		250uL of 1545038	
42	B162062-MSD1	1635021-14	10000	(50uL) 100x, 100x		250uL of 1545038	
43	SEQ-CCV3		1	CCV (1ppb)	1619062	250uL of 1545038	
44	SEQ-CCB3		1				

Quantitation Report

File Name 033SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 8:26:12 PM
Sample Name SEQ-ICB1
Sample Type CalBlk
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

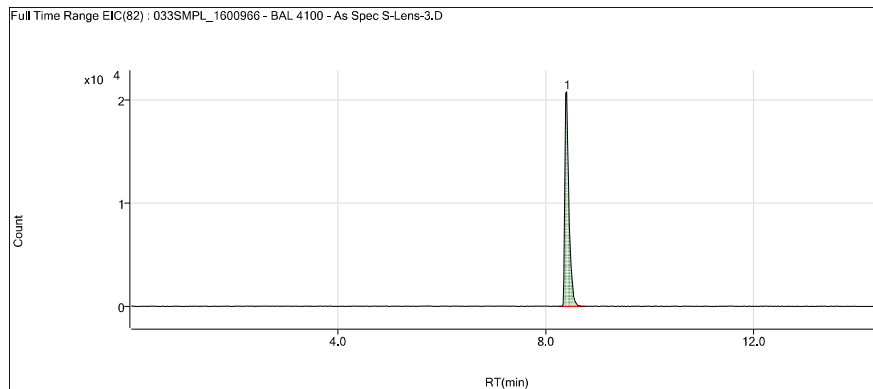
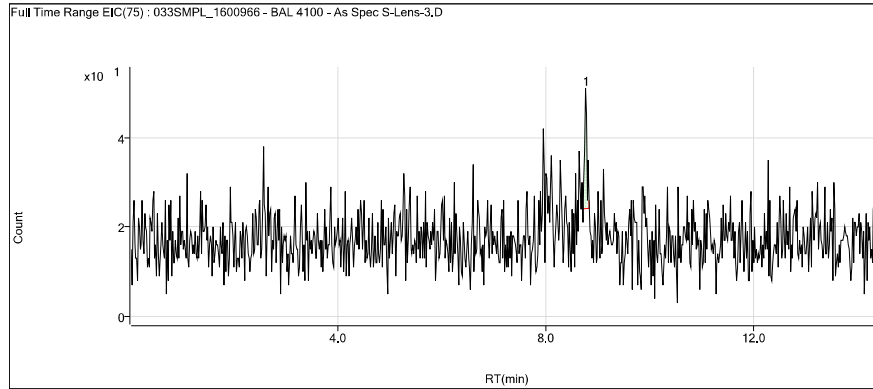
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
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		75	Unk 12.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	As3		ug/l		Pulse		
		75	DMA		ug/l		Pulse		
		75	MMA		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 1.9		ug/l		Pulse		
1	8.771	75	As5	0.000	ug/l	81	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.407	Se82	82	Pulse



Quantitation Report

File Name 034SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 8:41:31 PM
Sample Name SEQ-CAL1
Sample Type CalStd
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

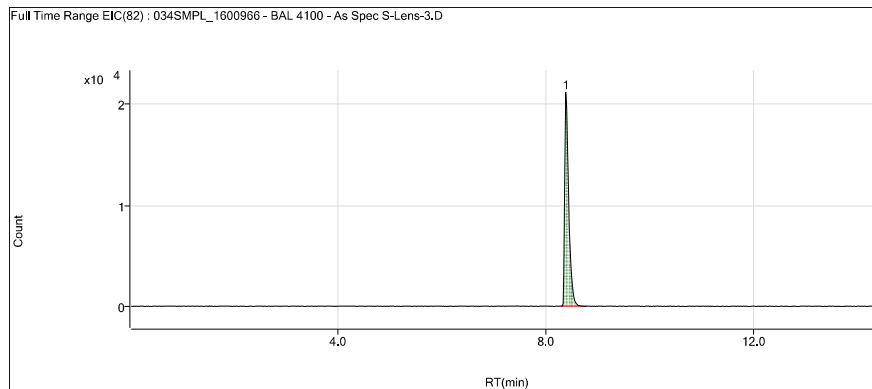
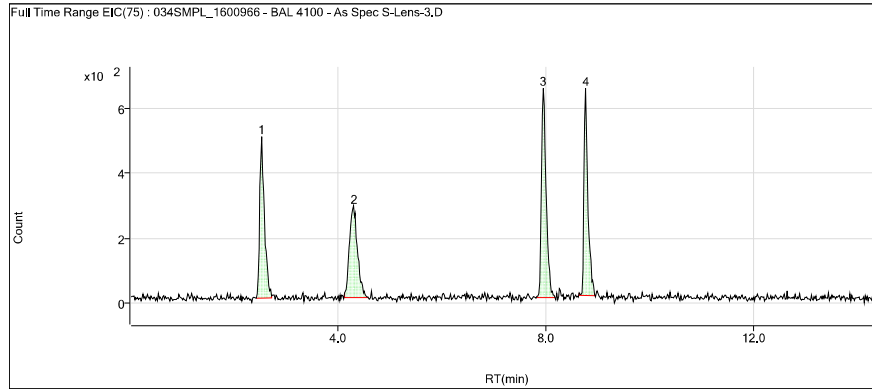
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
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		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.531	75	DMA	0.023	ug/l	3166	Pulse		
2	4.299	75	As3	0.022	ug/l	3017	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
3	7.956	75	MMA	0.027	ug/l	4053	Pulse		
4	8.771	75	As5	0.023	ug/l	3336	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.390	Se82	82	Pulse



Quantitation Report

File Name 035SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 8:56:49 PM
Sample Name SEQ-CAL2
Sample Type CalStd
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

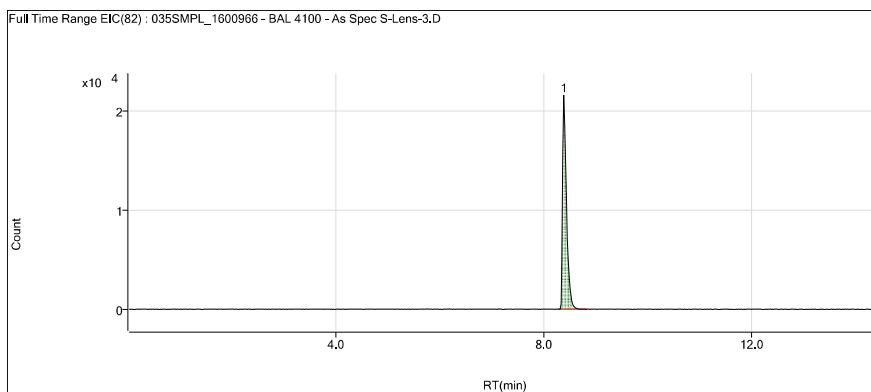
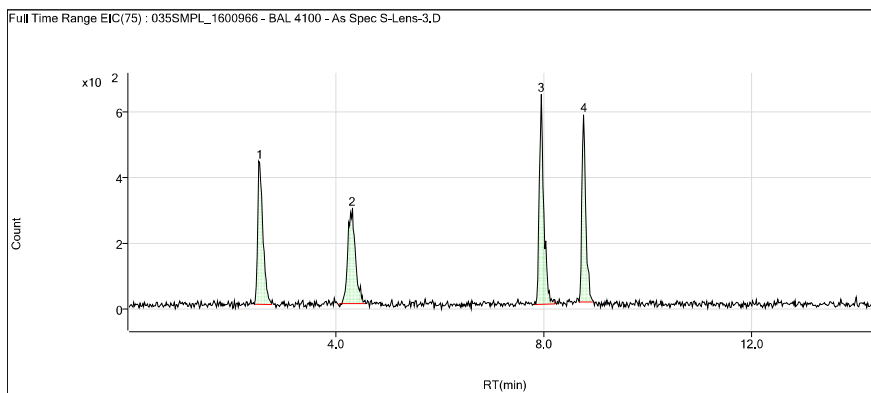
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.514	75	DMA	0.022	ug/l	3064	Pulse		
2	4.316	75	As3	0.021	ug/l	2909	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
3	7.956	75	MMA	0.026	ug/l	3817	Pulse		
4	8.771	75	As5	0.020	ug/l	2958	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.390	Se82	82	Pulse



Quantitation Report

File Name 036SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 9:12:06 PM
Sample Name SEQ-CAL3
Sample Type CalStd
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

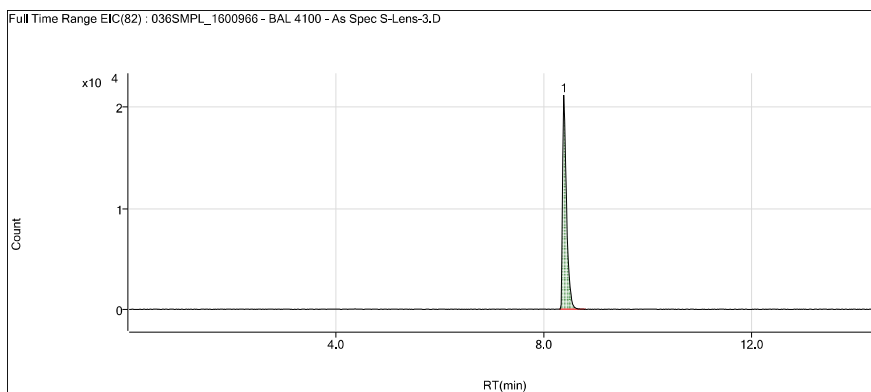
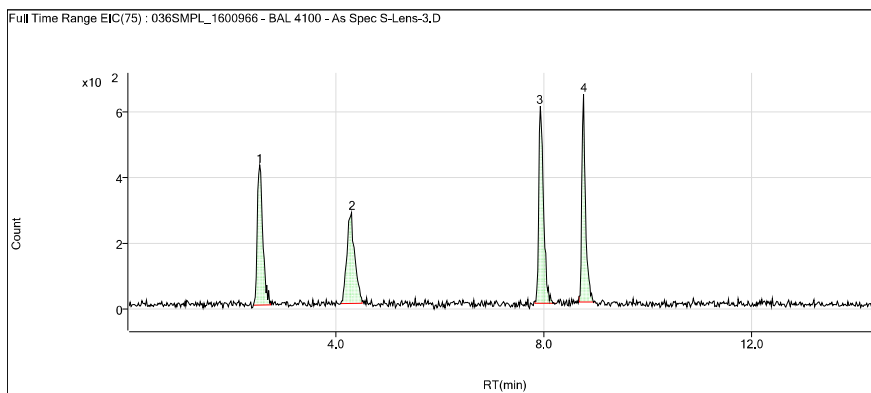
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.531	75	DMA	0.023	ug/l	3184	Pulse		
2	4.299	75	As3	0.021	ug/l	2919	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
3	7.939	75	MMA	0.026	ug/l	3811	Pulse		
4	8.771	75	As5	0.021	ug/l	3089	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.390	Se82	82	Pulse



Quantitation Report

File Name 037SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 9:27:26 PM
Sample Name SEQ-CAL4
Sample Type CalStd
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

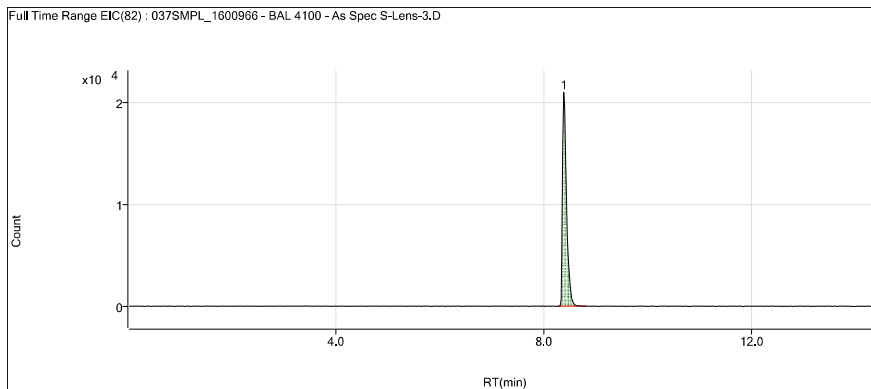
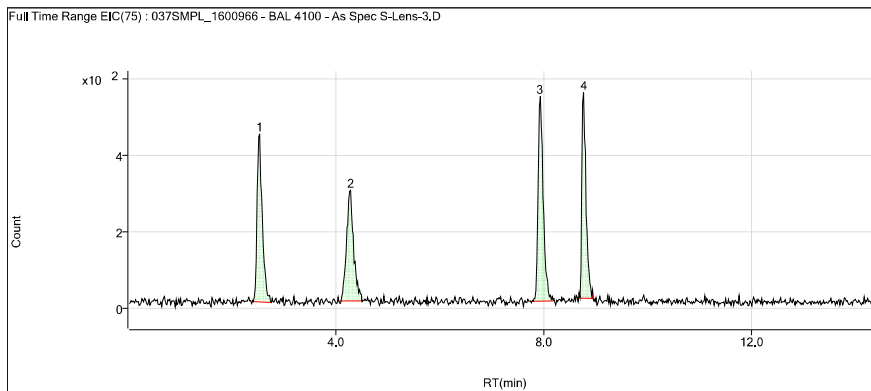
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.531	75	DMA	0.022	ug/l	3078	Pulse		
2	4.282	75	As3	0.020	ug/l	2727	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
3	7.939	75	MMA	0.025	ug/l	3721	Pulse		
4	8.771	75	As5	0.021	ug/l	3026	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.390	Se82	82	Pulse



Quantitation Report

File Name 038SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 9:42:45 PM
Sample Name SEQ-CAL5
Sample Type CalStd
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

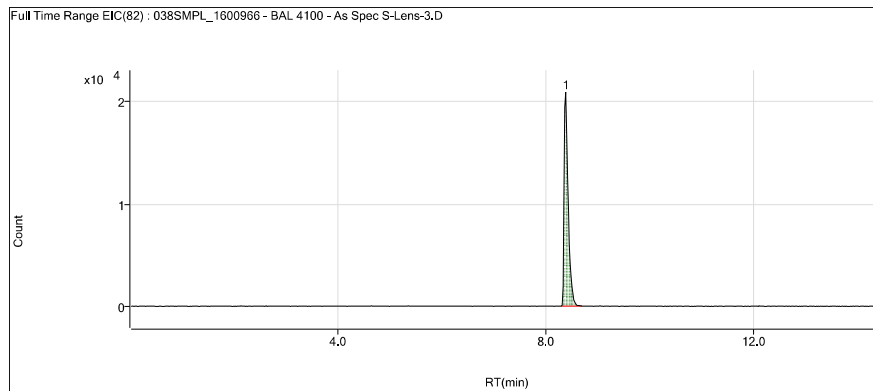
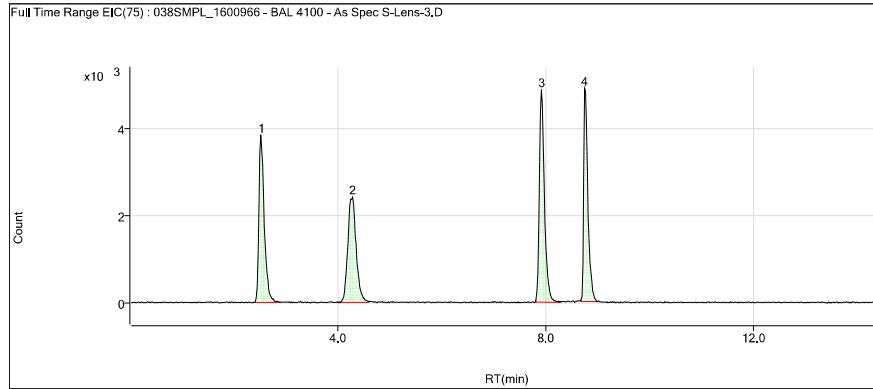
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8,2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.514	75	DMA	0.201	ug/l	27722	Pulse		
2	4.282	75	As3	0.195	ug/l	27033	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
3	7.922	75	MMA	0.224	ug/l	33327	Pulse		
4	8.754	75	As5	0.193	ug/l	27361	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.390	Se82	82	Pulse



Quantitation Report

File Name 039SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 9:58:03 PM
Sample Name SEQ-CAL6
Sample Type CalStd
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

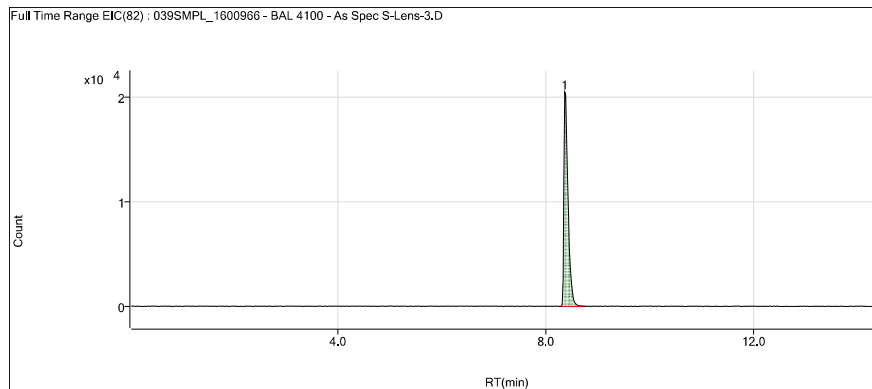
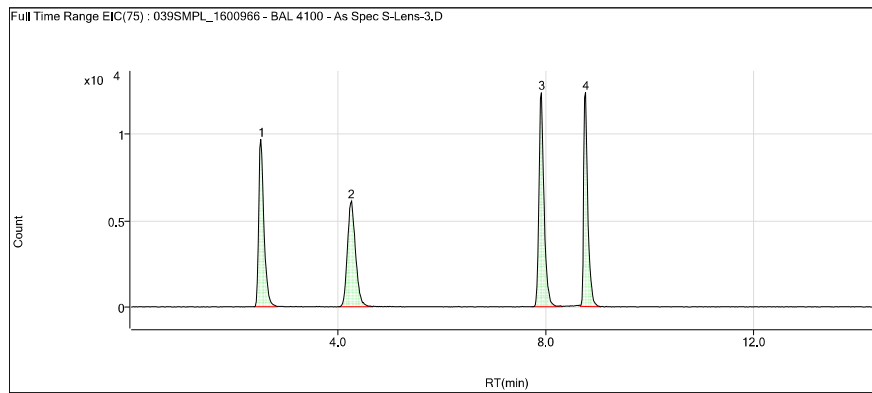
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.514	75	DMA	0.497	ug/l	68507	Pulse		
2	4.264	75	As3	0.478	ug/l	66281	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
3	7.922	75	MMA	0.568	ug/l	84518	Pulse		
4	8.771	75	As5	0.489	ug/l	69078	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 040SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 10:13:22 PM
Sample Name SEQ-CAL7
Sample Type CalStd
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

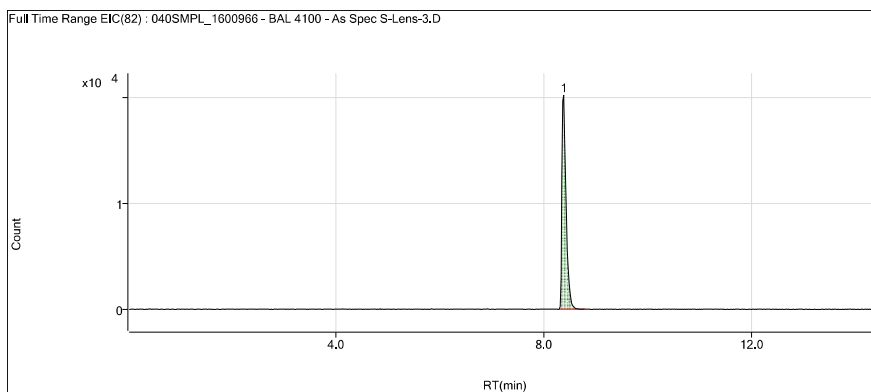
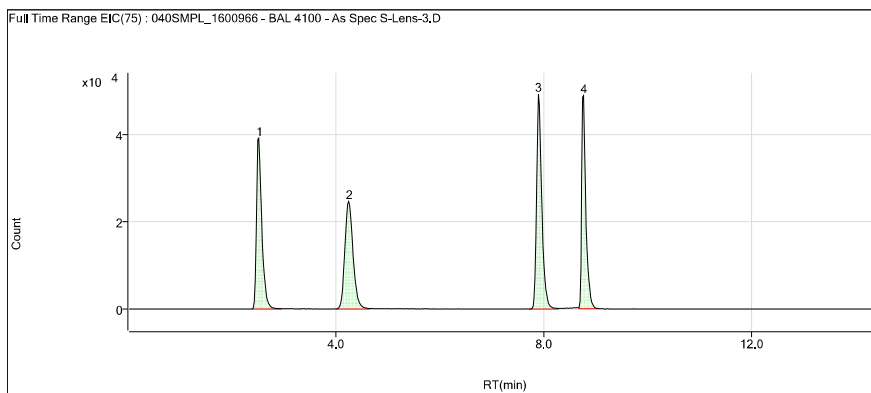
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.514	75	DMA	2.029	ug/l	279819	Pulse		
2	4.247	75	As3	1.941	ug/l	268996	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
3	7.904	75	MMA	2.297	ug/l	341942	Pulse		
4	8.771	75	As5	1.940	ug/l	273762	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.390	Se82	82	Pulse



Quantitation Report

File Name 041SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 10:28:40 PM
Sample Name SEQ-CAL8
Sample Type CalStd
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

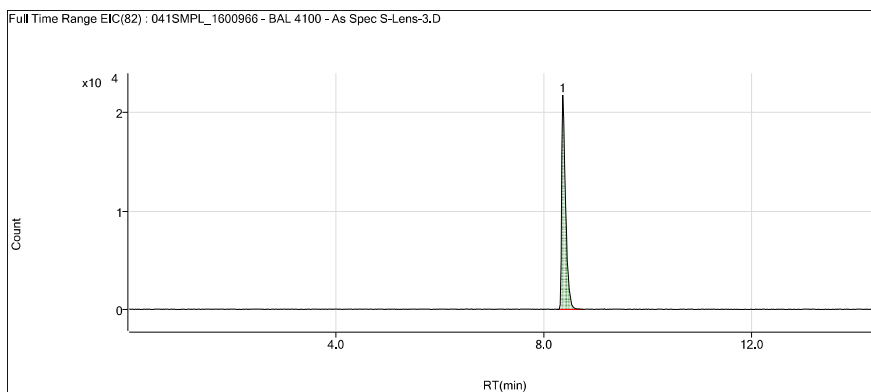
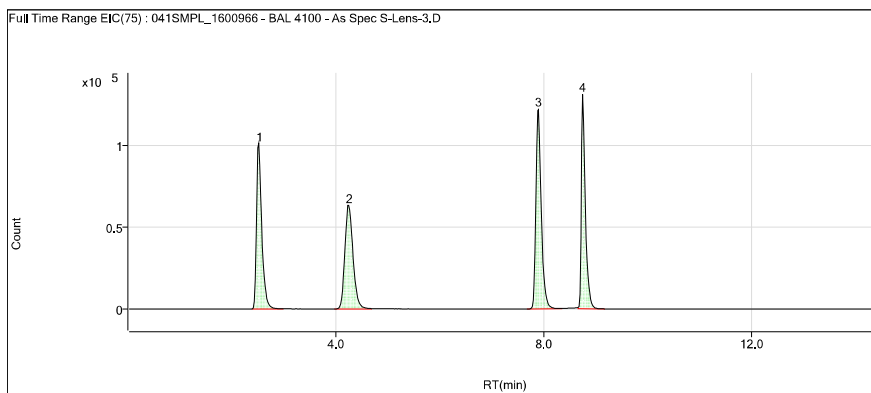
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8,2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.514	75	DMA	5.200	ug/l	717124	Pulse		
2	4.247	75	As3	4.994	ug/l	691946	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
3	7.904	75	MMA	5.899	ug/l	877982	Pulse		
4	8.754	75	As5	5.008	ug/l	706409	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 042SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 10:43:57 PM
Sample Name SEQ-CAL9
Sample Type CalStd
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

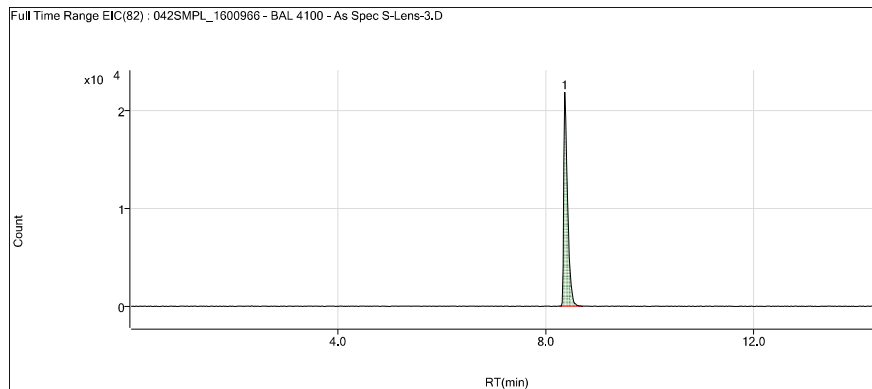
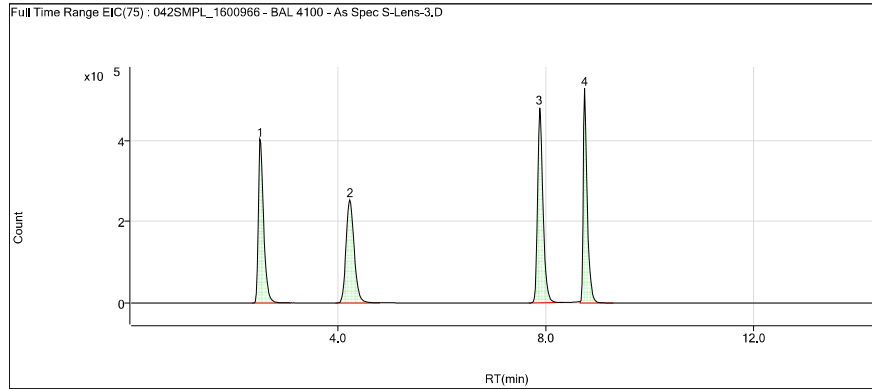
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.496	75	DMA	20.849	ug/l	2875013	Pulse		
2	4.230	75	As3	20.008	ug/l	2772403	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
3	7.887	75	MMA	23,448	ug/l	3489862	Pulse		
4	8.754	75	As5	20,004	ug/l	2821509	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 043SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 10:59:16 PM
Sample Name SEQ-ICB2
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

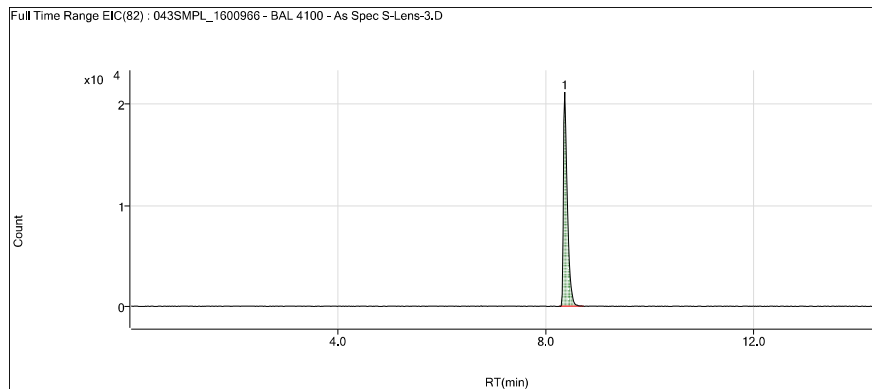
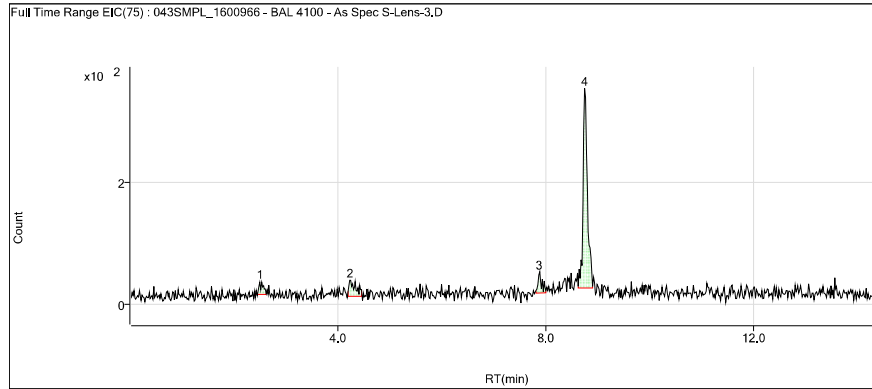
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.496	75	DMA	0.001	ug/l	119	Pulse		
2	4.230	75	As3	0.002	ug/l	241	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
3	7.887	75	MMA	0.001	ug/l	179	Pulse		
4	8.754	75	As5	0.013	ug/l	1908	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 044SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 11:14:34 PM
Sample Name SEQ-ICV1
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

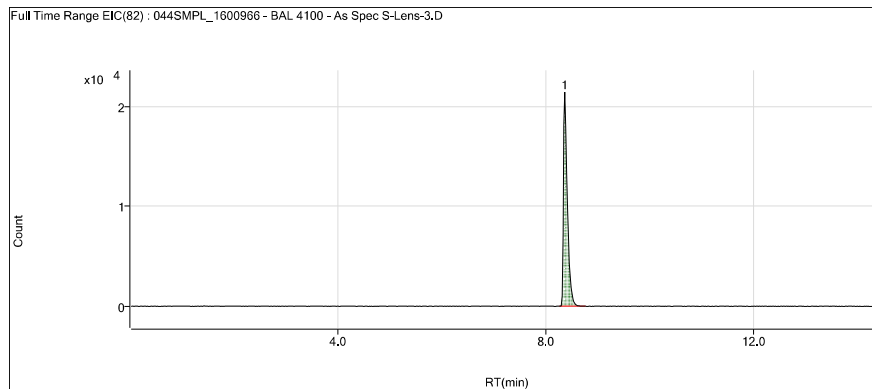
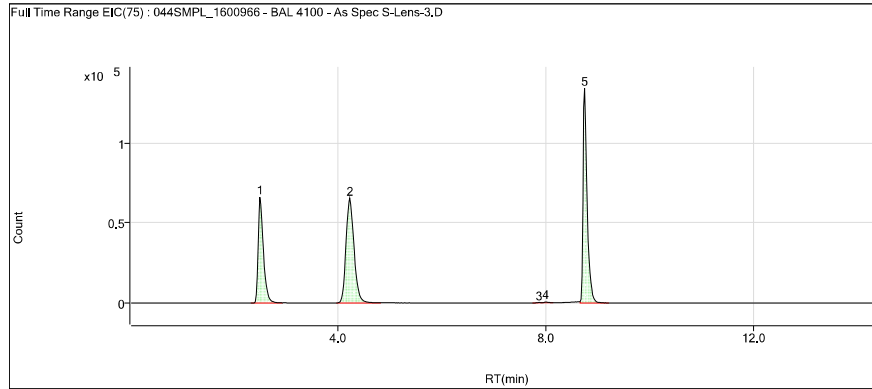
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.496	75	DMA	3.361	ug/l	463472	Pulse		
2	4.230	75	As3	5.081	ug/l	704100	Pulse		
3	7.870	75	MMA	0.007	ug/l	1099	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
4	8.008	75	Unk 8	0.022	ug/l	3011	Pulse		
5	8.754	75	As5	5.206	ug/l	734284	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 045SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 11:29:52 PM
Sample Name SEQ-ICV2
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

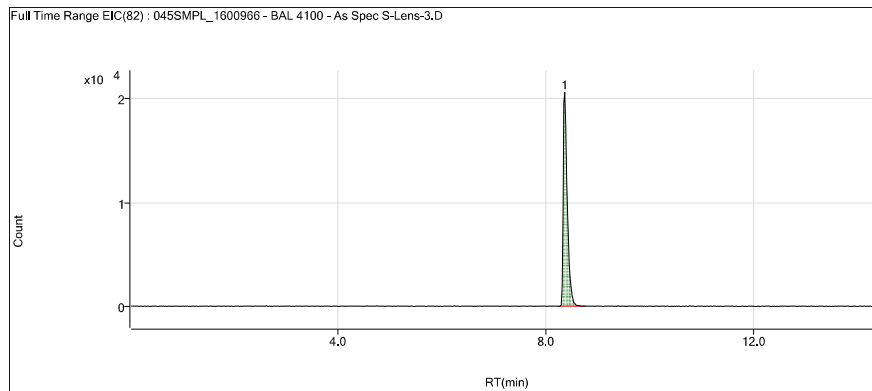
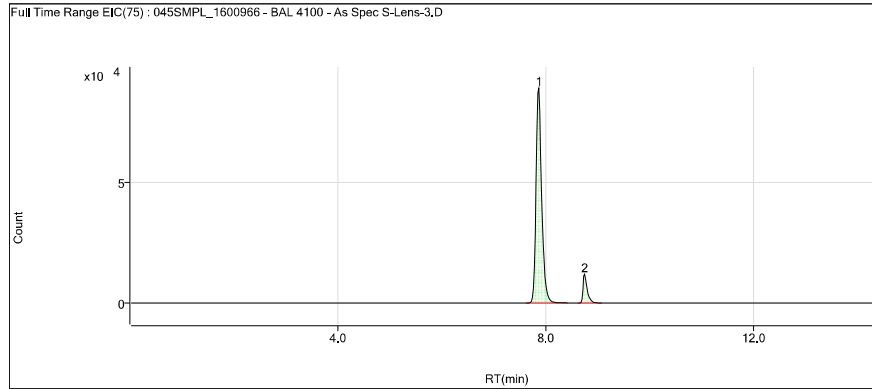
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	As3		ug/l		Pulse		
		75	DMA		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
1	7.870	75	MMA	4.544	ug/l	676343	Pulse		
2	8.754	75	As5	0.469	ug/l	66293	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 046SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/25/2016 11:45:11 PM
Sample Name SEQ-ICV3
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

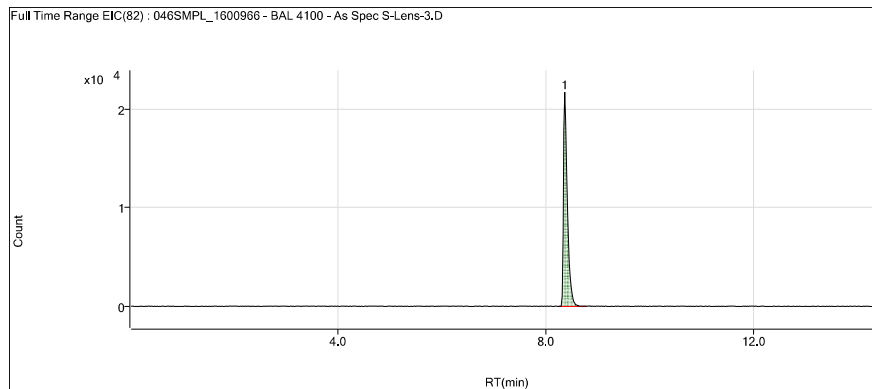
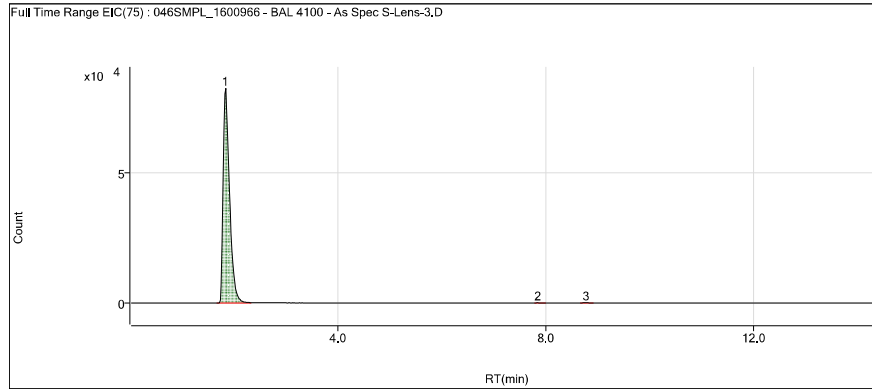
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	As3		ug/l		Pulse		
		75	DMA		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
1	1.838	75	AsB+TMAO	5.151	ug/l	710275	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
2	7.852	75	MMA	0.001	ug/l	208	Pulse		
3	8.771	75	As5	0.004	ug/l	592	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 047SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 12:00:30 AM
Sample Name SEQ-ICV4
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

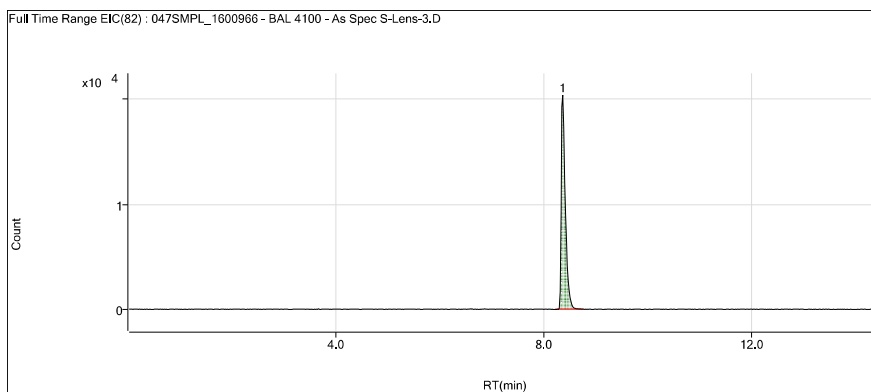
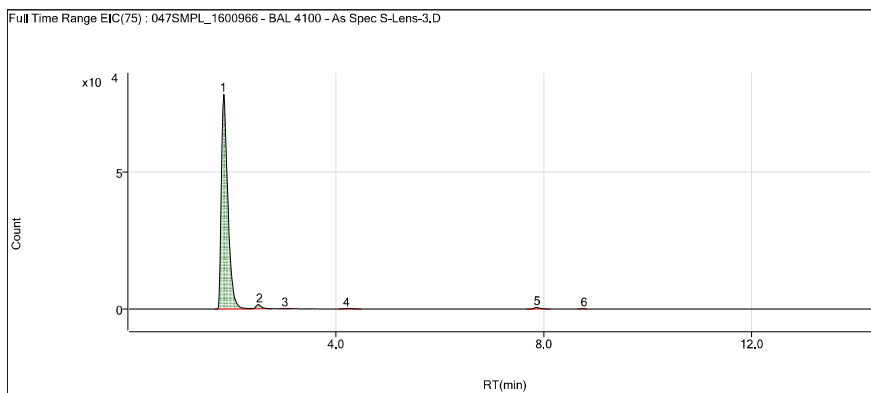
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	1.838	75	AsB+TMAO	4.931	ug/l	679944	Pulse		
2	2.514	75	DMA	0.079	ug/l	10915	Pulse		
3	3.016	75	Unk 3.2	0.004	ug/l	552	Pulse		
4	4.212	75	As3	0.012	ug/l	1621	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
5	7.870	75	MMA	0.027	ug/l	3995	Pulse		
6	8.771	75	As5	0.003	ug/l	436	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 048SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 12:15:49 AM
Sample Name SEQ-ICB3
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

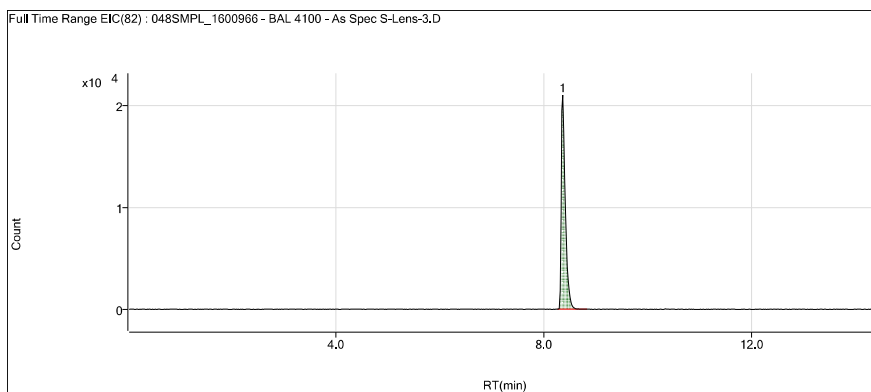
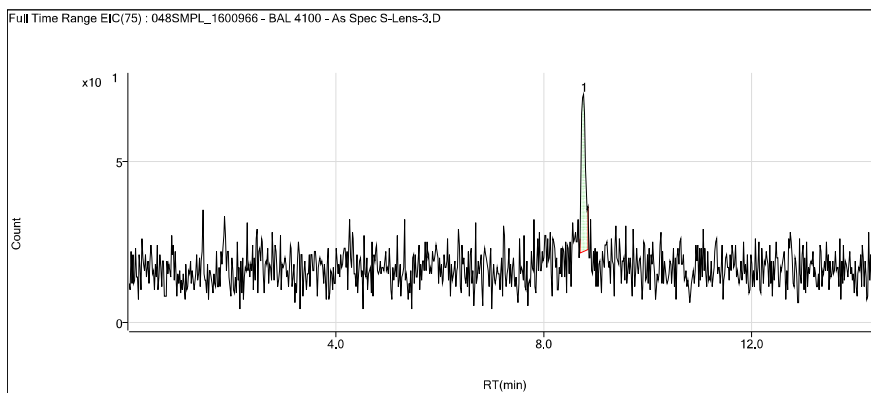
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	As3		ug/l		Pulse		
		75	DMA		ug/l		Pulse		
		75	MMA		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 1.9		ug/l		Pulse		
1	8.771	75	As5	0.002	ug/l	294	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 049SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 12:31:07 AM
Sample Name SEQ-SCV1
Sample Type Sample
Comment ---
Prep Dilution 50.0000
Auto Dilution 1,0000
Total Dilution 50.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

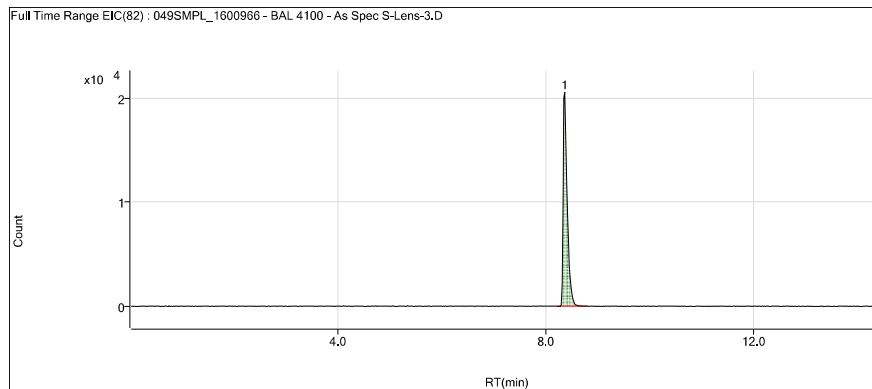
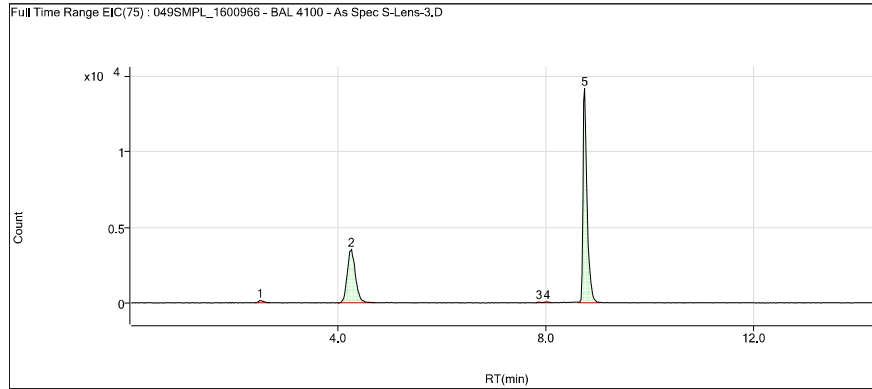
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8,2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.496	75	DMA	0.374	ug/l	1032	Pulse		
2	4.264	75	As3	13.979	ug/l	38741	Pulse		
3	7.887	75	MMA	0.055	ug/l	163	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
4	8.026	75	Unk 8	0.135	ug/l	372	Pulse		
5	8.754	75	As5	27.414	ug/l	77410	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 050SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 12:46:24 AM
Sample Name SEQ-CCV1
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

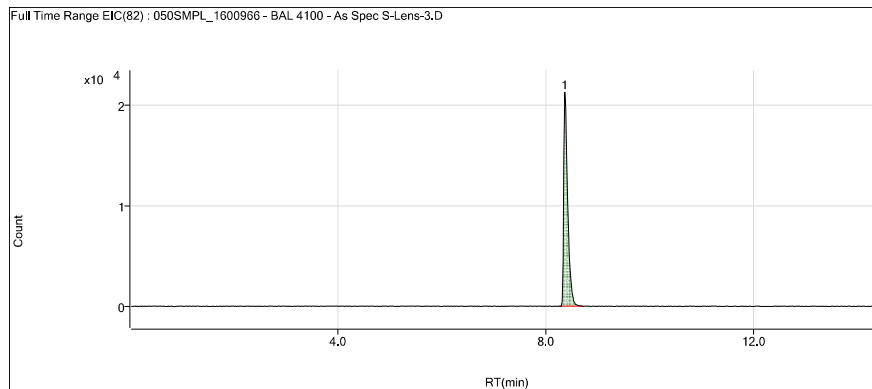
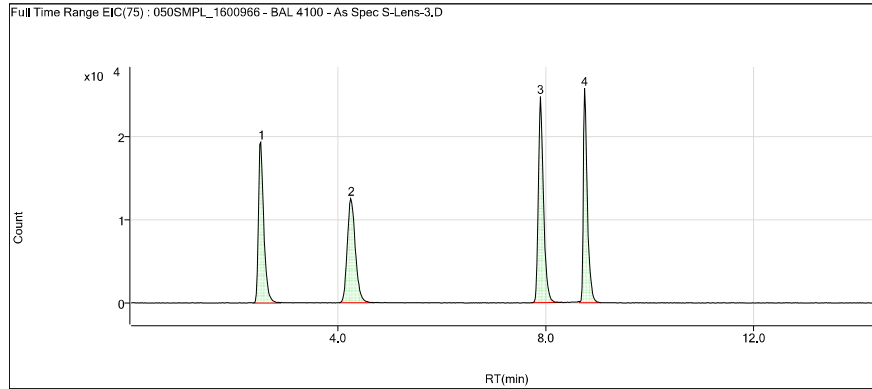
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8,2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.514	75	DMA	1.009	ug/l	139206	Pulse		
2	4.247	75	As3	0.981	ug/l	135871	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
3	7.904	75	MMA	1.159	ug/l	172455	Pulse		
4	8.754	75	As5	0.986	ug/l	139142	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 051SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 1:01:43 AM
Sample Name SEQ-CCB1
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

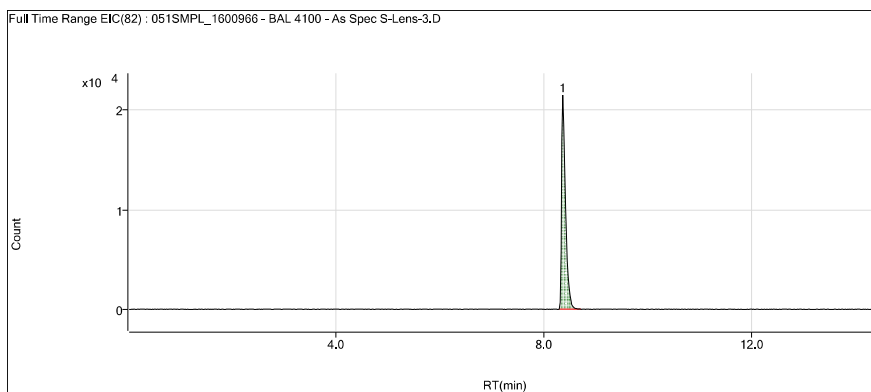
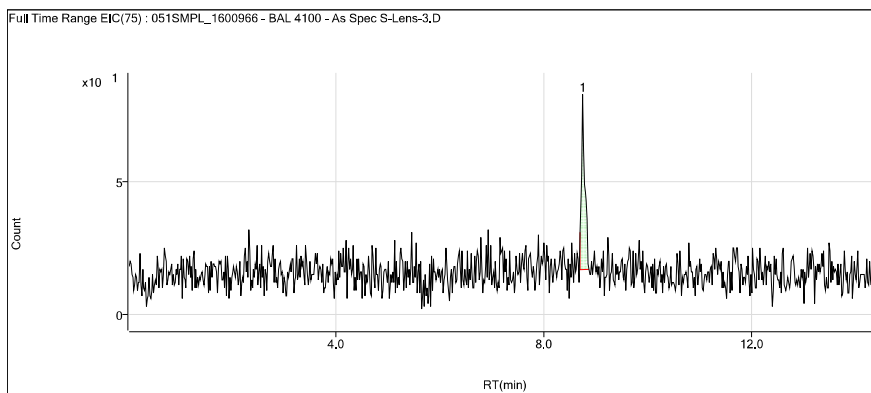
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	As3		ug/l		Pulse		
		75	DMA		ug/l		Pulse		
		75	MMA		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 1.9		ug/l		Pulse		
1	8.754	75	As5	0.001	ug/l	292	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 052SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 1:17:01 AM
Sample Name B162062-BLK1
Sample Type Sample
Comment Diluent
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

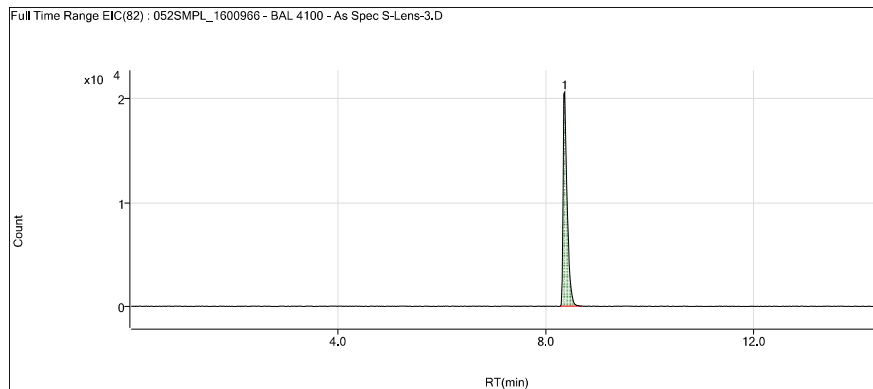
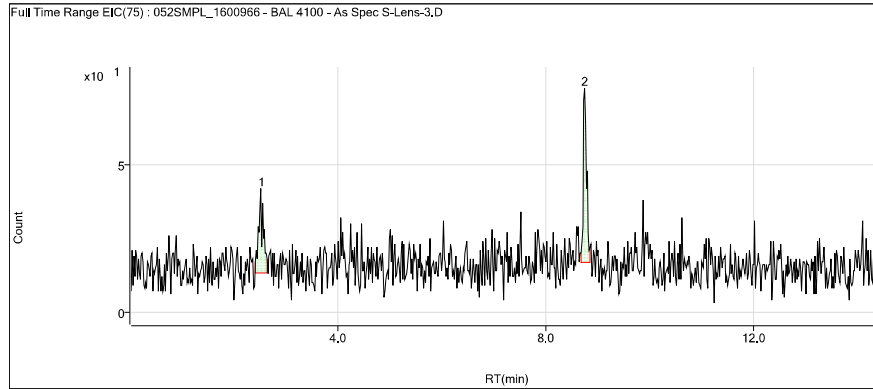
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	As3		ug/l		Pulse		
		75	MMA		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
1	2.514	75	DMA	0.001	ug/l	176	Pulse		
2	8.754	75	As5	0.001	ug/l	268	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 053SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 1:32:18 AM
Sample Name B162062-BLK2
Sample Type Sample
Comment B162062
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

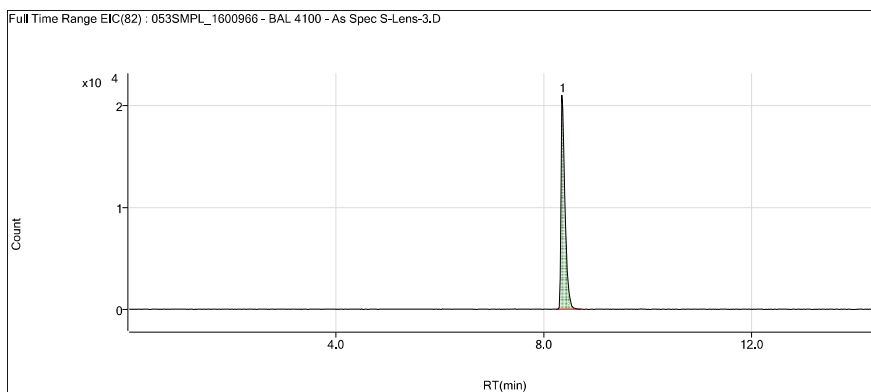
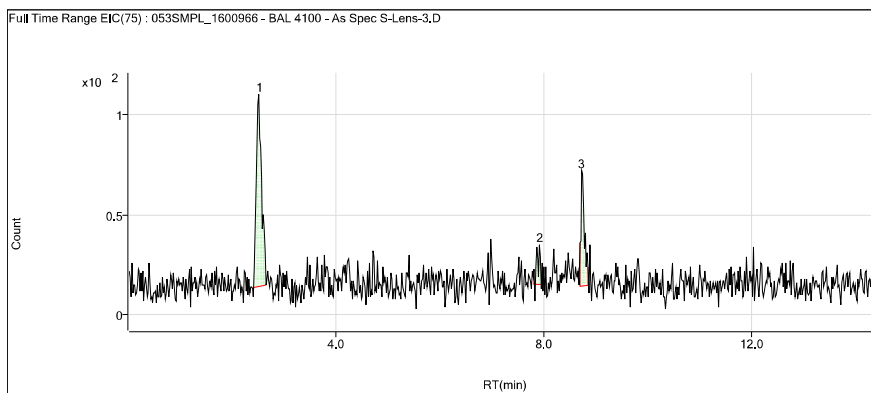
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	As3		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
1	2.514	75	DMA	0.005	ug/l	688	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
2	7.922	75	MMA	0.001	ug/l	81	Pulse		
3	8.736	75	As5	0.001	ug/l	265	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.355	Se82	82	Pulse



Quantitation Report

File Name 054SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 1:47:38 AM
Sample Name B162062-BLK3
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

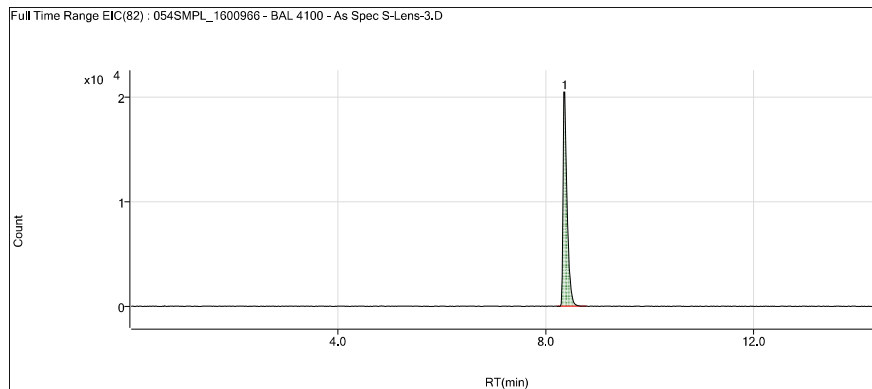
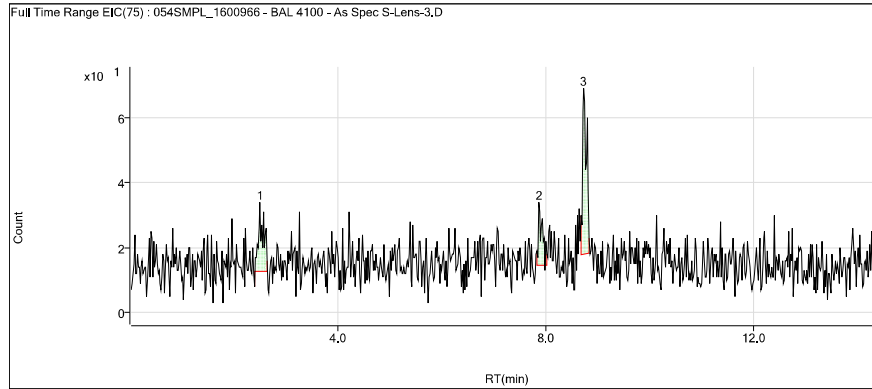
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	As3		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
1	2.496	75	DMA	0.001	ug/l	148	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
2	7.870	75	MMA	0.001	ug/l	101	Pulse		
3	8.736	75	As5	0.001	ug/l	282	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.372	Se82	82	Pulse



Quantitation Report

File Name 055SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 2:02:56 AM
Sample Name B162062-BLK4
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

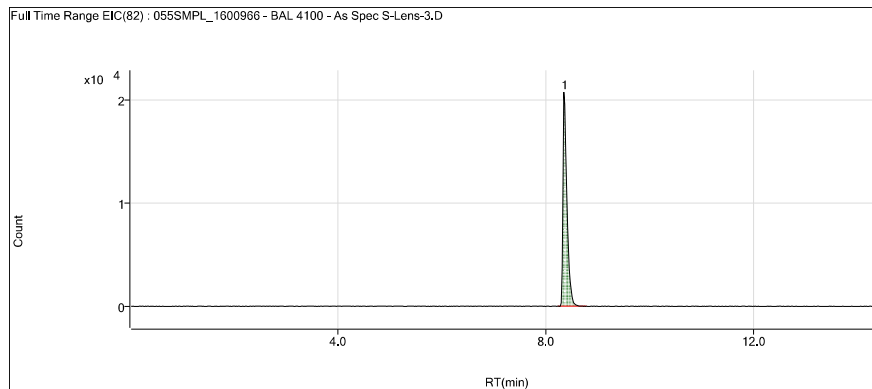
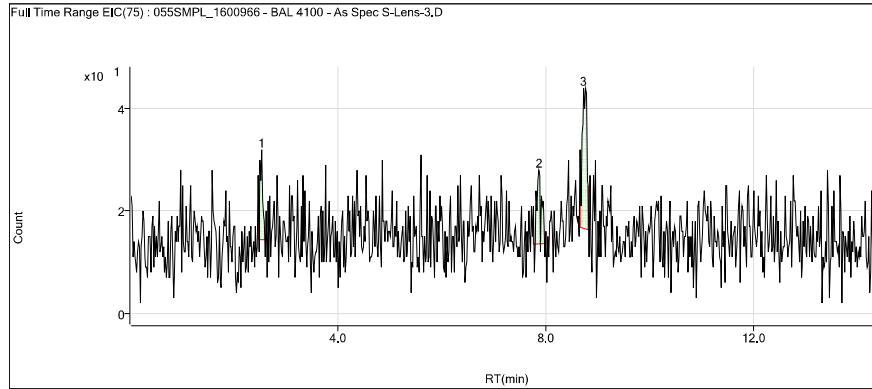
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	As3		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
1	2.531	75	DMA	0.000	ug/l	63	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
2	7.870	75	MMA	0.001	ug/l	81	Pulse		
3	8.736	75	As5	0.001	ug/l	172	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.355	Se82	82	Pulse



Quantitation Report

File Name 056SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 2:18:15 AM
Sample Name 1635021-02
Sample Type Sample
Comment ---
Prep Dilution 100000.0000
Auto Dilution 1.0000
Total Dilution 100000.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

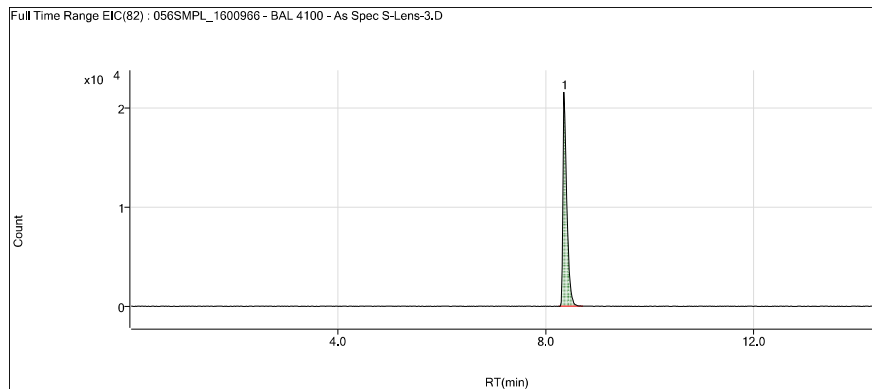
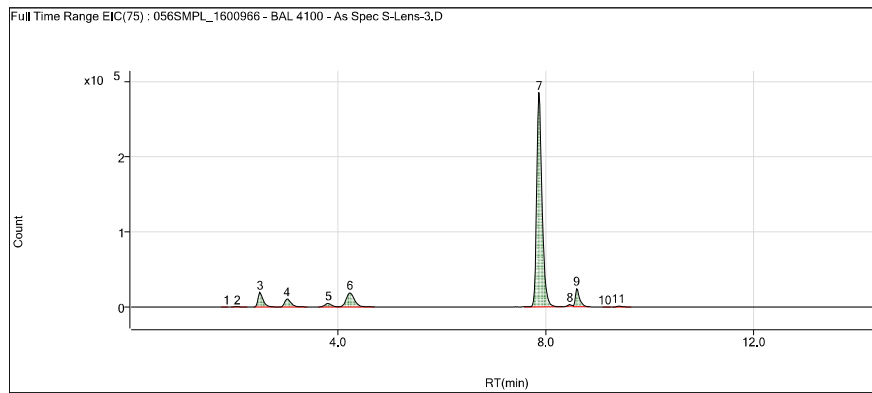
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	As5		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
1	1.855	75	AsB+TMAO	167.513	ug/l	231	Pulse		
2	2.063	75	Unk 1.9	1783.905	ug/l	2460	Pulse		
3	2.496	75	DMA	97499.820	ug/l	134452	Pulse		
4	3.016	75	Unk 3.2	66137.905	ug/l	91204	Pulse		
5	3.814	75	Unk 3.7	30132.761	ug/l	41553	Pulse		
6	4.230	75	As3	148600.133	ug/l	205907	Pulse		
7	7.870	75	MMA	1378020.069	ug/l	2050938	Pulse		
8	8.459	75	Unk 8.4	8223.366	ug/l	11340	Pulse		
9	8.598	75	Unk 8.6	100538.259	ug/l	138642	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
10	9.152	75	Unk 9.2	327.774	ug/l	452	Pulse		
11	9.413	75	Unk 9.4	5329.959	ug/l	7350	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.355	Se82	82	Pulse



Quantitation Report

File Name 057SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 2:33:33 AM
Sample Name 1635021-04
Sample Type Sample
Comment ---
Prep Dilution 10000.0000
Auto Dilution 1,0000
Total Dilution 10000.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

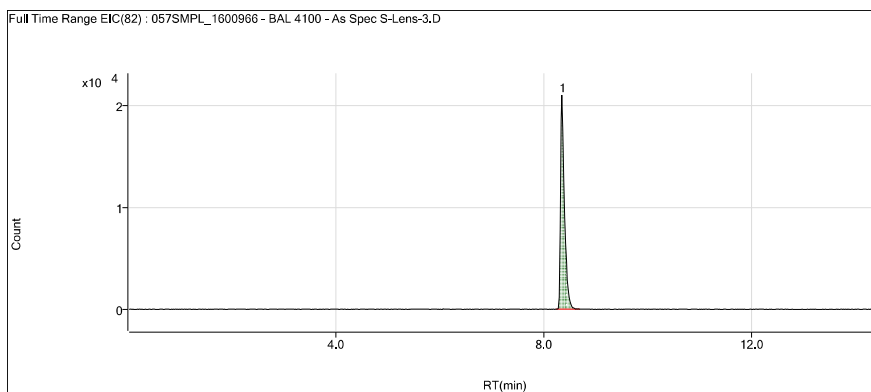
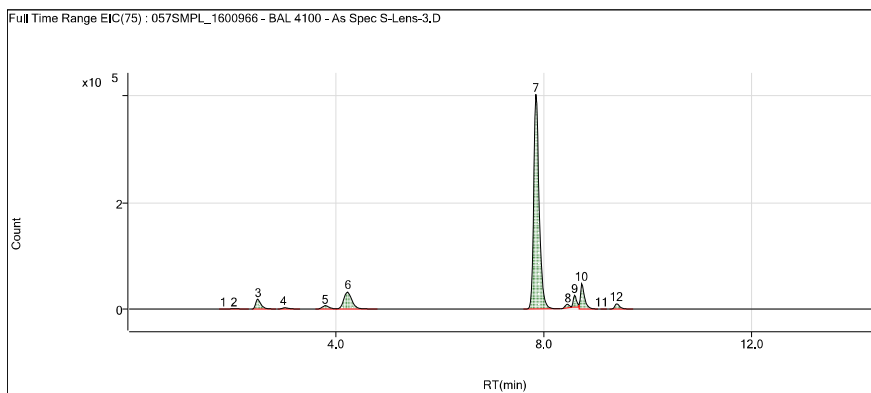
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
1	1.838	75	AsB+TMAO	56.708	ug/l	782	Pulse		
2	2.028	75	Unk 1.9	424.149	ug/l	5849	Pulse		
3	2.496	75	DMA	9445.993	ug/l	130260	Pulse		
4	2.999	75	Unk 3.2	1351.852	ug/l	18642	Pulse		
5	3.796	75	Unk 3.7	4082.386	ug/l	56296	Pulse		
6	4.230	75	As3	25117.115	ug/l	348034	Pulse		
7	7.852	75	MMA	198681.092	ug/l	2957015	Pulse		
8	8.459	75	Unk 8.4	2885.357	ug/l	39789	Pulse		
9	8.598	75	Unk 8.6	7406.758	ug/l	102139	Pulse		
10	8.736	75	As5	18259.772	ug/l	257619	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
11	9.118	75	Unk 9.2	28,644	ug/l	395	Pulse		
12	9.413	75	Unk 9.4	4697,616	ug/l	64780	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.355	Se82	82	Pulse



Quantitation Report

File Name 058SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 2:48:51 AM
Sample Name 1635021-06
Sample Type Sample
Comment ---
Prep Dilution 100000.0000
Auto Dilution 1.0000
Total Dilution 100000.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

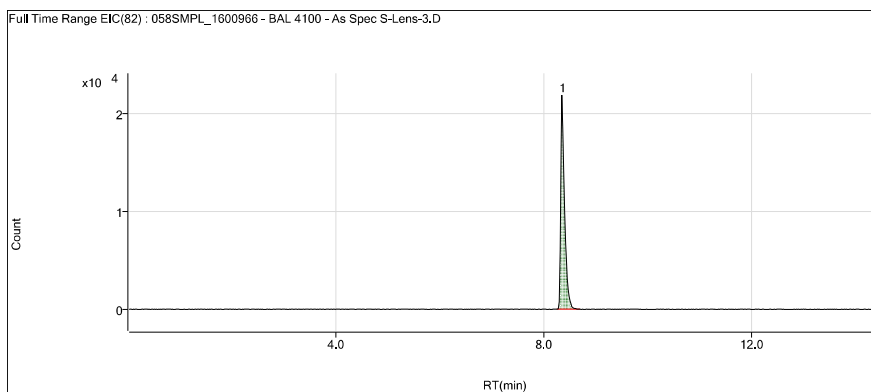
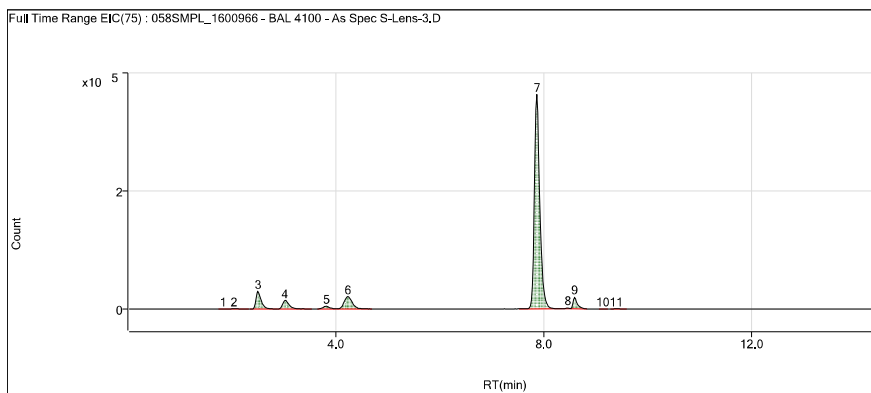
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 3,3		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	As5		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
1	1.838	75	AsB+TMAO	443.076	ug/l	611	Pulse		
2	2.028	75	Unk 1.9	2857.148	ug/l	3940	Pulse		
3	2.496	75	DMA	151062.647	ug/l	208315	Pulse		
4	3.016	75	Unk 3.2	90258.327	ug/l	124466	Pulse		
5	3.814	75	Unk 3.7	28613.542	ug/l	39458	Pulse		
6	4.230	75	As3	163914.303	ug/l	227127	Pulse		
7	7.870	75	MMA	1774602.180	ug/l	2641180	Pulse		
8	8.459	75	Unk 8.4	4846.274	ug/l	6683	Pulse		
9	8.598	75	Unk 8.6	79945.762	ug/l	110245	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
10	9.135	75	Unk 9.2	538.797	ug/l	743	Pulse		
11	9.413	75	Unk 9.4	2494.566	ug/l	3440	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.355	Se82	82	Pulse



Quantitation Report

File Name 059SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 3:04:10 AM
Sample Name 1635021-08
Sample Type Sample
Comment ---
Prep Dilution 5000.0000
Auto Dilution 1.0000
Total Dilution 5000.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

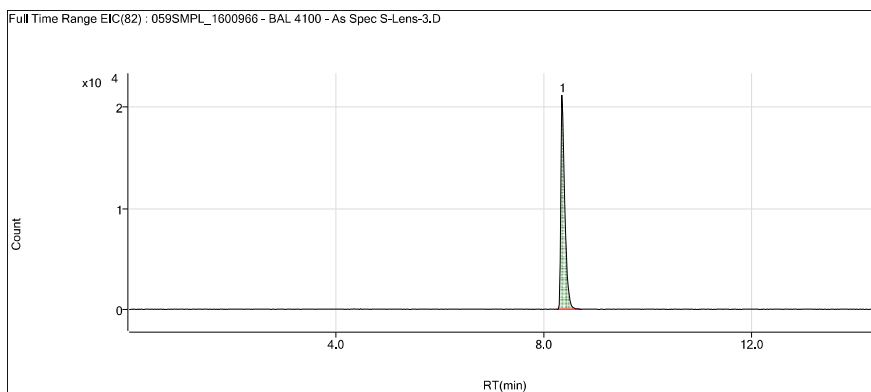
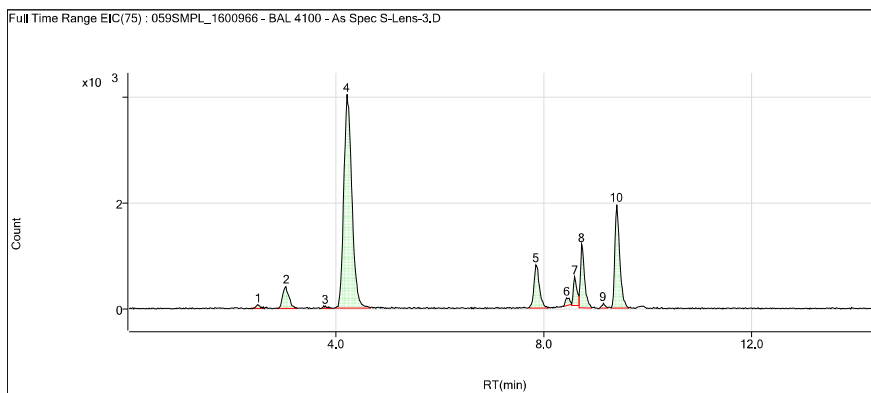
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
1	2.496	75	DMA	14.975	ug/l	413	Pulse		
2	3.034	75	Unk 3.2	122.843	ug/l	3388	Pulse		
3	3.796	75	Unk 3.7	8,956	ug/l	247	Pulse		
4	4.212	75	As3	1571.146	ug/l	43541	Pulse		
5	7.852	75	MMA	199,755	ug/l	5946	Pulse		
6	8.442	75	Unk 8.4	31,146	ug/l	859	Pulse		
7	8.598	75	Unk 8.6	96,229	ug/l	2654	Pulse		
8	8.736	75	As5	228.118	ug/l	6516	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
9	9.152	75	Unk 9.2	12.763	ug/l	352	Pulse		
10	9.413	75	Unk 9.4	461.567	ug/l	12730	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.355	Se82	82	Pulse



Quantitation Report

File Name 060SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 3:19:28 AM
Sample Name SEQ-CCV2
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

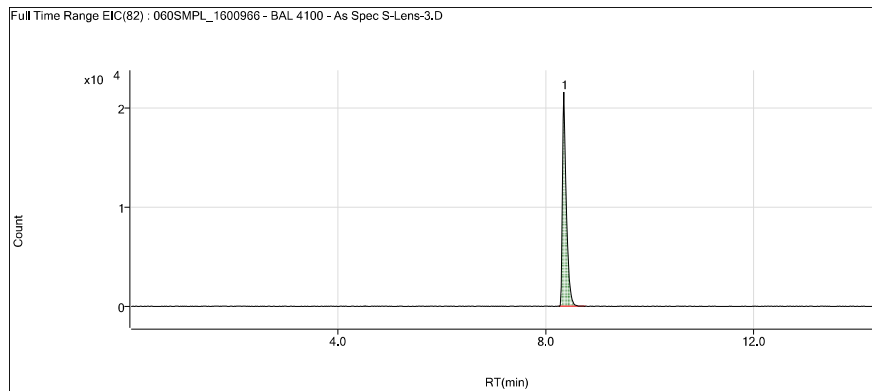
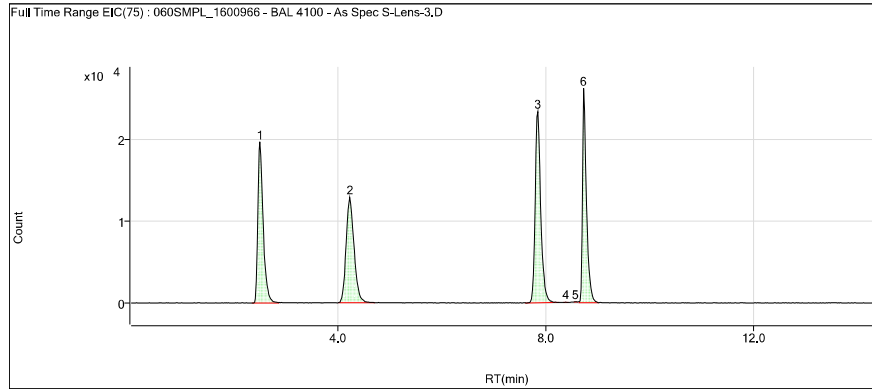
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
1	2.496	75	DMA	1.023	ug/l	141063	Pulse		
2	4.230	75	As3	0.989	ug/l	137062	Pulse		
3	7.852	75	MMA	1.174	ug/l	174659	Pulse		
4	8.390	75	Unk 8.4	0.000	ug/l	56	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
5	8.580	75	Unk 8.6	0.001	ug/l	137	Pulse		
6	8.736	75	As5	0.994	ug/l	140256	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.355	Se82	82	Pulse



Quantitation Report

File Name 061SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 3:34:46 AM
Sample Name SEQ-CCB2
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

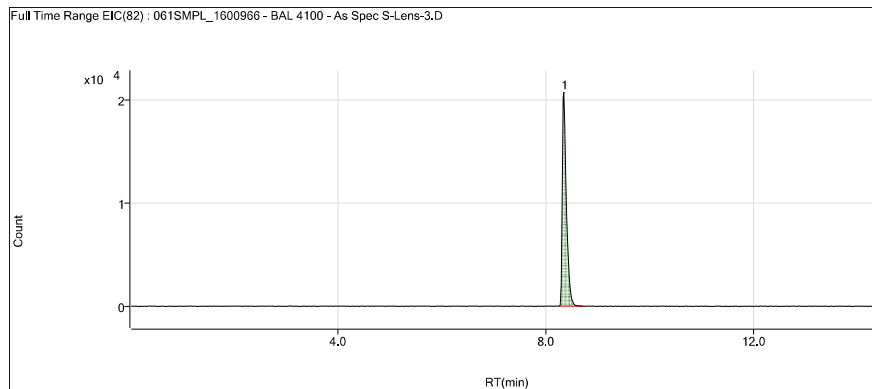
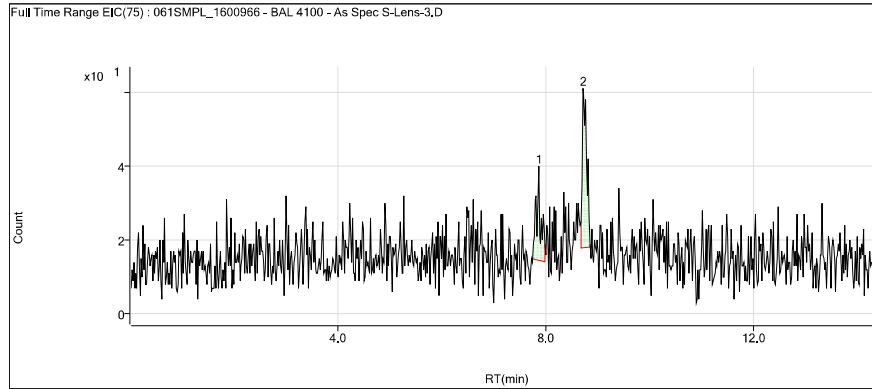
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	As3		ug/l		Pulse		
		75	DMA		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
1	7.870	75	MMA	0.001	ug/l	150	Pulse		
2	8.719	75	As5	0.001	ug/l	254	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.355	Se82	82	Pulse



Quantitation Report

File Name 062SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 3:50:04 AM
Sample Name 1635021-10
Sample Type Sample
Comment ---
Prep Dilution 50000.0000
Auto Dilution 1,0000
Total Dilution 50000.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

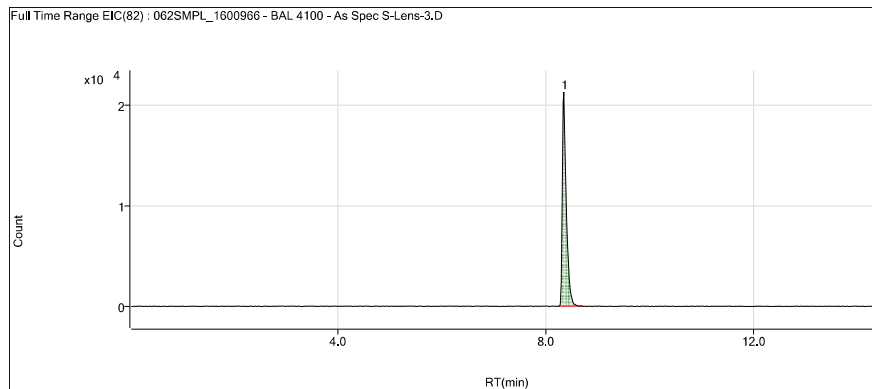
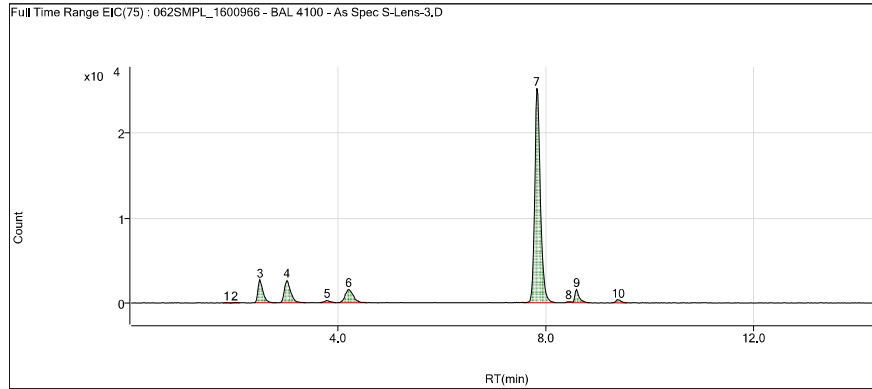
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	As5		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
1	1.855	75	AsB+TMAO	46.048	ug/l	127	Pulse		
2	2.011	75	Unk 1.9	93.184	ug/l	257	Pulse		
3	2.496	75	DMA	6736.053	ug/l	18578	Pulse		
4	3.016	75	Unk 3.2	8001.828	ug/l	22069	Pulse		
5	3.779	75	Unk 3.7	707.761	ug/l	1952	Pulse		
6	4.195	75	As3	6028.240	ug/l	16706	Pulse		
7	7.835	75	MMA	64555.238	ug/l	192158	Pulse		
8	8.442	75	Unk 8.4	203.771	ug/l	562	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
9	8.598	75	Unk 8.6	3277.381	ug/l	9039	Pulse		
10	9.395	75	Unk 9.4	922.047	ug/l	2543	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.355	Se82	82	Pulse



Quantitation Report

File Name 063SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 4:05:23 AM
Sample Name 1635021-12
Sample Type Sample
Comment ---
Prep Dilution 50000.0000
Auto Dilution 1,0000
Total Dilution 50000.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

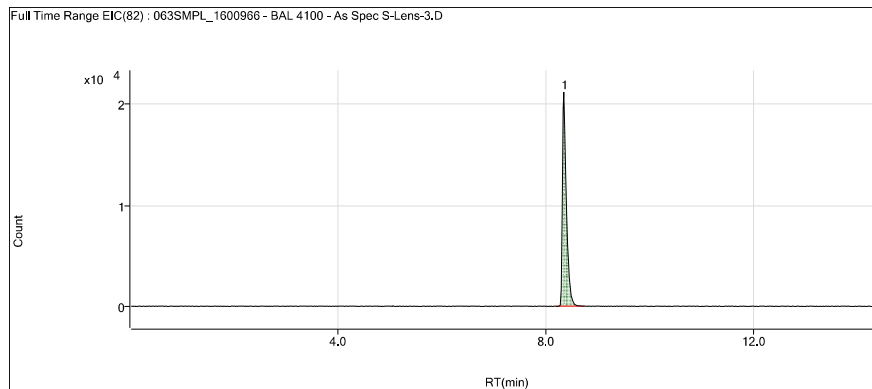
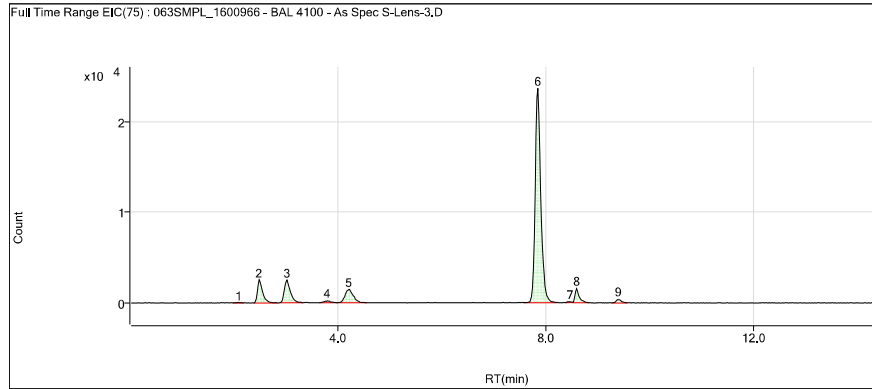
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	As5		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
1	2.080	75	Unk 1.9	116.751	ug/l	322	Pulse		
2	2.479	75	DMA	6269.047	ug/l	17290	Pulse		
3	3.016	75	Unk 3.2	7424.234	ug/l	20476	Pulse		
4	3.796	75	Unk 3.7	684.193	ug/l	1887	Pulse		
5	4.212	75	As3	5774.929	ug/l	16004	Pulse		
6	7.852	75	MMA	59319.477	ug/l	176573	Pulse		
7	8.476	75	Unk 8.4	152.647	ug/l	421	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
8	8.598	75	Unk 8.6	3094.277	ug/l	8534	Pulse		
9	9.395	75	Unk 9.4	913.345	ug/l	2519	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.355	Se82	82	Pulse



Quantitation Report

File Name 064SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 4:20:41 AM
Sample Name 1635021-14
Sample Type Sample
Comment ---
Prep Dilution 10000.0000
Auto Dilution 1,0000
Total Dilution 10000.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

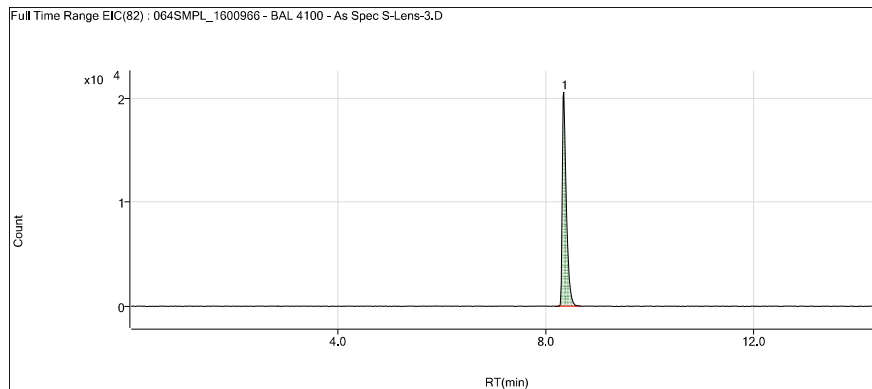
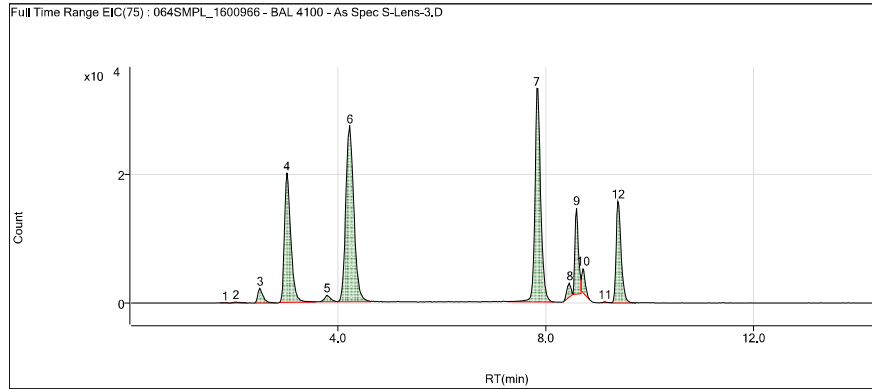
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
1	1.838	75	AsB+TMAO	7.107	ug/l	98	Pulse		
2	2.028	75	Unk 1.9	83.611	ug/l	1153	Pulse		
3	2.496	75	DMA	1156.782	ug/l	15952	Pulse		
4	3.016	75	Unk 3.2	12335.339	ug/l	170104	Pulse		
5	3.796	75	Unk 3.7	607.978	ug/l	8384	Pulse		
6	4.230	75	As3	21353.019	ug/l	295877	Pulse		
7	7.835	75	MMA	17209.310	ug/l	256130	Pulse		
8	8.459	75	Unk 8.4	879.770	ug/l	12132	Pulse		
9	8.598	75	Unk 8.6	4634.599	ug/l	63911	Pulse		
10	8.719	75	As5	1134.833	ug/l	16087	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
11	9.135	75	Unk 9.2	55.475	ug/l	765	Pulse		
12	9.395	75	Unk 9.4	7747.223	ug/l	106834	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.355	Se82	82	Pulse



Quantitation Report

File Name 065SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 4:36:00 AM
Sample Name B162062-DUP1
Sample Type Sample
Comment 1635021-14
Prep Dilution 10000.0000
Auto Dilution 1,0000
Total Dilution 10000.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

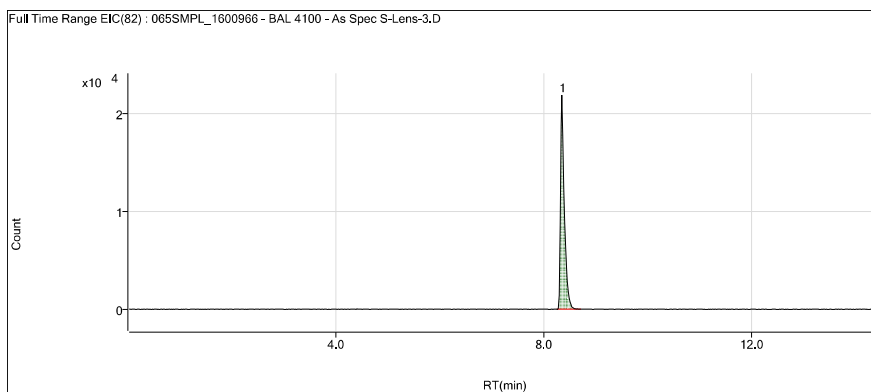
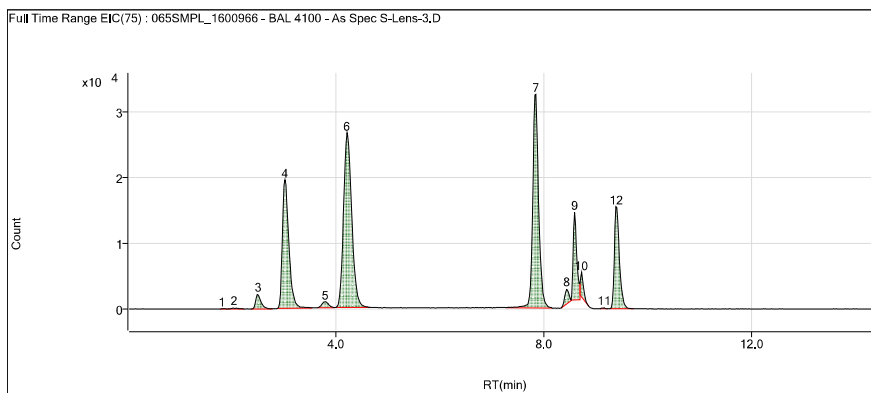
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
1	1.803	75	AsB+TMAO	8.992	ug/l	124	Pulse		
2	2.028	75	Unk 1.9	77.375	ug/l	1067	Pulse		
3	2.496	75	DMA	1144.092	ug/l	15777	Pulse		
4	3.016	75	Unk 3.2	12274.497	ug/l	169265	Pulse		
5	3.796	75	Unk 3.7	613,852	ug/l	8465	Pulse		
6	4.212	75	As3	21031.220	ug/l	291418	Pulse		
7	7.852	75	MMA	17259.770	ug/l	256881	Pulse		
8	8.442	75	Unk 8.4	918,928	ug/l	12672	Pulse		
9	8.598	75	Unk 8.6	4778.979	ug/l	65902	Pulse		
10	8.736	75	As5	929.148	ug/l	13186	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
11	9.170	75	Unk 9.2	45.395	ug/l	626	Pulse		
12	9.395	75	Unk 9.4	7649.398	ug/l	105485	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.355	Se82	82	Pulse



Quantitation Report

File Name 066SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 4:51:18 AM
Sample Name B162062-MS1
Sample Type Sample
Comment 1635021-14
Prep Dilution 10000.0000
Auto Dilution 1,0000
Total Dilution 10000.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

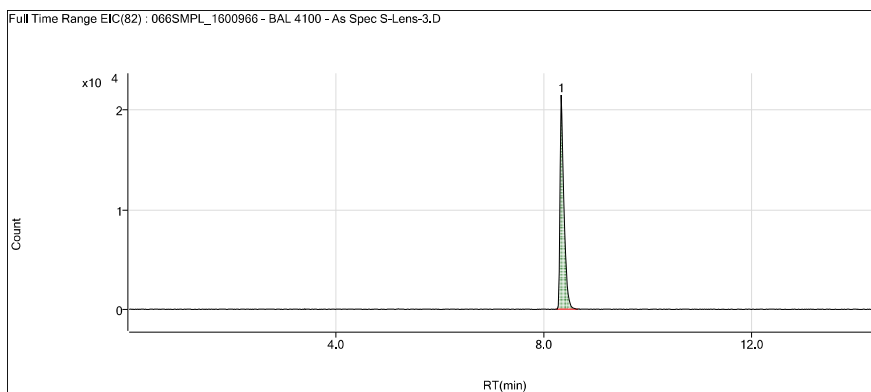
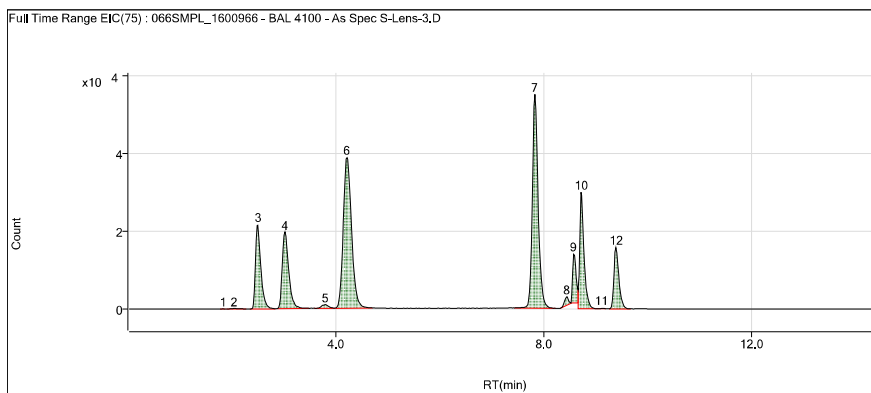
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
1	1.820	75	AsB+TMAO	4.206	ug/l	58	Pulse		
2	2.046	75	Unk 1.9	81.726	ug/l	1127	Pulse		
3	2.496	75	DMA	11338.962	ug/l	156364	Pulse		
4	3.016	75	Unk 3.2	12286.245	ug/l	169427	Pulse		
5	3.796	75	Unk 3.7	634.737	ug/l	8753	Pulse		
6	4.212	75	As3	31003.978	ug/l	429605	Pulse		
7	7.835	75	MMA	28746.730	ug/l	427844	Pulse		
8	8.442	75	Unk 8.4	870.923	ug/l	12010	Pulse		
9	8.580	75	Unk 8.6	4431.118	ug/l	61105	Pulse		
10	8.719	75	As5	12002.375	ug/l	169364	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
11	9.118	75	Unk 9.2	42.205	ug/l	582	Pulse		
12	9.395	75	Unk 9.4	7649,906	ug/l	105492	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.338	Se82	82	Pulse



Quantitation Report

File Name 0675MPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 5:06:36 AM
Sample Name B162062-MSD1
Sample Type Sample
Comment 1635021-14
Prep Dilution 10000.0000
Auto Dilution 1,0000
Total Dilution 10000.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

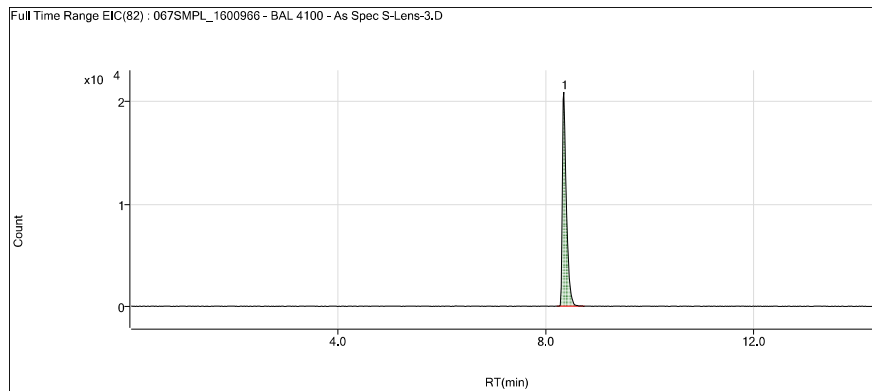
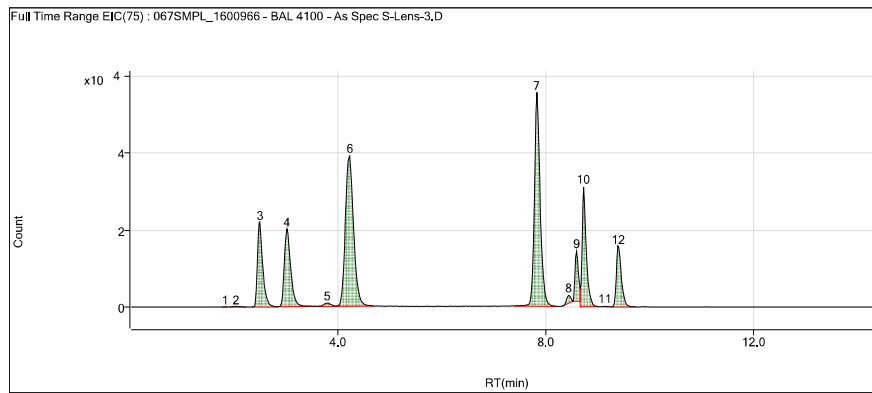
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
1	1.838	75	AsB+TMAO	5.946	ug/l	82	Pulse		
2	2.028	75	Unk 1.9	79.986	ug/l	1103	Pulse		
3	2.496	75	DMA	11369.057	ug/l	156779	Pulse		
4	3.016	75	Unk 3.2	12402.416	ug/l	171029	Pulse		
5	3.779	75	Unk 3.7	567.224	ug/l	7822	Pulse		
6	4.230	75	As3	31033.062	ug/l	430008	Pulse		
7	7.835	75	MMA	28631.298	ug/l	426126	Pulse		
8	8.442	75	Unk 8.4	856.347	ug/l	11809	Pulse		
9	8.598	75	Unk 8.6	4385.505	ug/l	60476	Pulse		
10	8.736	75	As5	12243.582	ug/l	172766	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
11	9.152	75	Unk 9.2	48.078	ug/l	663	Pulse		
12	9.395	75	Unk 9.4	7726.483	ug/l	106548	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.355	Se82	82	Pulse



Quantitation Report

File Name 068SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 5:21:55 AM
Sample Name SEQ-CCV3
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

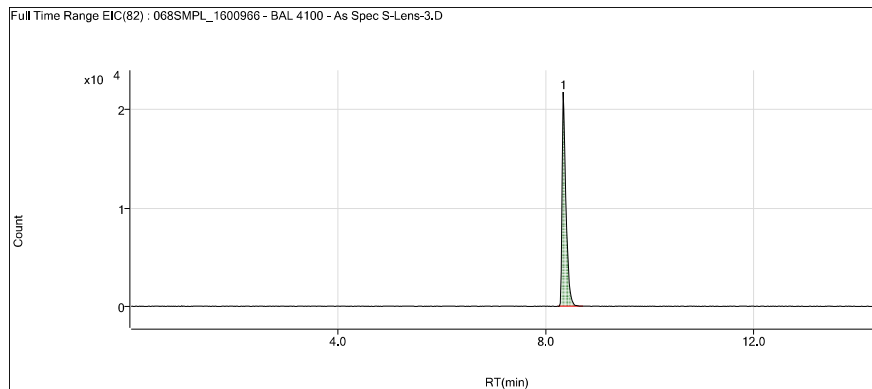
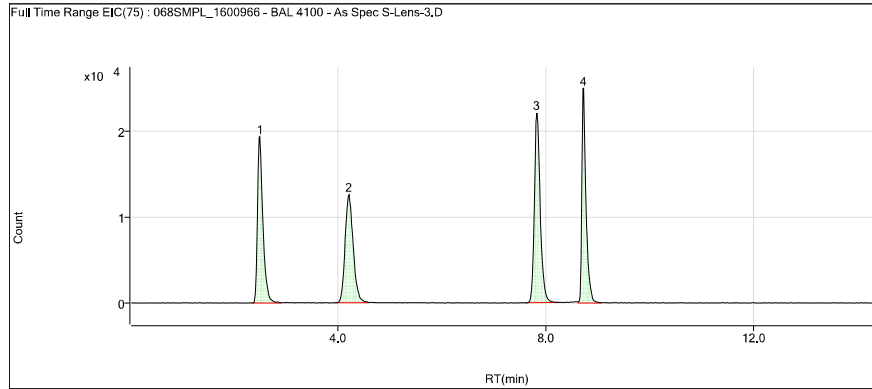
Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		
1	2.496	75	DMA	1.018	ug/l	140347	Pulse		
2	4.212	75	As3	0.985	ug/l	136422	Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
3	7.835	75	MMA	1.164	ug/l	173243	Pulse		
4	8.719	75	As5	0.994	ug/l	140283	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.338	Se82	82	Pulse



Quantitation Report

File Name 069SMPL_1600966 - BAL 4100 - As Spec S-Lens-3.D
File Path C:\Agilent\ICPMH\1\DATA\1600966 - BAL 4100 - As Spec S-Lens-Crunch.b
Acq Time 8/26/2016 5:37:12 AM
Sample Name SEQ-CCB3
Sample Type Sample
Comment ---
Prep Dilution 1.0000
Auto Dilution 1.0000
Total Dilution 1.0000
Operator Name ICPMS6
Acq Mode Time Resolved
Cal Title ---
Cal Type External Calibration
Last Calib 08/29/2016 09:12:35
Bkg File ---
Bkg Mode Count Subtraction except for ISTD
FQ BlankFile ---

FullQuant Table

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
		75	Unk 3.3		ug/l		Pulse		
		75	Unk 12.8		ug/l		Pulse		
		75	Unk 10.8		ug/l		Pulse		
		75	Unk 2.8		ug/l		Pulse		
		75	Unk 8.4		ug/l		Pulse		
		75	Unk 9.2		ug/l		Pulse		
		75	Unk 7.9		ug/l		Pulse		
		75	Unk 8.2		ug/l		Pulse		
		75	Unk 10.2		ug/l		Pulse		
		75	Unk 11.1		ug/l		Pulse		
		75	Unk 8.6		ug/l		Pulse		
		75	Unk 8.9		ug/l		Pulse		
		75	Unk 8.8		ug/l		Pulse		
		75	Unk 11.7		ug/l		Pulse		
		75	Unk 6.0		ug/l		Pulse		
		75	Unk 5.2		ug/l		Pulse		
		75	Unk 3.2		ug/l		Pulse		
		75	Unk 4.6		ug/l		Pulse		
		75	Unk 7		ug/l		Pulse		
		75	Unk 14.1		ug/l		Pulse		
		75	As3		ug/l		Pulse		
		75	DMA		ug/l		Pulse		
		75	AsB+TMAO		ug/l		Pulse		
		75	Unk 9.7		ug/l		Pulse		
		75	Unk 4.2		ug/l		Pulse		
		75	Unk 9.4		ug/l		Pulse		
		75	Unk 3.7		ug/l		Pulse		
		75	Unk 9		ug/l		Pulse		
		75	Unk 8		ug/l		Pulse		
		75	Unk 1.9		ug/l		Pulse		

Quantitation Report

Peak#	RT	Mass	Compound	Conc.	Units	Area	Det.	Ratio	ISTD
1	7.818	75	MMA	0.000	ug/l	65	Pulse		
2	8.754	75	As5	0.001	ug/l	256	Pulse		

ISTD Table:

RT	Compound	Mass	Det.
8.338	Se82	82	Pulse

