AECOS, Inc.

45-939 Kamehameha Hwy, Suite 104 · Kaneohe, HI 96744
Telephone: (808) 234-7770 · Fax: (808) 234-7775 · aecos@aecos.com

CLIENT: Stantec GS
737 Bishop Street, Suite 3050
Honolulu HI 96813
ATTENTION: Benjamin Berridge / Hannah Hubanks / Jess Hawkins
Benjamin.Berridge@cardno-gs.com

FILE No.:	1494
REPORT DATE:	04/23/2024
PAGE:	1 of 1

AECOS REPORT OF RESULTS

SAMPLE TYPE: water
***AECOS* LOG No.:** 50748
DATE SAMPLED: 07/08/24
DATE/TIME RECEIVED: 07/08/24 @1516
SAMPLER: B. Weeks
TEMP. CONTROL: 6.2, 6.6 °C (w/IR)
MATRIX: Water
DATE/TIME ANALYZED: 07/08/24 @1542-1549
ANALYST: R. Knapstein

	ANALYTE (UNITS)	Enterococcus (MPN/100ml)	*Dilution Factor (10 ml / 100 ml)*	*Number of large positive wells*	*Number of small positive wells*
	METHOD →	ASTM D650399	---	---	---
SAMPLE ID ⇩	TIME SAMPLED ⇩				
WW-3	1000	31	*10*	*3*	*0*
WW-6	0844	590	*10*	*34*	*3*
WW-2	0945	63	*10*	*5*	*1*
E-1	0937	<10	*10*	*0*	*0*
E-2	0910	840	*10*	*37*	*10*
D-4	0925	290	*10*	*21*	*2*
D-6	0930	75	*10*	*7*	*0*
D-7	0900	510	*10*	*31*	*3*
D-8	0835	710	*10*	*37*	*4*
U-2/WW-5	1040	890	*10*	*38*	*10*
U-3/WW 4	0835	290	*10*	*16*	*8*

A. Mello
for *AECOS*, Inc.

CHAIN OF CUSTODY FORM

AECOS, Inc.
45-939 Kamehameha Highway Suite 104
Kaneohe, Oahu, HI 96744
Tel: (808) 234-7770 Fax: 234-7775

PROJECT FILE No.:

LOG NUMBER [50748]

CLIENT: Stantec GS CONTACT: BEN BERRIDGE
ADDRESS: 737 Bishop st suite 3050 PHONE No.: ☎ 808-476-0067
Honolulu, Hi, 96813 Purchase Order No.:

☐ RUSH
☐ SEE REVERSE
SPECIAL INSTRUCTIONS

	☑ SAMPLED	SAMPLE ID	DATE	TIME	SAMPLE TYPE	CONTAINER(S)		REQUESTED ANALYSES	PRESERVATION
1		U2/WW-5	7/9/24	1040	WATER	1	IDEXX	ENTEROCOCCI	
2		U-3/WW4	7/8/24	0835	↓	↓	↓	↓	
3									
4									
5									
6									
7									
8									
9									
10									

CLIENTS PROVIDING SAMPLES TO THE LABORATORY SHOULD COMPLETE AS MUCH OF THE ABOVE FORM AS POSSIBLE, NOTE: NAME AND DATED SIGNATURE OF PERSON COLLECTING THE SAMPLE MUST BE ENTERED BELOW ↓. INFORMATION REQUESTED IN SHADED BOXES ABOVE TO BE FILLED IN BY THE LABORATORY.

SAMPLED BY: DATE JULY 8 20 24
PRINT NAME BERT WEEKS
RELINQUISHED: DATE JULY 8 20 24
SIGNATURE TIME 1514

RECEIVED BY: DATE 20___
SIGNATURE TIME
RELINQUISHED: DATE 20___
SIGNATURE OR INITIALS TIME

RECEIVED FOR LABORATORY: DATE 7/8 20 24
SIGNATURE TIME 1516
RELINQUISHED: DATE 20___
SIGNATURE OR INITIALS TIME

COMMENTS:

PRECAUTIONS:

DISPOSAL:

USE (BLACK) INK

RETURN SAMPLE TO CLIENT ☐

pg 1 of 2

CHAIN OF CUSTODY FORM

AECOS, Inc.
45-939 Kamehameha Highway Suite 104
Kaneohe, Oahu, HI 96744
Tel: (808) 234-7770 Fax: 234-7775

PROJECT FILE No.:
LOG NUMBER [050748]

CLIENT: Stantec GS
ADDRESS: 737 Bishop st suite 3050 Honolulu, Hi, 96813
CONTACT: BEN BERRIDGE
PHONE No.: ☎ 808-476-0067
Purchase Order No.:

☐ RUSH
☐ SEE REVERSE
SPECIAL INSTRUCTIONS

	☑	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	SAMPLE TYPE	CONTAINER(S)		REQUESTED ANALYSES	PRESERVATION
1		WW-3	7/8/24	1000	WATER	1	IDEXX	ENTEROCOCCI	
2		WW-6	7/8/24	0844					
3		WW-2	7/8/24	0945					
4		E-1	7/8/24	0937					
5		E-2	7/8/24	0910					
6		D-4	7/8/24	0925					
7		D-6	7/8/24	0930					
8		D-7	7/8/24	0900					
9		D-8	7/8/24	0835					
10		seeps 2							

CLIENTS PROVIDING SAMPLES TO THE LABORATORY SHOULD COMPLETE AS MUCH OF THE ABOVE FORM AS POSSIBLE. NOTE: NAME AND DATED SIGNATURE OF PERSON COLLECTING THE SAMPLE MUST BE ENTERED BELOW ↓. INFORMATION REQUESTED IN SHADED BOXES ABOVE TO BE FILLED IN BY THE LABORATORY.

SAMPLED BY: DATE JULY 8 20 24
PRINT NAME BERT WEEKS
RELINQUISHED: DATE JULY 8 20 24
SIGNATURE TIME 1514

RECEIVED BY: DATE 20___
SIGNATURE TIME
RELINQUISHED: DATE 20___
SIGNATURE OR INITIALS TIME

RECEIVED FOR LABORATORY: DATE 7/8 20 24
SIGNATURE TIME 1516
RELINQUISHED: DATE 20___
SIGNATURE OR INITIALS TIME

COMMENTS:

PRECAUTIONS:

DISPOSAL:

RETURN SAMPLE TO CLIENT ☐

USE (BLACK) INK

$T_1 = 6.2\,^{\circ}C$
$T_2 = 6.6\,^{\circ}C$ w/ IR
No temp control bottles rec'd.

Anatek Labs, Inc.

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4802 Tieton Drive - Yakima, WA 98908 - 509-225-9404 - yakima@anateklabs.com - FL NELAP E871190

Client:	Stantec-GS	Work Order:	WEG0469
Address:	737 Bishop St., Ste. 3050	Project:	ADC Water Quality Monitoring
	Honolulu, HI 96813	Reported:	8/8/2024 17:25
Attn:	Benjamin Berridge		

Analytical Results Report

Sample Location:	WW-3		
Lab/Sample Number:	WEG0469-01	Collect Date:	07/08/24 10:40
Date Received:	07/10/24 10:00	Collected By:	
Matrix:	Water		

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
TSS	12.8	mg/L			7/12/24 10:35	EMG	EPA 160.2	
Metals by ICP-MS								
Arsenic	0.00124	mg/L	0.000140	0.00100	7/15/24 16:19	JLG	EPA 200.8	
Mercury								
Mercury	<0.0710	ug/L	0.0710	0.100	7/18/24 13:17	JLG	EPA 245.1	
Semivolatiles								
Atrazine	<0.0500	ug/L	0.0500	0.0999	7/24/24 21:43	MAH	EPA 625.1	
Metolachlor	<0.0500	ug/L	0.0500	0.0999	7/24/24 21:43	MAH	EPA 625.1	
Permethrin	<0.250	ug/L	0.250	0.500	7/24/24 21:43	MAH	EPA 625.1	
Surrogate: Terphenyl-d14	*103%*		*25-135*		*7/24/24 21:43*	*MAH*	*EPA 625.1*	
Diesel	<0.0520	mg/L	0.0520	0.0800	7/12/24 15:20	BAM	NWTPH-HCID	
Gasoline	<0.160	mg/L	0.160	0.400	7/12/24 15:20	BAM	NWTPH-HCID	
Lube Oil	<0.0460	mg/L	0.0460	0.0800	7/12/24 15:20	BAM	NWTPH-HCID	
Mineral Oil	<0.160	mg/L	0.160	0.400	7/12/24 15:20	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	*93.6%*		*50-150*		*7/12/24 15:20*	*BAM*	*NWTPH-HCID*	

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Sample Location: WW-6
Lab/Sample Number: WEG0469-02 Collect Date: 07/08/24 09:45
Date Received: 07/10/24 10:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
TSS	0.900	mg/L			7/12/24 10:35	EMG	EPA 160.2	
Metals by ICP-MS								
Arsenic	0.000256	mg/L	0.000140	0.00100	7/15/24 16:22	JLG	EPA 200.8	J
Mercury								
Mercury	<0.0710	ug/L	0.0710	0.100	7/18/24 13:25	JLG	EPA 245.1	
Semivolatiles								
Diesel	<0.0520	mg/L	0.0520	0.0800	7/12/24 16:16	BAM	NWTPH-HCID	
Gasoline	<0.160	mg/L	0.160	0.400	7/12/24 16:16	BAM	NWTPH-HCID	
Lube Oil	<0.0460	mg/L	0.0460	0.0800	7/12/24 16:16	BAM	NWTPH-HCID	
Mineral Oil	<0.160	mg/L	0.160	0.400	7/12/24 16:16	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	*95.3%*		*50-150*		*7/12/24 16:16*	*BAM*	*NWTPH-HCID*	

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Sample Location: WW-2
Lab/Sample Number: WEG0469-03 Collect Date: 07/08/24 10:15
Date Received: 07/10/24 10:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
TSS	18.6	mg/L			7/12/24 10:35	EMG	EPA 160.2	
Metals by ICP-MS								
Arsenic	0.00302	mg/L	0.000140	0.00100	7/15/24 16:57	JLG	EPA 200.8	
Mercury								
Mercury	<0.0710	ug/L	0.0710	0.100	7/18/24 13:27	JLG	EPA 245.1	
Semivolatiles								
Diesel	<0.0520	mg/L	0.0520	0.0800	7/12/24 17:13	BAM	NWTPH-HCID	
Gasoline	<0.160	mg/L	0.160	0.400	7/12/24 17:13	BAM	NWTPH-HCID	
Lube Oil	<0.0460	mg/L	0.0460	0.0800	7/12/24 17:13	BAM	NWTPH-HCID	
Mineral Oil	<0.160	mg/L	0.160	0.400	7/12/24 17:13	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	*89.1%*		*50-150*		*7/12/24 17:13*	*BAM*	*NWTPH-HCID*	

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Sample Location: E-2
Lab/Sample Number: WEG0469-04 Collect Date: 07/08/24 09:15
Date Received: 07/10/24 10:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
TSS	6.33	mg/L			7/12/24 10:35	EMG	EPA 160.2	
Metals by ICP-MS								
Arsenic	0.0254	mg/L	0.000140	0.00100	7/15/24 16:24	JLG	EPA 200.8	
Mercury								
Mercury	<0.0710	ug/L	0.0710	0.100	7/18/24 13:30	JLG	EPA 245.1	
Semivolatiles								
Atrazine	<0.0501	ug/L	0.0501	0.100	7/24/24 22:11	MAH	EPA 625.1	
Metolachlor	<0.0501	ug/L	0.0501	0.100	7/24/24 22:11	MAH	EPA 625.1	
Permethrin	<0.250	ug/L	0.250	0.501	7/24/24 22:11	MAH	EPA 625.1	
Surrogate: Terphenyl-d14	*104%*		*25-135*		*7/24/24 22:11*	*MAH*	*EPA 625.1*	
Diesel	<0.676	mg/L	0.676	1.04	7/12/24 18:09	BAM	NWTPH-HCID	
Gasoline	<2.08	mg/L	2.08	5.20	7/12/24 18:09	BAM	NWTPH-HCID	
Lube Oil	<0.598	mg/L	0.598	1.04	7/12/24 18:09	BAM	NWTPH-HCID	
Mineral Oil	<2.08	mg/L	2.08	5.20	7/12/24 18:09	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	*77.8%*		*50-150*		*7/12/24 18:09*	*BAM*	*NWTPH-HCID*	

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Sample Location: E-1
Lab/Sample Number: WEG0469-05 Collect Date: 07/08/24 10:50
Date Received: 07/10/24 10:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
TSS	18.0	mg/L			7/12/24 10:35	EMG	EPA 160.2	
Metals by ICP-MS								
Arsenic	0.00223	mg/L	0.000140	0.00100	7/15/24 16:59	JLG	EPA 200.8	
Mercury								
Mercury	<0.0710	ug/L	0.0710	0.100	7/18/24 13:32	JLG	EPA 245.1	
Semivolatiles								
Atrazine	<0.0470	ug/L	0.0470	0.0941	7/24/24 22:38	MAH	EPA 625.1	
Metolachlor	<0.0470	ug/L	0.0470	0.0941	7/24/24 22:38	MAH	EPA 625.1	
Permethrin	<0.235	ug/L	0.235	0.470	7/24/24 22:38	MAH	EPA 625.1	
Surrogate: Terphenyl-d14	*112%*		*25-135*		*7/24/24 22:38*	*MAH*	*EPA 625.1*	
Diesel	<0.0520	mg/L	0.0520	0.0800	7/12/24 20:56	BAM	NWTPH-HCID	
Gasoline	<0.160	mg/L	0.160	0.400	7/12/24 20:56	BAM	NWTPH-HCID	
Lube Oil	<0.0460	mg/L	0.0460	0.0800	7/12/24 20:56	BAM	NWTPH-HCID	
Mineral Oil	<0.160	mg/L	0.160	0.400	7/12/24 20:56	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	*91.5%*		*50-150*		*7/12/24 20:56*	*BAM*	*NWTPH-HCID*	

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Sample Location: E-1 Dup

Lab/Sample Number: WEG0469-06 Collect Date: 07/08/24 11:00

Date Received: 07/10/24 10:00 Collected By:

Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
TSS	14.0	mg/L			7/12/24 10:35	EMG	EPA 160.2	
Metals by ICP-MS								
Arsenic	0.00227	mg/L	0.000140	0.00100	7/15/24 17:06	JLG	EPA 200.8	
Mercury								
Mercury	<0.0710	ug/L	0.0710	0.100	7/18/24 13:40	JLG	EPA 245.1	
Semivolatiles								
Atrazine	<0.0497	ug/L	0.0497	0.0993	7/24/24 23:05	MAH	EPA 625.1	
Metolachlor	<0.0497	ug/L	0.0497	0.0993	7/24/24 23:05	MAH	EPA 625.1	
Permethrin	<0.248	ug/L	0.248	0.497	7/24/24 23:05	MAH	EPA 625.1	
Surrogate: Terphenyl-d14	*102%*		*25-135*		*7/24/24 23:05*	*MAH*	*EPA 625.1*	
Diesel	<0.0520	mg/L	0.0520	0.0800	7/12/24 21:51	BAM	NWTPH-HCID	
Gasoline	<0.160	mg/L	0.160	0.400	7/12/24 21:51	BAM	NWTPH-HCID	
Lube Oil	<0.0460	mg/L	0.0460	0.0800	7/12/24 21:51	BAM	NWTPH-HCID	
Mineral Oil	<0.160	mg/L	0.160	0.400	7/12/24 21:51	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	*88.9%*		*50-150*		*7/12/24 21:51*	*BAM*	*NWTPH-HCID*	

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4802 Tieton Drive - Yakima, WA 98908 - 509-225-9404 - yakima@anateklabs.com - FL NELAP E871190

Sample Location: D-4
Lab/Sample Number: WEG0469-07 Collect Date: 07/08/24 09:45
Date Received: 07/10/24 10:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
TSS	18.0	mg/L			7/12/24 10:35	EMG	EPA 160.2	
Metals by ICP-MS								
Arsenic	0.00183	mg/L	0.000140	0.00100	7/15/24 16:26	JLG	EPA 200.8	
Mercury								
Mercury	<0.0710	ug/L	0.0710	0.100	7/18/24 13:42	JLG	EPA 245.1	
Semivolatiles								
Diesel	<0.0520	mg/L	0.0520	0.0800	7/13/24 4:16	BAM	NWTPH-HCID	
Gasoline	<0.160	mg/L	0.160	0.400	7/13/24 4:16	BAM	NWTPH-HCID	
Lube Oil	<0.0460	mg/L	0.0460	0.0800	7/13/24 4:16	BAM	NWTPH-HCID	
Mineral Oil	<0.160	mg/L	0.160	0.400	7/13/24 4:16	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	*85.0%*		*50-150*		*7/13/24 4:16*	*BAM*	*NWTPH-HCID*	

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4802 Tieton Drive - Yakima, WA 98908 - 509-225-9404 - yakima@anateklabs.com - FL NELAP E871190

Sample Location: D-6
Lab/Sample Number: WEG0469-08 Collect Date: 07/08/24 10:15
Date Received: 07/10/24 10:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
TSS	650	mg/L			7/12/24 10:35	EMG	EPA 160.2	
Metals by ICP-MS								
Arsenic	0.00161	mg/L	0.000140	0.00100	7/15/24 16:29	JLG	EPA 200.8	
Mercury								
Mercury	<0.0710	ug/L	0.0710	0.100	7/18/24 13:45	JLG	EPA 245.1	
Semivolatiles								
Diesel	<0.0520	mg/L	0.0520	0.0800	7/13/24 5:12	BAM	NWTPH-HCID	
Gasoline	<0.160	mg/L	0.160	0.400	7/13/24 5:12	BAM	NWTPH-HCID	
Lube Oil	<0.0460	mg/L	0.0460	0.0800	7/13/24 5:12	BAM	NWTPH-HCID	
Mineral Oil	<0.160	mg/L	0.160	0.400	7/13/24 5:12	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	*92.9%*		*50-150*		*7/13/24 5:12*	*BAM*	*NWTPH-HCID*	

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Sample Location: D-7
Lab/Sample Number: WEG0469-09 Collect Date: 07/08/24 09:30
Date Received: 07/10/24 10:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
TSS	38.0	mg/L			7/12/24 10:35	EMG	EPA 160.2	
Metals by ICP-MS								
Arsenic	0.000487	mg/L	0.000140	0.00100	7/15/24 16:31	JLG	EPA 200.8	J
Mercury								
Mercury	<0.0710	ug/L	0.0710	0.100	7/18/24 13:47	JLG	EPA 245.1	
Semivolatiles								
Diesel	<0.0520	mg/L	0.0520	0.0800	7/13/24 6:07	BAM	NWTPH-HCID	
Gasoline	<0.160	mg/L	0.160	0.400	7/13/24 6:07	BAM	NWTPH-HCID	
Lube Oil	0.548	mg/L	0.0460	0.0800	7/13/24 6:07	BAM	NWTPH-HCID	
Mineral Oil	<0.160	mg/L	0.160	0.400	7/13/24 6:07	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	*93.8%*		*50-150*		*7/13/24 6:07*	*BAM*	*NWTPH-HCID*	

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Sample Location: D-8
Lab/Sample Number: WEG0469-10 Collect Date: 07/08/24 08:45
Date Received: 07/10/24 10:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
TSS	7.90	mg/L			7/12/24 10:35	EMG	EPA 160.2	
Metals by ICP-MS								
Arsenic	0.00520	mg/L	0.000140	0.00100	7/15/24 16:34	JLG	EPA 200.8	
Mercury								
Mercury	<0.0710	ug/L	0.0710	0.100	7/18/24 14:00	JLG	EPA 245.1	
Semivolatiles								
Diesel	<0.0520	mg/L	0.0520	0.0800	7/13/24 7:02	BAM	NWTPH-HCID	
Gasoline	<0.160	mg/L	0.160	0.400	7/13/24 7:02	BAM	NWTPH-HCID	
Lube Oil	<0.0460	mg/L	0.0460	0.0800	7/13/24 7:02	BAM	NWTPH-HCID	
Mineral Oil	<0.160	mg/L	0.160	0.400	7/13/24 7:02	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	*71.2%*		*50-150*		*7/13/24 7:02*	*BAM*	*NWTPH-HCID*	

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Sample Location: U-2/WW-5
Lab/Sample Number: WEG0469-11 Collect Date: 07/08/24 10:45
Date Received: 07/10/24 10:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
TSS	14.0	mg/L			7/12/24 10:35	EMG	EPA 160.2	
Metals by ICP-MS								
Arsenic	0.000297	mg/L	0.000140	0.00100	7/15/24 16:36	JLG	EPA 200.8	J
Mercury								
Mercury	<0.0710	ug/L	0.0710	0.100	7/18/24 14:03	JLG	EPA 245.1	
Semivolatiles								
Diesel	<0.0520	mg/L	0.0520	0.0800	7/13/24 7:57	BAM	NWTPH-HCID	
Gasoline	<0.160	mg/L	0.160	0.400	7/13/24 7:57	BAM	NWTPH-HCID	
Lube Oil	<0.0460	mg/L	0.0460	0.0800	7/13/24 7:57	BAM	NWTPH-HCID	
Mineral Oil	<0.160	mg/L	0.160	0.400	7/13/24 7:57	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	*94.6%*		*50-150*		*7/13/24 7:57*	*BAM*	*NWTPH-HCID*	

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Sample Location: U-3/WW-4
Lab/Sample Number: WEG0469-12 Collect Date: 07/08/24 08:20
Date Received: 07/10/24 10:00 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
TSS	12.3	mg/L			7/12/24 10:35	EMG	EPA 160.2	
Metals by ICP-MS								
Arsenic	0.000307	mg/L	0.000140	0.00100	7/15/24 16:38	JLG	EPA 200.8	J
Mercury								
Mercury	<0.0710	ug/L	0.0710	0.100	7/18/24 14:05	JLG	EPA 245.1	
Semivolatiles								
Diesel	<0.0520	mg/L	0.0520	0.0800	7/13/24 8:52	BAM	NWTPH-HCID	
Gasoline	<0.160	mg/L	0.160	0.400	7/13/24 8:52	BAM	NWTPH-HCID	
Lube Oil	0.725	mg/L	0.0460	0.0800	7/13/24 8:52	BAM	NWTPH-HCID	
Mineral Oil	<0.160	mg/L	0.160	0.400	7/13/24 8:52	BAM	NWTPH-HCID	
Surrogate: n-Hexacosane	*97.5%*		*50-150*		*7/13/24 8:52*	*BAM*	*NWTPH-HCID*	

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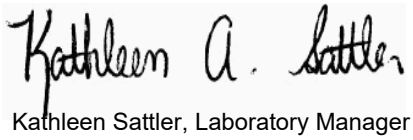
Authorized Signature,



Kathleen Sattler, Laboratory Manager

J	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
M2	Matrix spike recovery was low; the associated blank spike recovery was acceptable. Potential matrix effect.
PQL	Practical Quantitation Limit
ND	Not Detected
MDL	Method Detection Limit
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was spiked or duplicated.

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Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0468 - W Filtration										
Blank (BEG0468-BLK1)				Prepared: 07/11/24 13:05- Analyzed: 07/12/24 10:35						
TSS	<0.1			mg/L						
Blank (BEG0468-BLK2)				Prepared: 07/11/24 13:05- Analyzed: 07/12/24 10:35						
TSS	<0.1			mg/L						
LCS (BEG0468-BS1)				Prepared: 07/11/24 13:05- Analyzed: 07/12/24 10:35						
TSS	95.0			mg/L	100		95.0	90-110		
Duplicate (BEG0468-DUP1)		**Source: WEG0469-01**		Prepared: 07/11/24 13:05- Analyzed: 07/12/24 10:35						
TSS	12.0			mg/L		12.8			6.45	20
Matrix Spike (BEG0468-MS1)		**Source: WEG0469-05**		Prepared: 07/11/24 13:05- Analyzed: 07/12/24 10:35						
TSS	136			mg/L	100	18.0	118	80-120		
Matrix Spike Dup (BEG0468-MSD1)		**Source: WEG0469-05**		Prepared: 07/11/24 13:05- Analyzed: 07/12/24 10:35						
TSS	132			mg/L	100	18.0	114	80-120	2.99	20

Quality Control Data

Metals by ICP-MS

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0543 - W 3010 Digest										
Blank (BEG0543-BLK1)				Prepared: 07/12/24 16:08- Analyzed: 07/15/24 16:11						
Arsenic	ND		0.00100	mg/L						
LCS (BEG0543-BS1)				Prepared: 07/12/24 16:08- Analyzed: 07/15/24 16:17						
Arsenic	0.0491		0.00100	mg/L	0.0500		98.1	85-115		
Matrix Spike (BEG0543-MS1)		**Source: WEG0469-05**		Prepared: 07/12/24 16:08- Analyzed: 07/15/24 17:02						
Arsenic	0.0623		0.00100	mg/L	0.0500	0.00223	120	70-130		
Matrix Spike (BEG0543-MS2)		**Source: WEG0469-12**		Prepared: 07/12/24 16:08- Analyzed: 07/15/24 16:41						
Arsenic	0.0492		0.00100	mg/L	0.0500	0.000307	97.9	70-130		
Matrix Spike Dup (BEG0543-MSD1)		**Source: WEG0469-05**		Prepared: 07/12/24 16:08- Analyzed: 07/15/24 17:04						
Arsenic	0.0535		0.00100	mg/L	0.0500	0.00223	103	70-130	15.2	20
Matrix Spike Dup (BEG0543-MSD2)		**Source: WEG0469-12**		Prepared: 07/12/24 16:08- Analyzed: 07/15/24 16:43						
Arsenic	0.0489		0.00100	mg/L	0.0500	0.000307	97.1	70-130	0.768	20

Quality Control Data

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Mercury

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0604 - W 245.1 Digest										
Blank (BEG0604-BLK1)					Prepared: 07/15/24 14:51- Analyzed: 07/18/24 13:09					
Mercury	ND		0.100	ug/L						
LCS (BEG0604-BS1)					Prepared: 07/15/24 14:51- Analyzed: 07/18/24 13:04					
Mercury	4.20		0.100	ug/L	4.10		102	85-115		
Matrix Spike (BEG0604-MS1)		**Source: WEG0469-01**			Prepared: 07/15/24 14:51- Analyzed: 07/18/24 13:20					
Mercury	5.83	M2	0.100	ug/L	4.10	ND	142	70-130		
Matrix Spike (BEG0604-MS2)		**Source: WEG0469-05**			Prepared: 07/15/24 14:51- Analyzed: 07/18/24 17:06					
Mercury	5.12		0.100	ug/L	4.10	ND	125	70-130		
Matrix Spike Dup (BEG0604-MSD1)		**Source: WEG0469-01**			Prepared: 07/15/24 14:51- Analyzed: 07/18/24 13:22					
Mercury	5.44	M2	0.100	ug/L	4.10	ND	133	70-130	6.92	20
Matrix Spike Dup (BEG0604-MSD2)		**Source: WEG0469-05**			Prepared: 07/15/24 14:51- Analyzed: 07/18/24 13:37					
Mercury	4.84		0.100	ug/L	4.10	ND	118	70-130	5.62	20

Quality Control Data
(Continued)

Semivolatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG0441 - W TPH-Dx										
Blank (BEG0441-BLK1)					Prepared: 07/11/24 10:09- Analyzed: 07/12/24 12:31					
Lube Oil	ND		0.0800	mg/L						
Mineral Oil	ND		0.400	mg/L						
Gasoline	ND		0.400	mg/L						
Diesel	ND		0.0800	mg/L						
Surrogate: n-Hexacosane			*0.182*	*mg/L*	*0.200*		*90.8*	*50-150*		
LCS (BEG0441-BS1)					Prepared: 07/11/24 10:09- Analyzed: 07/12/24 13:27					
Diesel	1.42		0.0800	mg/L	2.00		71.0	70-130		
Surrogate: n-Hexacosane			*0.172*	*mg/L*	*0.200*		*85.6*	*50-150*		
Matrix Spike (BEG0441-MS1)		**Source: WEG0469-05**			Prepared: 07/11/24 10:09- Analyzed: 07/12/24 19:05					
Diesel	1.90		0.0800	mg/L	2.00	ND	94.8	70-130		
Surrogate: n-Hexacosane			*0.149*	*mg/L*	*0.200*		*74.6*	*50-150*		
Matrix Spike Dup (BEG0441-MSD1)		**Source: WEG0469-05**			Prepared: 07/11/24 10:09- Analyzed: 07/12/24 20:00					
Diesel	1.89		0.0800	mg/L	2.00	ND	94.3	70-130	0.539	20
Surrogate: n-Hexacosane			*0.178*	*mg/L*	*0.200*		*88.9*	*50-150*		
Batch: BEG1115 - SVOC Water										
Blank (BEG1115-BLK1)					Prepared: 07/15/24 07:11- Analyzed: 07/24/24 21:16					
Permethrin	ND		0.500	ug/L						
Metolachlor	ND		0.100	ug/L						
Atrazine	ND		0.100	ug/L						

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Quality Control Data
(Continued)

Semivolatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEG1115 - SVOC Water (Continued)										
Blank (BEG1115-BLK1)					Prepared: 07/15/24 07:11- Analyzed: 07/24/24 21:16					
Surrogate: Terphenyl-d14			*20.3*	*ug/L*	*25.0*		*81.1*	*25-135*		
LCS (BEG1115-BS1)					Prepared: 07/15/24 07:11- Analyzed: 07/24/24 20:49					
Atrazine	5.07		0.100	ug/L	5.00		101	60-125		
Metolachlor	5.99		0.100	ug/L	5.00		120	60-125		
Surrogate: Terphenyl-d14			*26.5*	*ug/L*	*25.0*		*106*	*25-135*		
Matrix Spike (BEG1115-MS1)		**Source: WEG0469-05**			Prepared: 07/15/24 07:11- Analyzed: 07/24/24 19:53					
Atrazine	10.1		0.200	ug/L	10.0	ND	101	40-140		
Metolachlor	11.8		0.200	ug/L	10.0	ND	118	40-140		
Surrogate: Terphenyl-d14			*51.8*	*ug/L*	*50.0*		*104*	*60-130*		
Matrix Spike Dup (BEG1115-MSD1)		**Source: WEG0469-05**			Prepared: 07/15/24 07:11- Analyzed: 07/24/24 20:21					
Metolachlor	12.0		0.200	ug/L	10.0	ND	120	40-140	1.01	40
Atrazine	10.3		0.200	ug/L	10.0	ND	103	40-140	2.36	40
Surrogate: Terphenyl-d14			*52.8*	*ug/L*	*50.0*		*106*	*60-130*		

Anatek Labs, Inc.

Chain of Custody Record

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504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

Anatek Log-In # WEG0469

Due: 07/24/24

Company Name:	Stantec GS (form. Cardno-GS)	Project Manager:	Benjamin Berridge
Address:	737 Bishop St Suite 3050	Project Name & # :	ADC Water Quality Monitoring
City: Honolulu	State: HI Zip: 96813	Email Address :	benjamin.berridge@stantecgs.com
Phone:	(808) 476-0067	Purchase Order #:	
Fax:		Sampler Name & phone:	

Please refer to our normal turn around time: http://www.anateklabs.com/services/guidelines/reporting.asp

✓ Normal __ Next Day* __ 2nd Day* __ Other*_____ *All rush order requests must be prior approved. __ Phone __ Mail __ Fax ✓ Email

Provide Sample Description

Storm water samples

Cooler

List Analyses Requested

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	TSS EPA 160.2	TPH HCID - SW 846 MOD 8015	**TPH GRO SW846M8015	Arsenic EPA 200.8	Mercury EPA 245.1	Pesticides-EPA 625 SIM Permethrin, Atrazine & Metolachlor	Glyphosate EPA 547	Paraquat Dichloride EPA		
	Preservative:														
3	WW-3	7-8-2024 / 10:40 HST	Water	7		X	X	X	X	X	X		X		
1	WW-6	7-8-2024 / 09:45 HST	Water	5		X	X	X	X	X					
2	WW-2	7-8-2024 / 10:15HST	Water	5		X	X	X	X	X					
4	E-2	7-8-2024 / 09:15 HST	Water	7		X	X	X	X	X	X		X		
4	E-1	7-82024 / 10:50 HST	Water	7		X	X	X	X	X	X		X		
4	E-1 DUP	7-8-2024 / 11:00 HST	Water	7		X	X	X	X	X	X		X		
4	E-1 MS/MSD	7-8-2024 / 11:10 HST	Water	7		X	X	X	X	X	X		X		
1	D-4	7-8-2024 / 09:45 HST	Water	5		X	X	X	X	X					
1	D-6	7-8-2024 / 10:15 HST	Water	5		X	X	X	X	X					
1	D-7	7-8-2024 / 9:30 HST	Water	5		X	X	X	X	X					
2	D-8	7-8-2024 / 08:45 HST	Water	5		X	X	X	X	X					
4	U-2/WW-5	7-8-2024 / 10:45 HST	Water	5		X	X	X	X	X					
2	U-3/WW-4	7-8-2024 / 08:20 HST	Water	5		X	X	X	X	X					

Note Special Instructions/Comments

**Please do not conduct TPH GRO analysis until Cardno confirms it should be run.

	Printed Name	Signature	Company	Date	Time
Relinquished by	Sydney Gabitzer	Sydney Gabitzer	Stantec	7-8-24	13:00
Received by	Kathy Sattler	Kathy Sattler	Anatek Labs, Inc.	7-10-24	1000
Relinquished by					
Received by					
Relinquished by					
Received by					

Inspection Checklist

Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
VOC Head Space?	Y	N

See attached

Temperature (°C):_____

Preservative:_____

Date & Time:_____

Inspected By:_____

1Form COC01.00 - Eff 1 Mar 2015

Anatek Labs, Inc.

Sample Receipt and Preservation Form

WEG0469

Due: 07/24/24

Client Name: Stantec GS Project: *(apply Anatek sample label here)*

TAT: (Normal) RUSH: _____ days

Samples Received From: (FedEx) UPS USPS Client Courier Other: _____

Custody Seal on Cooler/Box: (Yes) No Custody Seals Intact: (Yes) No N/A

Number of Coolers/Boxes: 3 Type of Ice: (Ice/Ice Packs) (Blue Ice) Dry Ice None

Packing Material: (Bubble Wrap) (Bags) Foam/Peanuts None Other: _____

Cooler Temp As Read (°C): _____ Cooler Temp Corrected (°C): _____ Thermometer Used: IR #6

Cooler 1 0.6°C Cooler #2 0.7°C Cooler #3 2.1°C IR Cooler #4 received 7-11-24 12.6°C

				Comments:
Samples Received Intact?	(Yes)	No	N/A	
Chain of Custody Present?	(Yes)	No	N/A	
Samples Received Within Hold Time?	(Yes)	No	N/A	
Samples Properly Preserved?	(Yes)	No	N/A	
VOC Vials Free of Headspace (<6mm)?	(Yes)	No	N/A	
VOC Trip Blanks Present?	Yes	No	(N/A)	
Labels and Chains Agree?	(Yes)	No	N/A	
Total Number of Sample Bottles Received: 75				

Chain of Custody Fully Completed?	(Yes)	No	N/A	
Correct Containers Received?	(Yes)	No	N/A	
Anatek Bottles Used?	(Yes)	No	Unknown	

Record preservatives (and lot numbers, if known) for containers below:

G1000mL HCl 2400468
G44mL HCl 2400468
P1000mL

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

Received/Inspected By: Kathleen A. Lattler Date/Time: 7-10-24 1000

Form F06.00 - Eff. 10 Nov. 2021

Anatek Labs, Inc.

Sample Receipt and Preservation Form

WEG0469

Due: 07/24/24

Client Name: Stantec GS Project: *(apply Anatek sample label here)*

TAT: (Normal) RUSH: _____ days

Samples Received From: (FedEx) UPS USPS Client Courier Other: _____

Custody Seal on Cooler/Box: (Yes) No Custody Seals Intact: (Yes) No N/A

Number of Coolers/Boxes: 3 Type of Ice: (Ice/Ice Packs) (Blue Ice) Dry Ice None

Packing Material: (Bubble Wrap) (Bags) Foam/Peanuts None Other: _____

Cooler Temp As Read (°C): _____ Cooler Temp Corrected (°C): _____ Thermometer Used: IR #6

Cooler 1 0.6°C Cooler #2 0.7°C Cooler #3 2.1°C IR Cooler #4 received 7-11-24 12.6°C

				Comments:
Samples Received Intact?	(Yes)	No	N/A	
Chain of Custody Present?	(Yes)	No	N/A	
Samples Received Within Hold Time?	(Yes)	No	N/A	
Samples Properly Preserved?	(Yes)	No	N/A	
VOC Vials Free of Headspace (<6mm)?	(Yes)	No	N/A	
VOC Trip Blanks Present?	Yes	No	(N/A)	
Labels and Chains Agree?	(Yes)	No	N/A	
Total Number of Sample Bottles Received: 75				

Chain of Custody Fully Completed?	(Yes)	No	N/A	
Correct Containers Received?	(Yes)	No	N/A	
Anatek Bottles Used?	(Yes)	No	Unknown	

Record preservatives (and lot numbers, if known) for containers below:

G1000mL HCl 2400468
G44mL HCl 2400468
P1000mL

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

Cooler 4 received 7-11-24
Samples E-2, E-1, E-1 DUP, E-1 MS/MSD

Received/Inspected By: Kathleen A. Sattler Date/Time: 7-10-24 1000

Form F06.00 - Eff. 10 Nov. 2021

TSS (SM2540D/EPA 160.2)-TS(SM 2540B)

Anatek Labs. Inc. Spokane

Batch ID: BEG0468 Date: 07.11.24 Time: 13:28 Initals: EMG

QC REQUIREMENTS:	Blank <1ppm, LFB %Rec= 90-110%, MS/MSD %Rec= 80-120% Run a blank and lcs before and after every 20 samples, plus dup and ms/msd after 20 samples.

TSS Reagents	Std. #	Amount Spiked	Balance ID	Oven	Temp	Filters	Thermometer
100ppm Cellulose TSS Soln.	2402250	100 ppm	BAL-06	5	105	2400563	T-Oven 5

Comments:

Date/Time of Weigh: 7.11.24 16:41 | 7.12.24 10:35

Sample Number	Sample ID	Dish ID	Filter Wt (g)	mLs used	Dry Weight #1	Dry Weight #2**	Dilution Factor	IResult (mg/L)	FResult (mg/L)	QC Date & Initials
BEG0468-BLK1	Blank	686	0.1055	1000	0.1054	0.1058	0.1	-1.00	-0.10	
BEG0468-BLK2	Blank	703	0.106	1000	0.106	0.1062	0.1			
BEG0468-BS1	LCS	687	0.1056	100	0.1153	0.1151	1	95.00	95.00	
BEG0468-DUP1	Duplicate WEG0469-01	688	0.1051	250	0.1082	0.1081	0.4	30.00	12.00	
WEG0469-01	WW-3	689	0.1054	250	0.1086	0.1086	0.4	32.00	12.80	
WEG0469-02	WW-6	690	0.1057	1000	0.1068	0.1066	0.1	9.00	0.90	
WEG0469-03	WW-2	691	0.105	500	0.1146	0.1143	0.2	93.00	18.60	
WEG0469-04	E-2	692	0.1045	300	0.1065	0.1064	0.3333333	19.00	6.33	
BEG0468-MS1	Matrix Spike WEG0469-05	693	0.1063	50	0.1132	0.1131	2	68.00	136.00	
BEG0468-MSD1	Matrix Spike Dup WEG04	694	0.1063	50	0.1129	0.1129	2	66.00	132.00	
WEG0469-05	E-1	695	0.1047	250	0.1094	0.1092	0.4	45.00	18.00	
WEG0469-06	E-1 Dup	696	0.1067	250	0.1102	0.1102	0.4	35.00	14.00	
WEG0469-07	D-4	697	0.1063	500	0.1155	0.1153	0.2	90.00	18.00	
WEG0469-08	D-6	698	0.1055	100	0.1707	0.1705	1	650.00	650.00	
WEG0469-09	D-7	699	0.1064	200	0.114	0.1141	0.5	76.00	38.00	
WEG0469-10	D-8	700	0.1063	1000	0.1142	0.1146	0.1	79.00	7.90	
WEG0469-11	U-2/WW-5	701	0.1057	500	0.1129	0.1127	0.2	70.00	14.00	
WEG0469-12	U-3/WW-4	702	0.1061	750	0.1153	0.1153	0.1333333	92.00	12.27	

TPHDx/HCID Extractions by EPA8015mod

Anatek Labs, Inc Spokane

Batch: BEG0441 Date: 7/19/24 Time: 10:30 Initial: BAM

Sample Number	Sample ID	Sample Matrix	Sample Amount	µL diesel spike amt	Surrogate spike amt	Internal spike amt	clean up used	Extract 3x with MeCl2	Final volume (mL)
BEG0441-BLK1	Blank	water	250µL	0	10	10		Yes	1
BEG0441-BS1	LCS	water		25	10	10			1
BEG0441-BSD1	LCS Dup	water		25	10	10			1
WEG0469-01	WW-3	water		0	10	10			1
WEG0469-02	WW-6	water		0	10	10			1
WEG0469-03	WW-2	water		0	10	10			1
WEG0469-04	E-2	water		0	10	10			1 13mL
BEG0441-MS1	trix Spike WEG0469	water		25	10	10			1
BEG0441-MSD1	Spike Dup WEG04	water		25	10	10			1
WEG0469-05	E-1	water		0	10	10			1
~~BEG0441-DUP1~~	~~uplicate WEG0469-~~	~~water~~			~~10~~	~~10~~			~~1~~
WEG0469-06	E-1 Dup	water			10	10			1
WEG0469-07	D-4	water			10	10			1
WEG0469-08	D-6	water			10	10			1
WEG0469-09	D-7	water			10	10			1
WEG0469-10	D-8	water			10	10			1
WEG0469-11	U-2/WW-5	water			10	10			1
WEG0469-12	U-3/WW-4	water			10	10			1
WEG0474-01	T518 Pumpout	water			10	10			1
					10	10			1
					10	10			1
					10	10			1
					10	10			1
					10	10			1
					10	10			1

$MeCl_2$	2400961	Balance	—
Na_2SO_4	2400691	Pipette	PT-11
Gas 20,000 ppm	2203385		
Diesel 20,000 ppm	2402447		
Motor Oil 20,000 ppm	2400995		
Internal Standard	2402243		
Surrogate Standard	2402448		
Diesel ICV	2203384		

*E2 has large matrix effect

*E1 MS/MSD have large matrix effect

batched E1-dup, and a duplicate for E-1, crossed out our 1 because it is same as E1-dup

BEG0441

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10001.D Vial: 1
Acq On : 12 Jul 2024 6:57 am Operator: BAM
Sample : BLK Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 13:22:07 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	Pentacosane	26.00	126398610	50.000 ppm
	System Monitoring Compounds			
2) S	Hexacosane	26.65	117573519	49.627 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.25%
	Target Compounds			
3) H	TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4) H	TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H	Mineral Oil	0.00	0	N.D. ppm
6) h	HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h	HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h	HCID Oil (>C14)	0.00	0	N.D. ppm

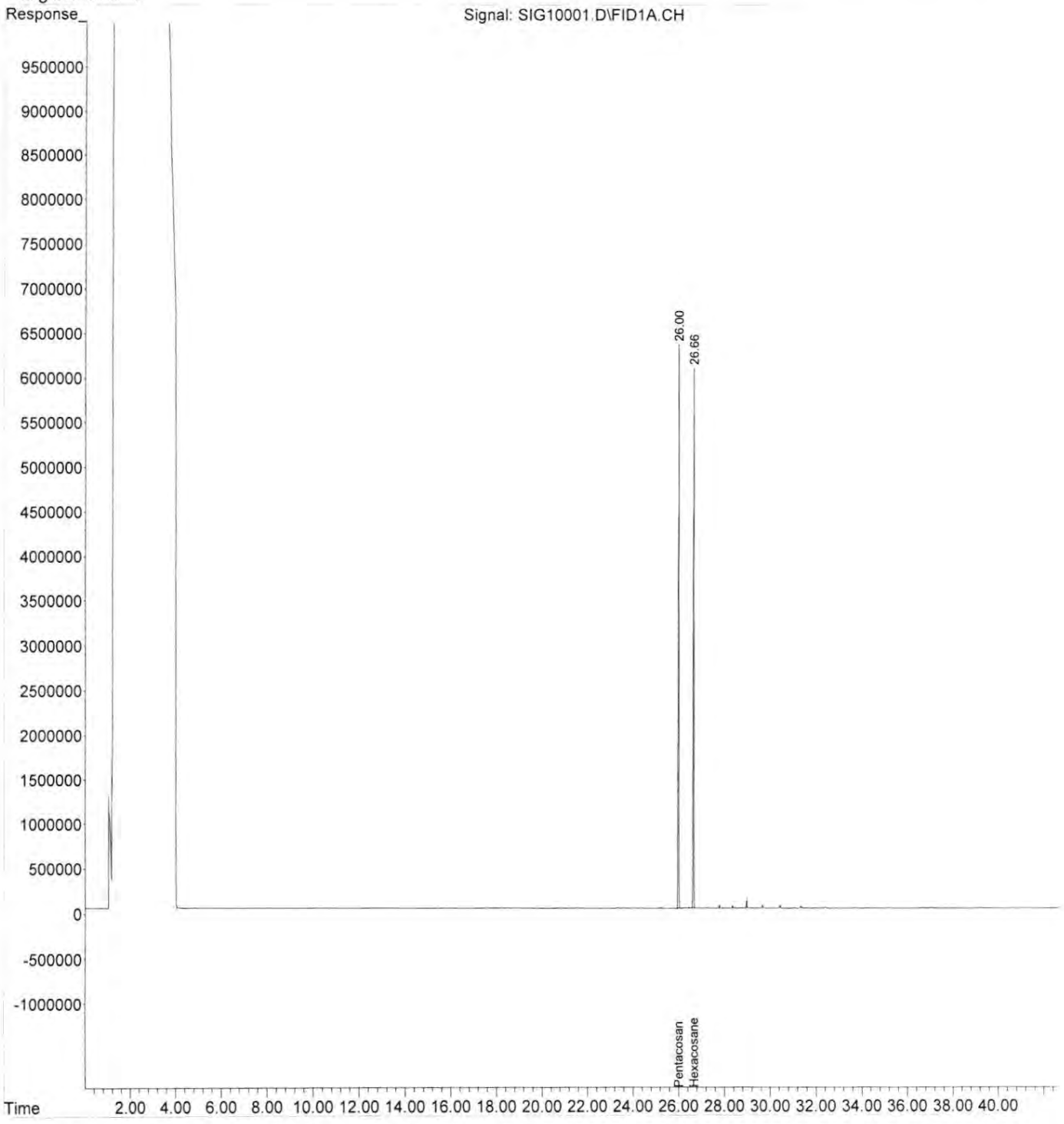
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10001.D Vial: 1
Acq On : 12 Jul 2024 6:57 am Operator: BAM
Sample : BLK Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 13:25 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10002.D Vial: 2
Acq On : 12 Jul 2024 7:52 am Operator: BAM
Sample : ICV 500PPM Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 13:22:09 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.00	150956453	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.67	138624315	48.993 ppm m
	Spiked Amount 50.000	Range 50 - 150	Recovery = 97.99%	
	Target Compounds			
3)	H TPH Diesel (C12-C14)	15.50	1417378240	522.097 ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

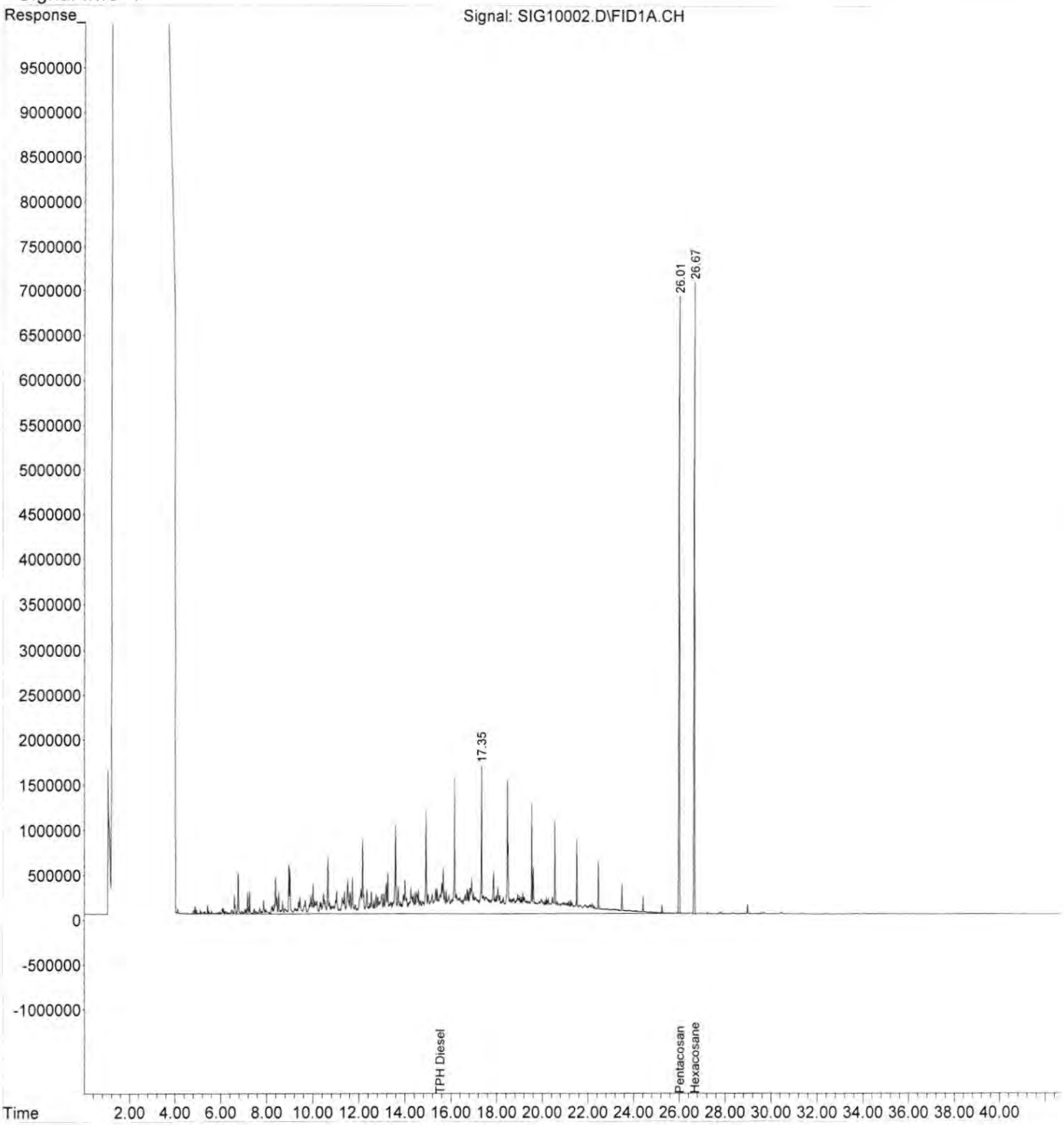
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10002.D Vial: 2
Acq On : 12 Jul 2024 7:52 am Operator: BAM
Sample : ICV 500PPM Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 13:25 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10003.D Vial: 3
Acq On : 12 Jul 2024 8:48 am Operator: BAM
Sample : DX 500PPM CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 13:22:12 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I Pentacosane	26.00	126248442	50.000 ppm
System Monitoring Compounds			
2) S Hexacosane	26.66	117524635	49.665 ppm
Spiked Amount 50.000	Range 50 - 150	Recovery = 99.33%	
Target Compounds			
3) H TPH Diesel (C12-C14)	15.50	1140087984	502.146 ppm
4) H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H Mineral Oil	0.00	0	N.D. ppm
6) h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h HCID Oil (>C14)	0.00	0	N.D. ppm

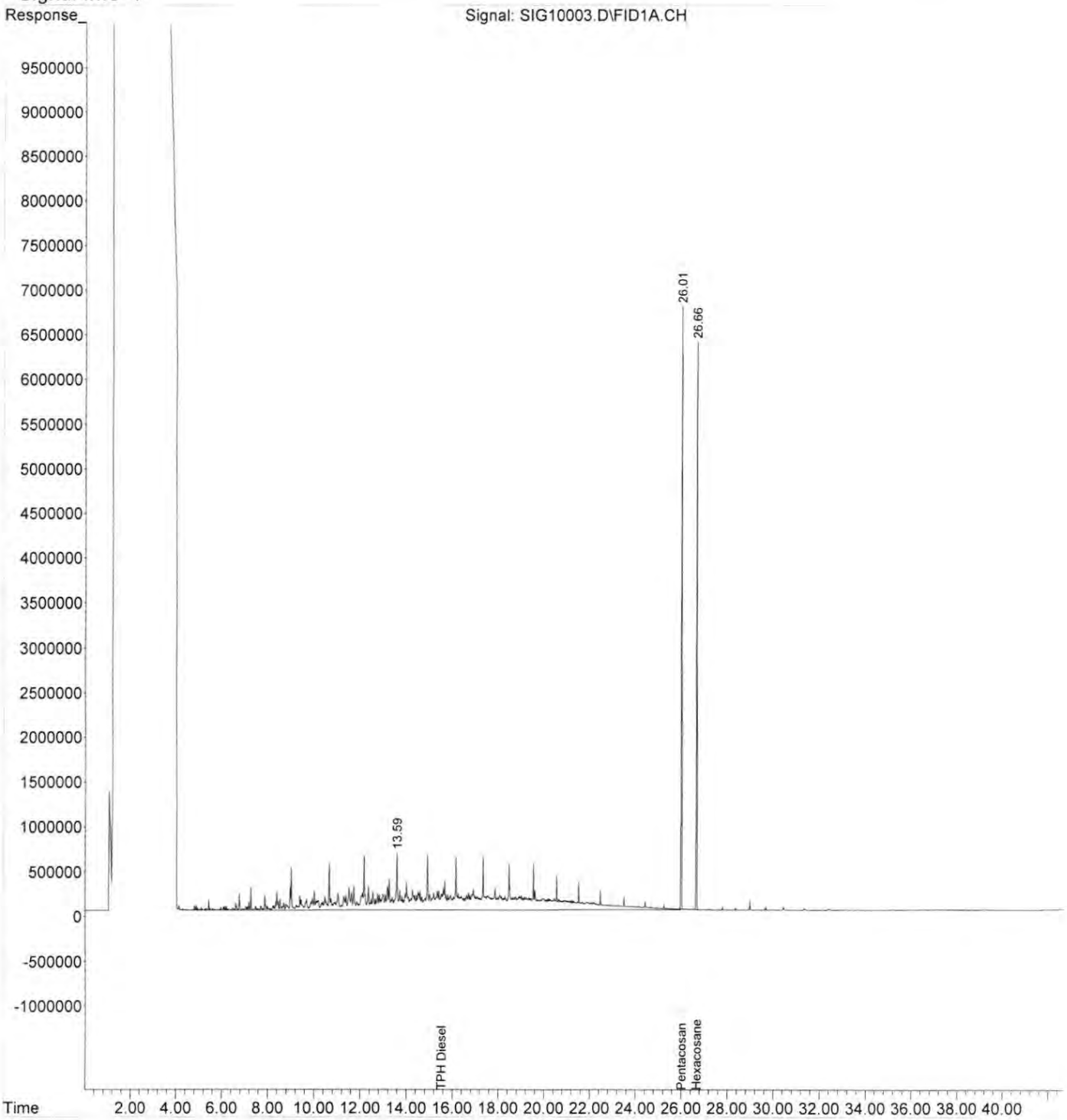
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10003.D Vial: 3
Acq On : 12 Jul 2024 8:48 am Operator: BAM
Sample : DX 500PPM CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 13:26 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10004.D Vial: 4
Acq On : 12 Jul 2024 9:44 am Operator: BAM
Sample : LO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 13:22:13 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.03	209016949	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.68	195441336	49.887 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.77%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	29.00	2389856546	1040.945 ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

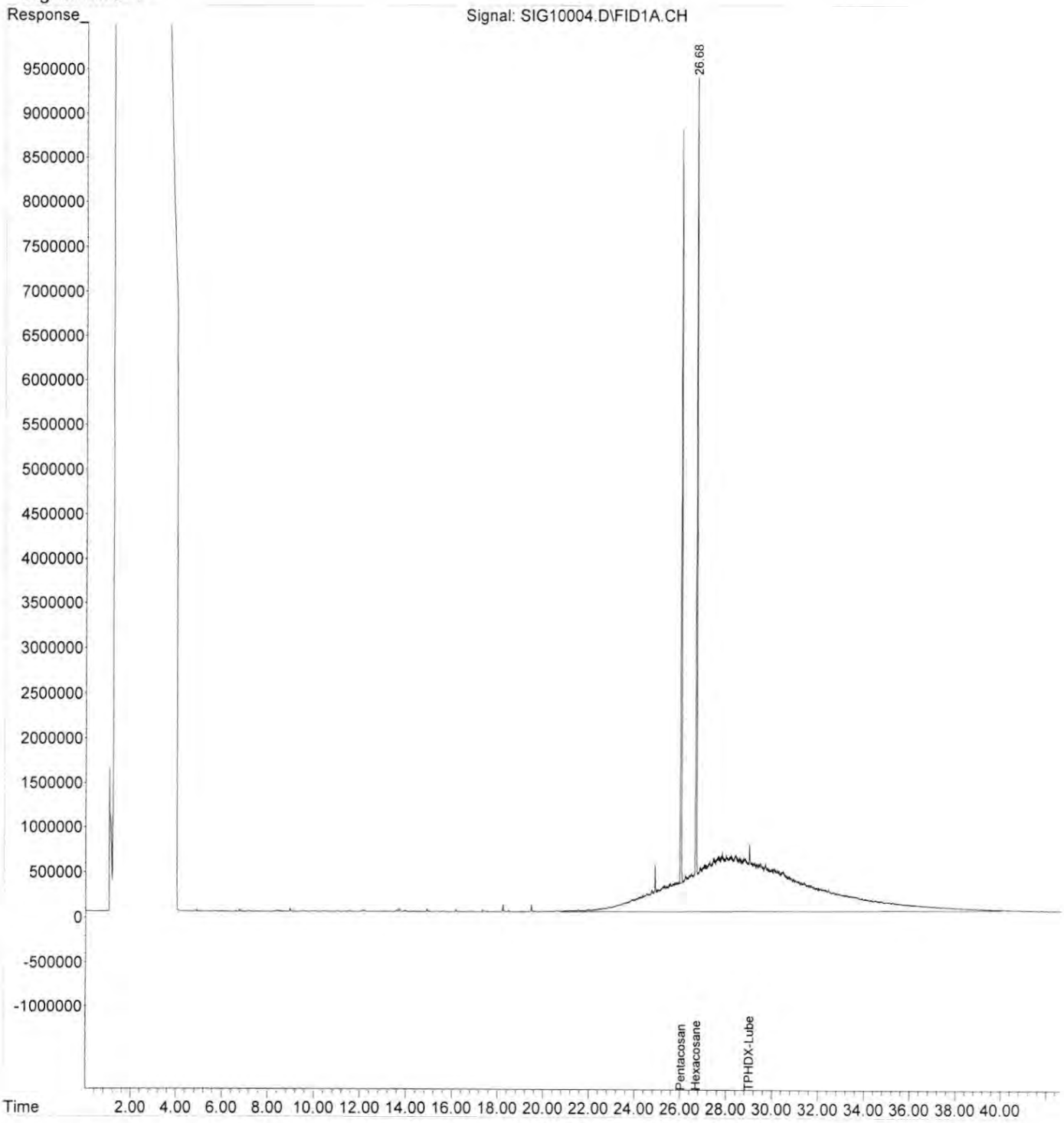
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10004.D Vial: 4
Acq On : 12 Jul 2024 9:44 am Operator: BAM
Sample : LO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 13:26 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10005.D Vial: 5
Acq On : 12 Jul 2024 10:39 am Operator: BAM
Sample : MO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 13:22:15 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	Pentacosane	26.01	143206786	50.000 ppm
	System Monitoring Compounds			
2) S	Hexacosane	26.67	132415104	49.331 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	98.66%
	Target Compounds			
3) H	TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4) H	TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H	Mineral Oil	20.00	2600924550	976.653 ppm
6) h	HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h	HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h	HCID Oil (>C14)	0.00	0	N.D. ppm

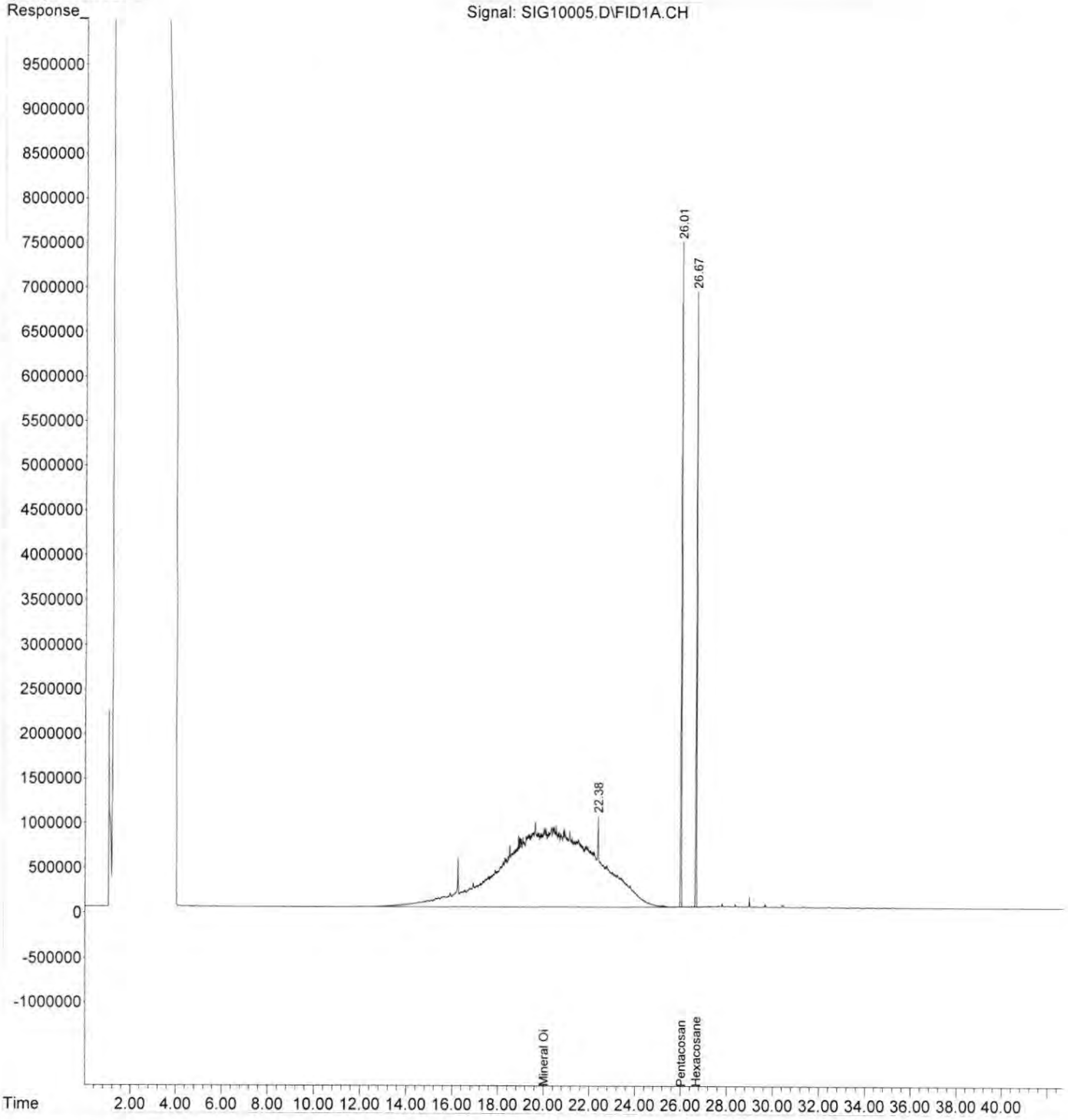
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10005.D Vial: 5
Acq On : 12 Jul 2024 10:39 am Operator: BAM
Sample : MO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 13:27 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10006.D Vial: 6
Acq On : 12 Jul 2024 11:35 am Operator: BAM
Sample : GAS 40 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 13:22:17 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.00	127678522	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.66	119729456	50.030 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.06%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	7.00	34278635	43.681 ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

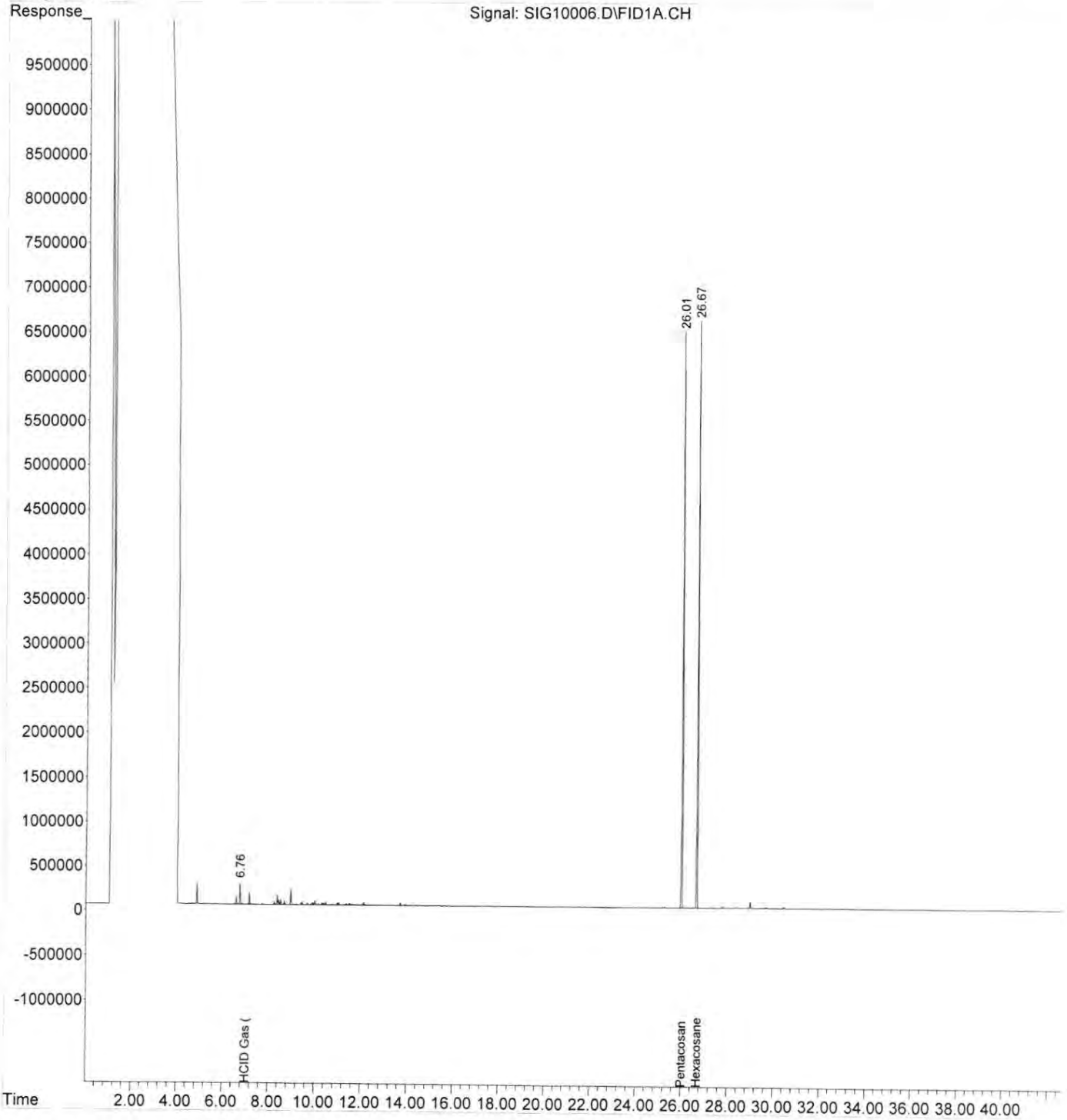
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10006.D Vial: 6
Acq On : 12 Jul 2024 11:35 am Operator: BAM
Sample : GAS 40 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 13:27 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10007.D Vial: 7
Acq On : 12 Jul 2024 12:31 pm Operator: BAM
Sample : BEG0441-BLK1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 14:48:23 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I Pentacosane	26.01	127974003	50.000 ppm
System Monitoring Compounds			
2) S Hexacosane	26.66	109110678	45.488 ppm
Spiked Amount 50.000	Range 50 - 150	Recovery = 90.98%	
Target Compounds			
3) H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4) H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H Mineral Oil	0.00	0	N.D. ppm
6) h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h HCID Oil (>C14)	0.00	0	N.D. ppm

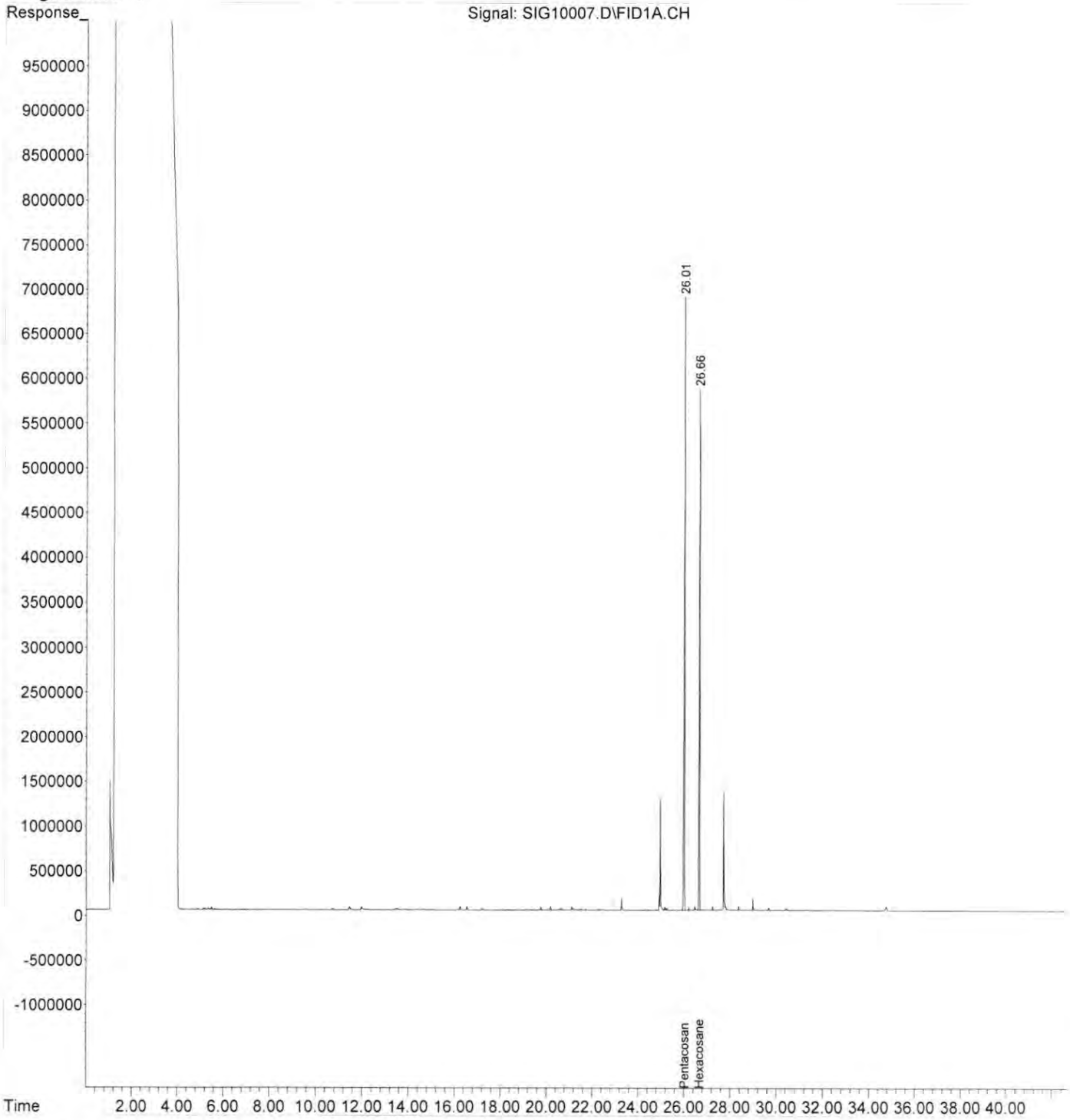
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10007.D Vial: 7
Acq On : 12 Jul 2024 12:31 pm Operator: BAM
Sample : BEG0441-BLK1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 14:51 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10008.D Vial: 8
Acq On : 12 Jul 2024 1:27 pm Operator: BAM
Sample : BEG0441-BS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 14:48:24 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.01	147529521	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.67	118609775	42.894 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	85.79%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	15.50	941493937	354.859 ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

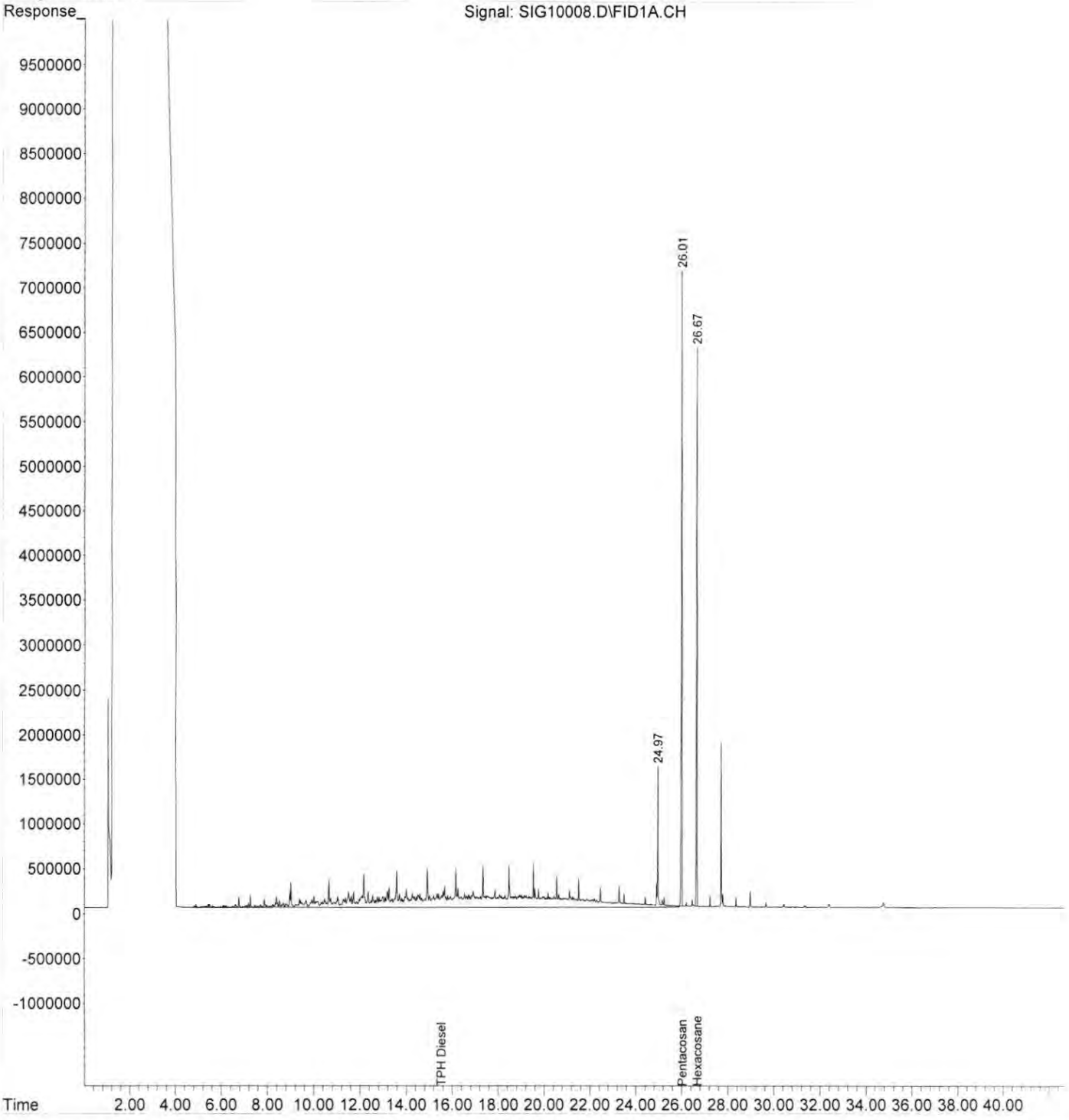
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10008.D Vial: 8
Acq On : 12 Jul 2024 1:27 pm Operator: BAM
Sample : BEG0441-BS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 15:05 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10009.D Vial: 9
Acq On : 12 Jul 2024 2:24 pm Operator: BAM
Sample : BEG0441-BSD1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 15:04:49 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.01	116511407	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.66	89858088	41.147 ppm m
Spiked Amount	50.000	Range 50 - 150	Recovery =	82.29%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	15.50	710649574	339.160 ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

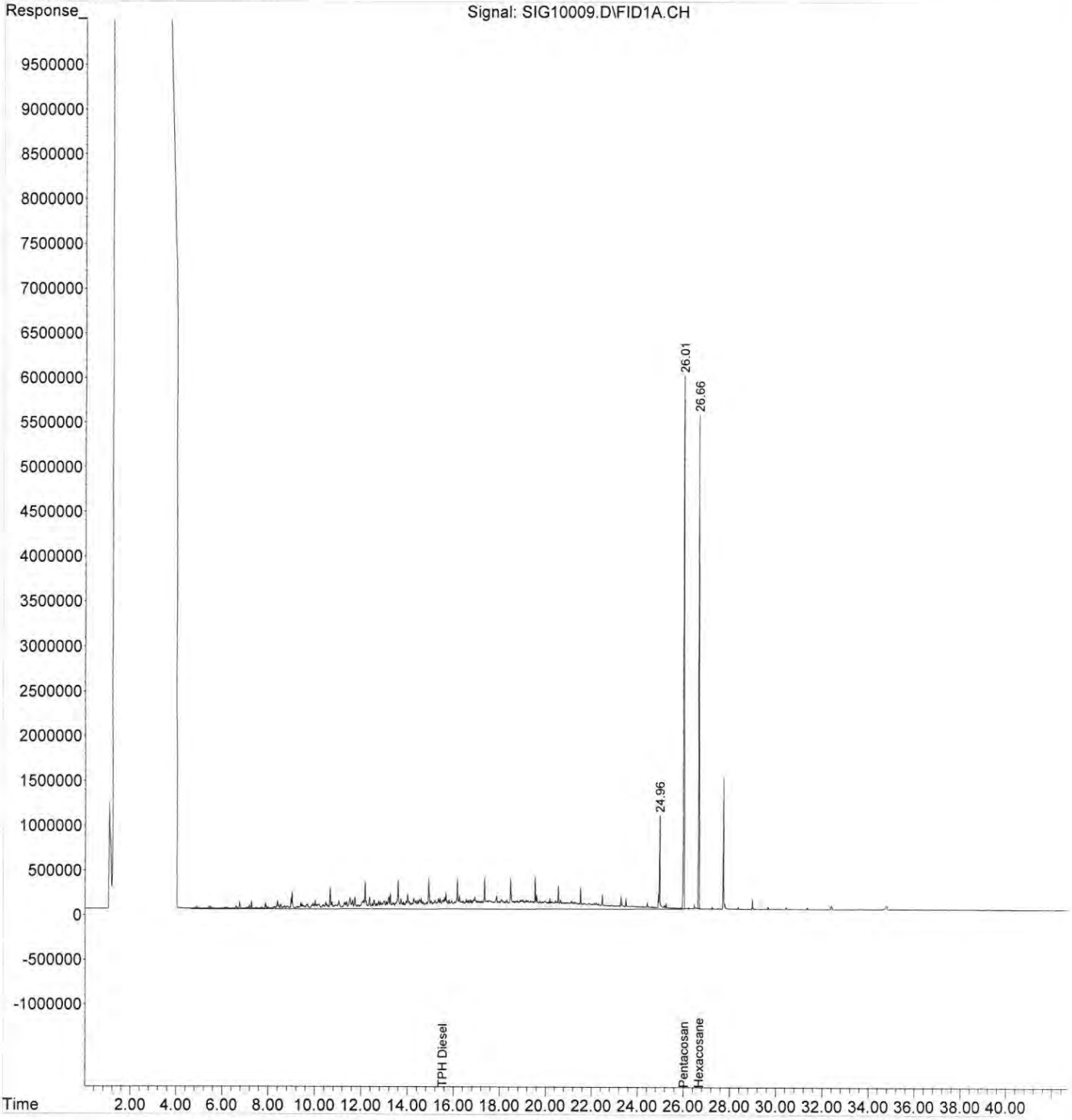
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10009.D Vial: 9
Acq On : 12 Jul 2024 2:24 pm Operator: BAM
Sample : BEG0441-BSD1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 15:10 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10010.D Vial: 10
Acq On : 12 Jul 2024 3:20 pm Operator: BAM
Sample : WEG0469-01 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 12 16:08:48 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I Pentacosane	26.01	117912372	50.000 ppm
System Monitoring Compounds			
2) S Hexacosane	26.66	103646593	46.897 ppm
Spiked Amount 50.000	Range 50 - 150	Recovery = 93.79%	
Target Compounds			
3) H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4) H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H Mineral Oil	0.00	0	N.D. ppm
6) h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h HCID Oil (>C14)	0.00	0	N.D. ppm

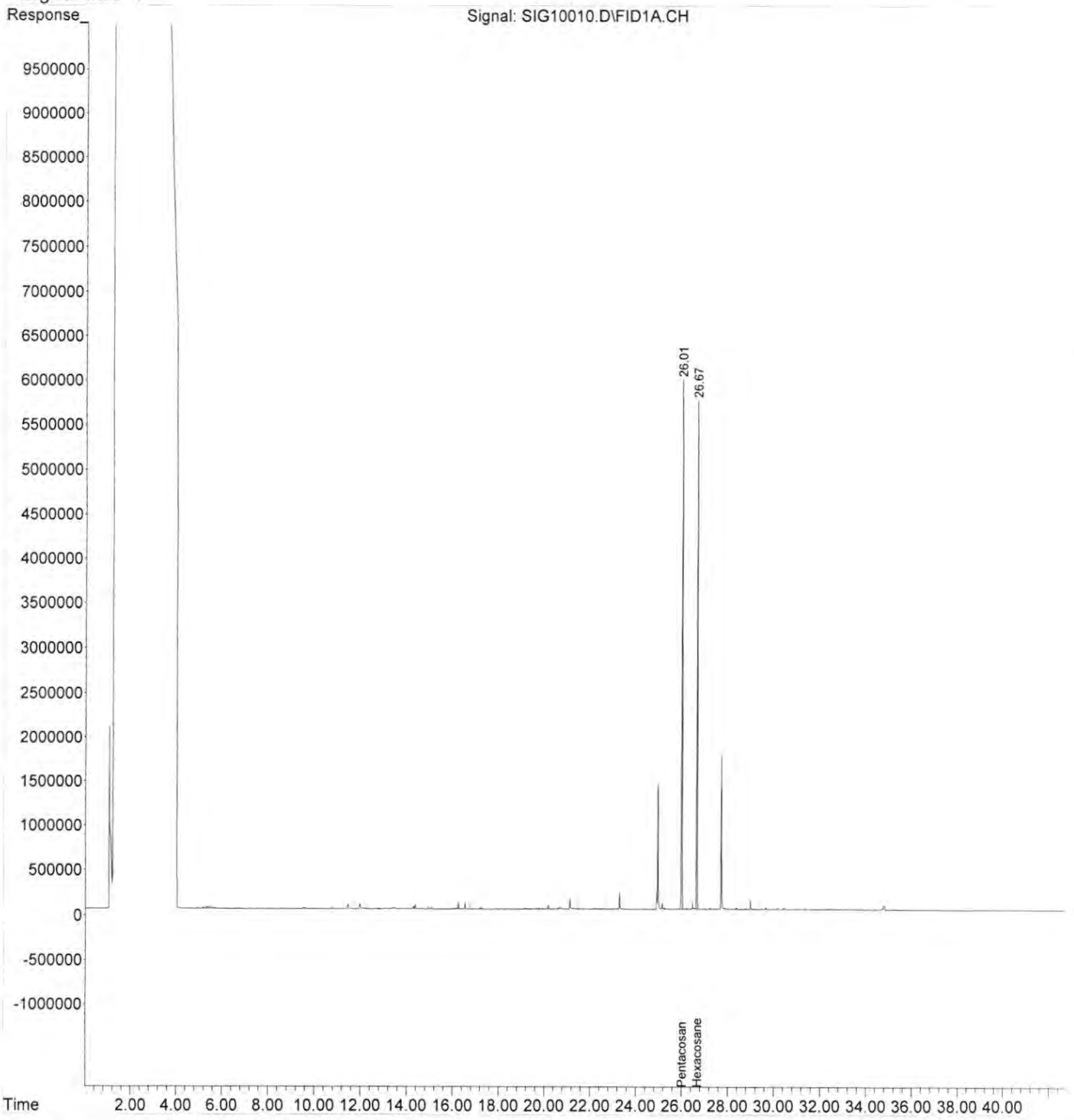
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10010.D Vial: 10
Acq On : 12 Jul 2024 3:20 pm Operator: BAM
Sample : WEG0469-01 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 14:05 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10011.D Vial: 11
Acq On : 12 Jul 2024 4:16 pm Operator: BAM
Sample : WEG0469-02 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:42:59 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.01	127470750	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.66	114124957	47.766 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	95.53%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

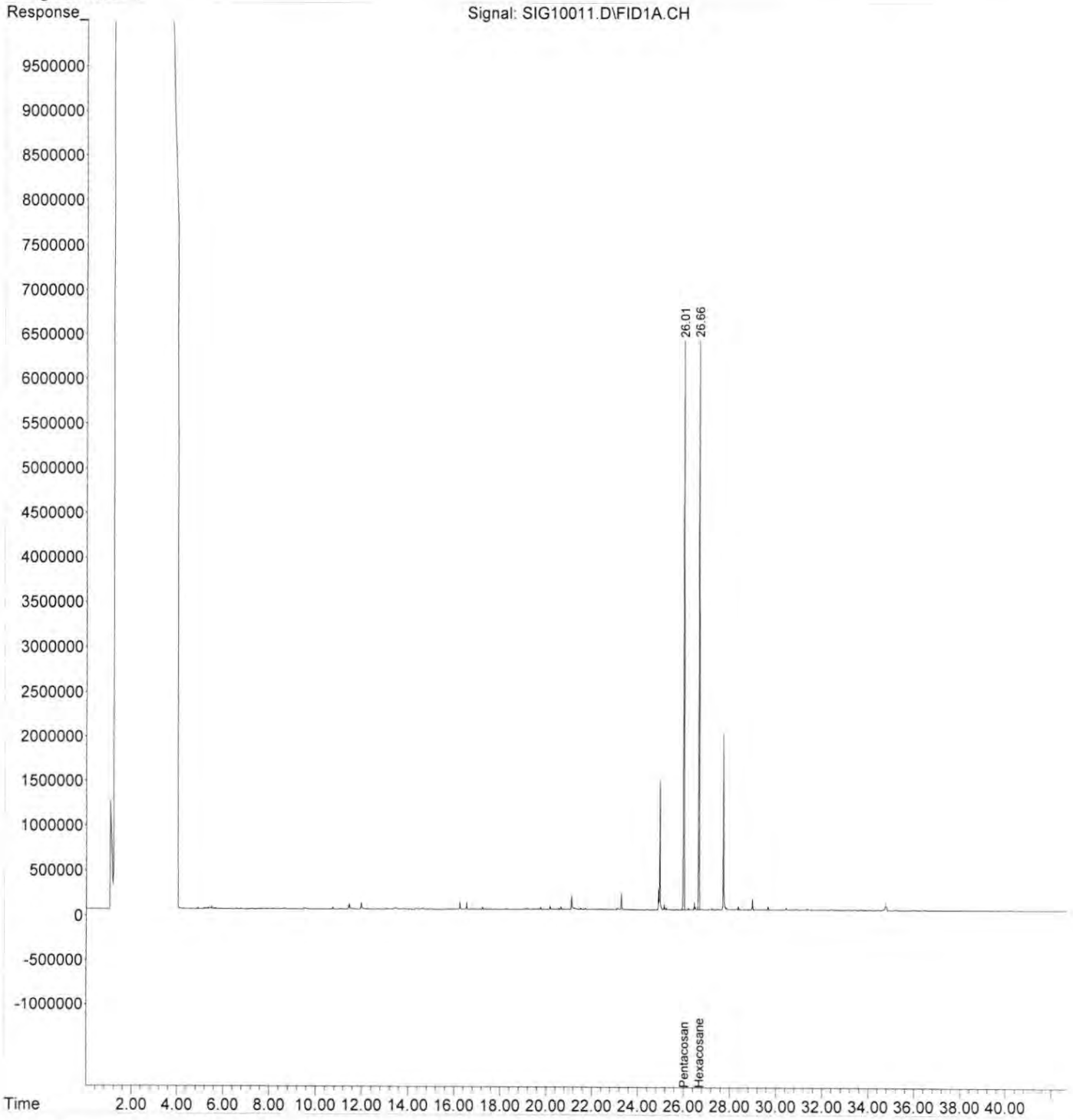
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10011.D Vial: 11
Acq On : 12 Jul 2024 4:16 pm Operator: BAM
Sample : WEG0469-02 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 14:05 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10012.D Vial: 12
Acq On : 12 Jul 2024 5:13 pm Operator: BAM
Sample : WEG0469-03 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:01 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.02	188695655	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.68	157796066	44.615 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	89.23%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

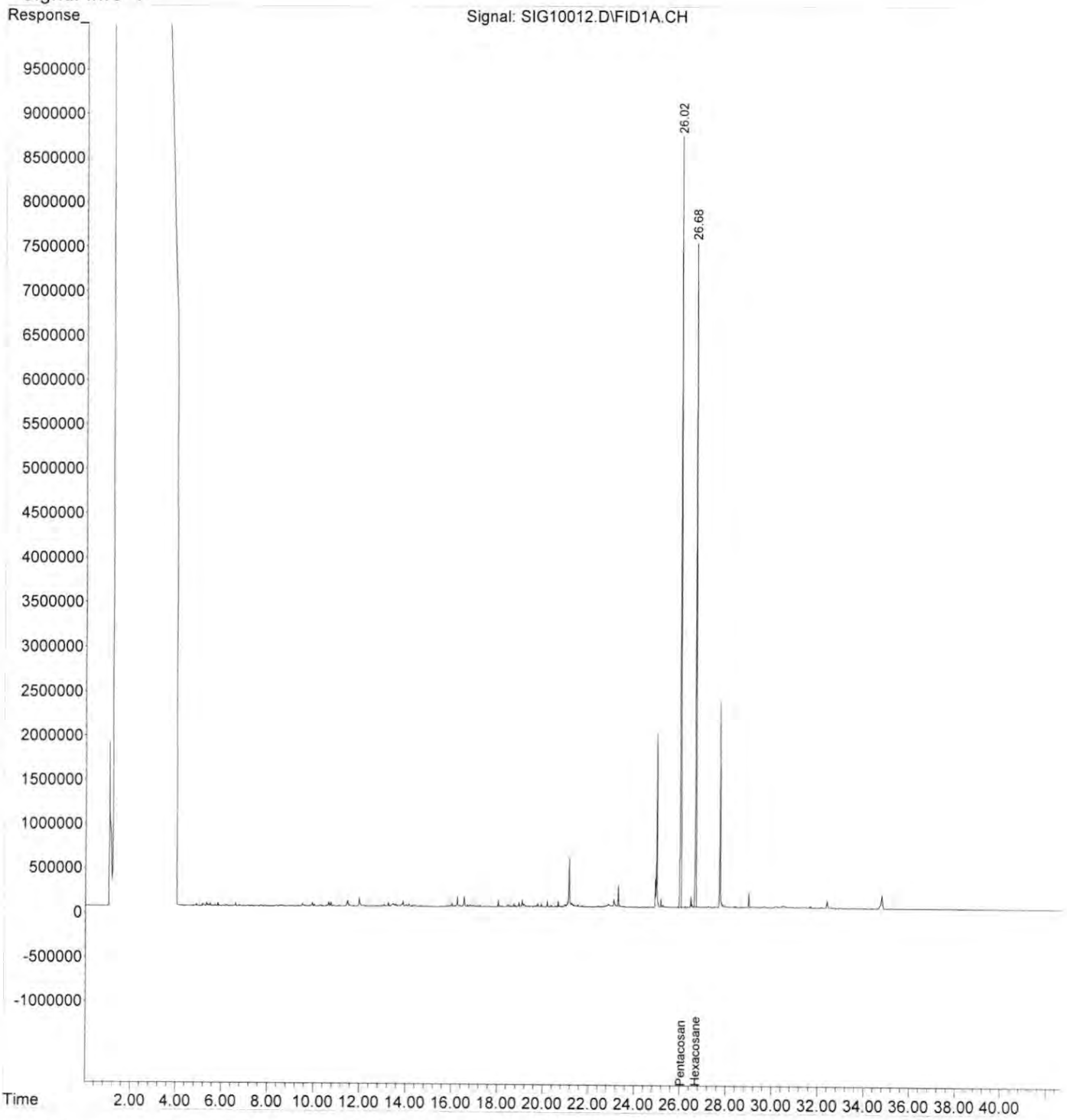
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10012.D Vial: 12
Acq On : 12 Jul 2024 5:13 pm Operator: BAM
Sample : WEG0469-03 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 14:05 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



SIG10012.D 240709DHT.M Mon Jul 15 16:15:28 2024

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10013.D Vial: 13
Acq On : 12 Jul 2024 6:09 pm Operator: BAM
Sample : WEG0469-04 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:03 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	Pentacosane	26.01	138256918	50.000 ppm
	System Monitoring Compounds			
2) S	Hexacosane	26.63	7769820	2.998 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	6.00%#
	Target Compounds			
3) H	TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4) H	TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H	Mineral Oil	0.00	0	N.D. ppm
6) h	HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h	HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h	HCID Oil (>C14)	0.00	0	N.D. ppm

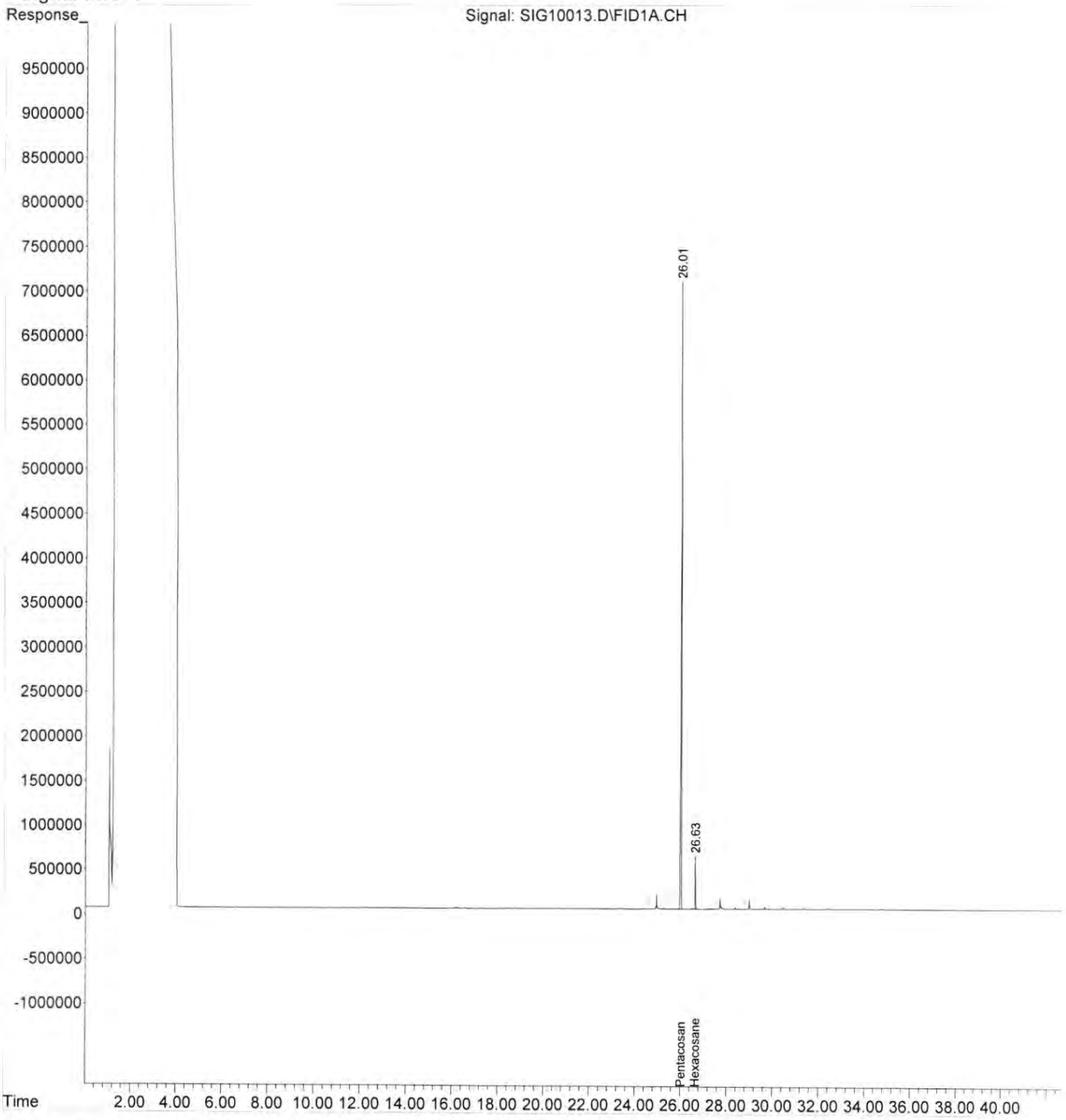
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10013.D Vial: 13
Acq On : 12 Jul 2024 6:09 pm Operator: BAM
Sample : WEG0469-04 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 14:06 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10014.D Vial: 14
Acq On : 12 Jul 2024 7:05 pm Operator: BAM
Sample : BEG0441-MS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:04 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.00	76180239	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.65	53338633	37.355 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	74.71%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	15.50	649347493	473.971 ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

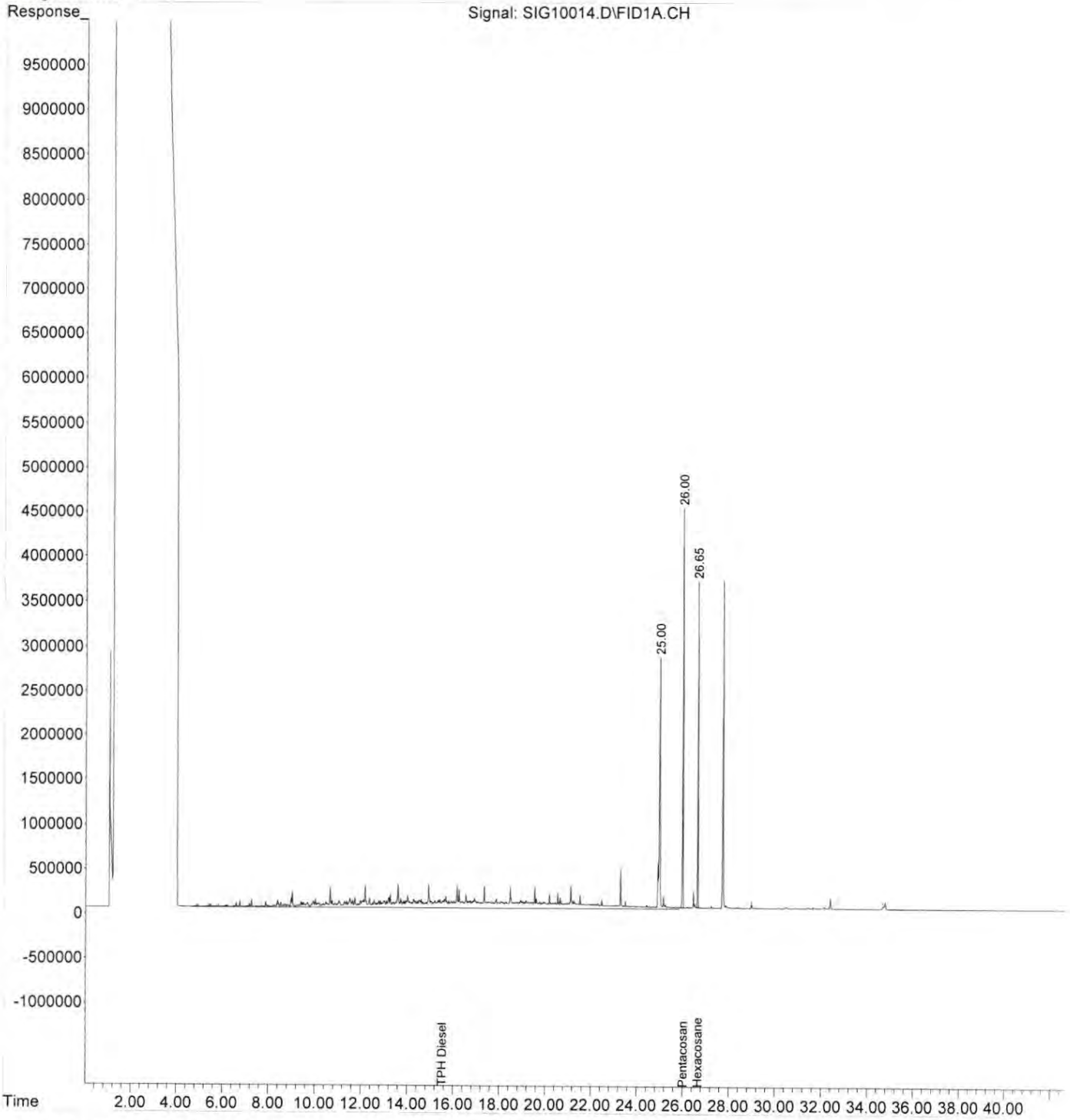
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10014.D Vial: 14
Acq On : 12 Jul 2024 7:05 pm Operator: BAM
Sample : BEG0441-MS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 8:49 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10015.D Vial: 15
Acq On : 12 Jul 2024 8:00 pm Operator: BAM
Sample : BEG0441-MSD1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:06 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	Pentacosane	26.02	149999499	50.000 ppm
	System Monitoring Compounds			
2) S	Hexacosane	26.67	125262926	44.554 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	89.11%
	Target Compounds			
3) H	TPH Diesel (C12-C14)	15.50	1271689939	471.421 ppm
4) H	TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H	Mineral Oil	0.00	0	N.D. ppm
6) h	HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h	HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h	HCID Oil (>C14)	0.00	0	N.D. ppm

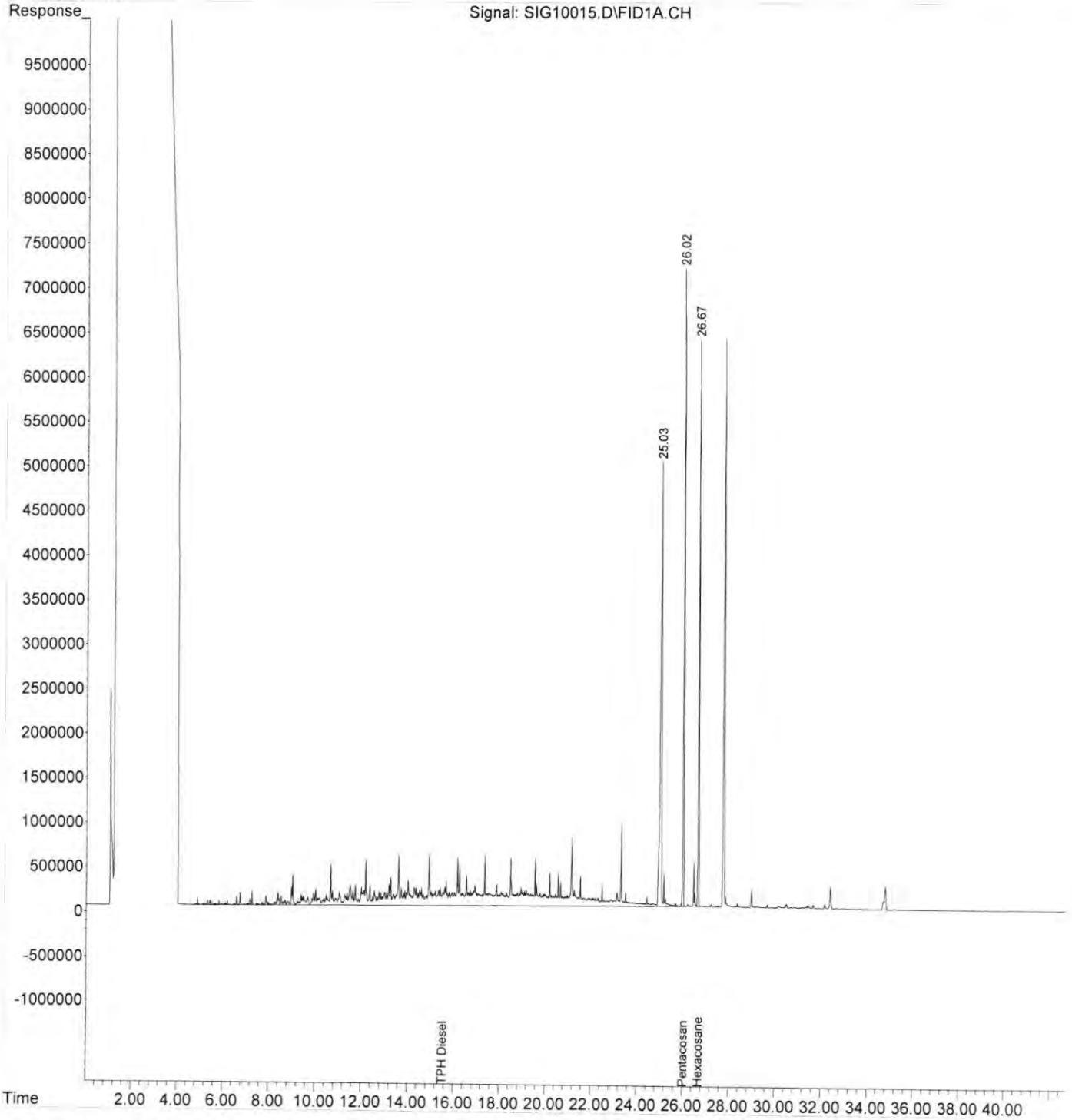
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10015.D Vial: 15
Acq On : 12 Jul 2024 8:00 pm Operator: BAM
Sample : BEG0441-MSD1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 8:49 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



SIG10015.D 240709DHT.M Mon Jul 15 16:15:32 2024

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10016.D Vial: 16
Acq On : 12 Jul 2024 8:56 pm Operator: BAM
Sample : WEG0469-05 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:07 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	Pentacosane	26.01	114831209	50.000 ppm
	System Monitoring Compounds			
2) S	Hexacosane	26.66	98684385	45.850 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	91.70%
	Target Compounds			
3) H	TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4) H	TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H	Mineral Oil	0.00	0	N.D. ppm
6) h	HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h	HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h	HCID Oil (>C14)	0.00	0	N.D. ppm

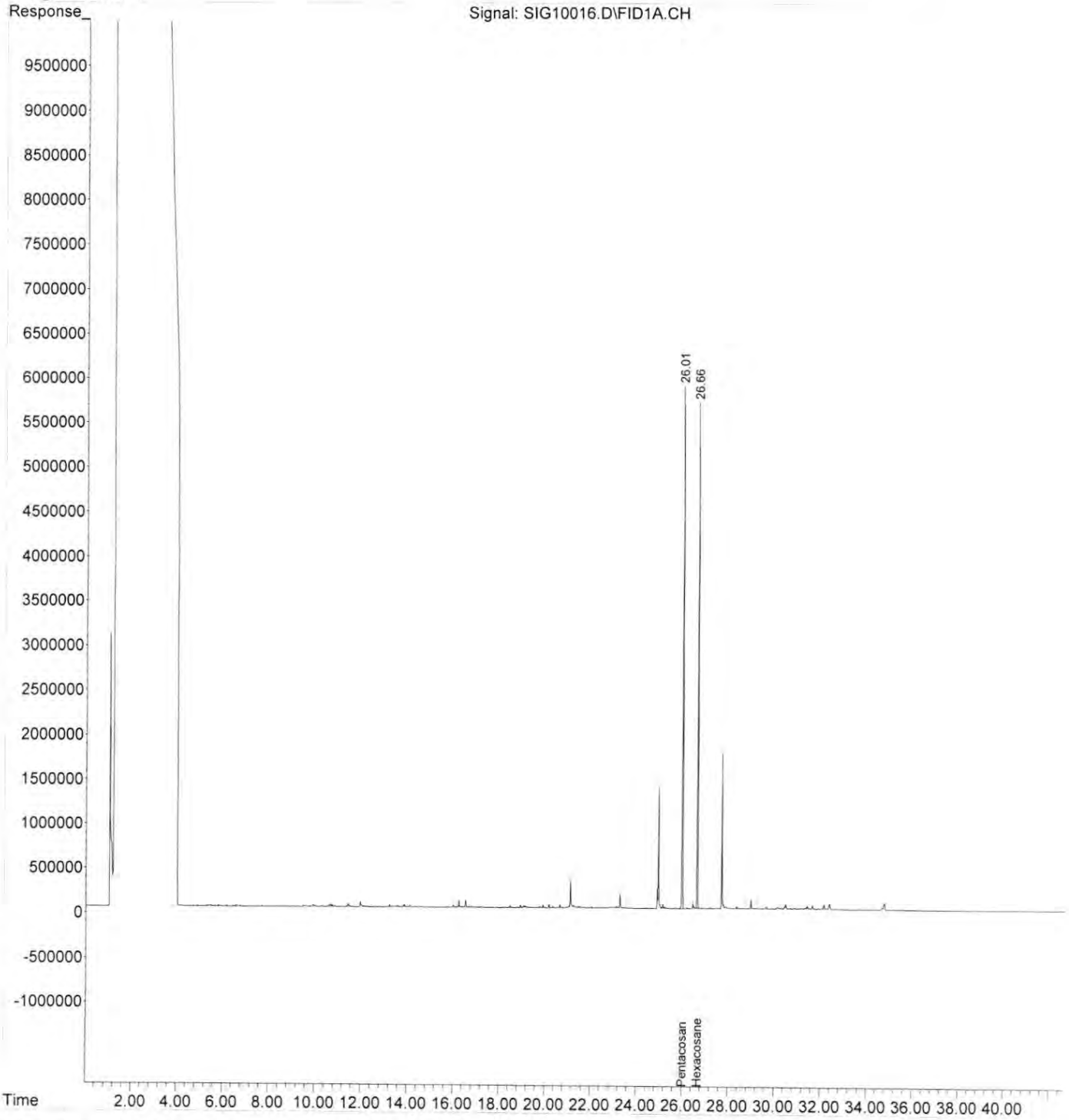
(f) = RT Delta > 1/2 Window (m) = manual int.
SIG10016.D 240709DHT.M Mon Jul 15 16:15:34 2024

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10016.D Vial: 16
Acq On : 12 Jul 2024 8:56 pm Operator: BAM
Sample : WEG0469-05 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 14:06 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



SIG10016.D 240709DHT.M Mon Jul 15 16:15:34 2024

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10017.D Vial: 17
Acq On : 12 Jul 2024 9:51 pm Operator: BAM
Sample : E-1 DUP Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:09 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.01	156116503	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.67	130345726	44.545 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	89.09%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

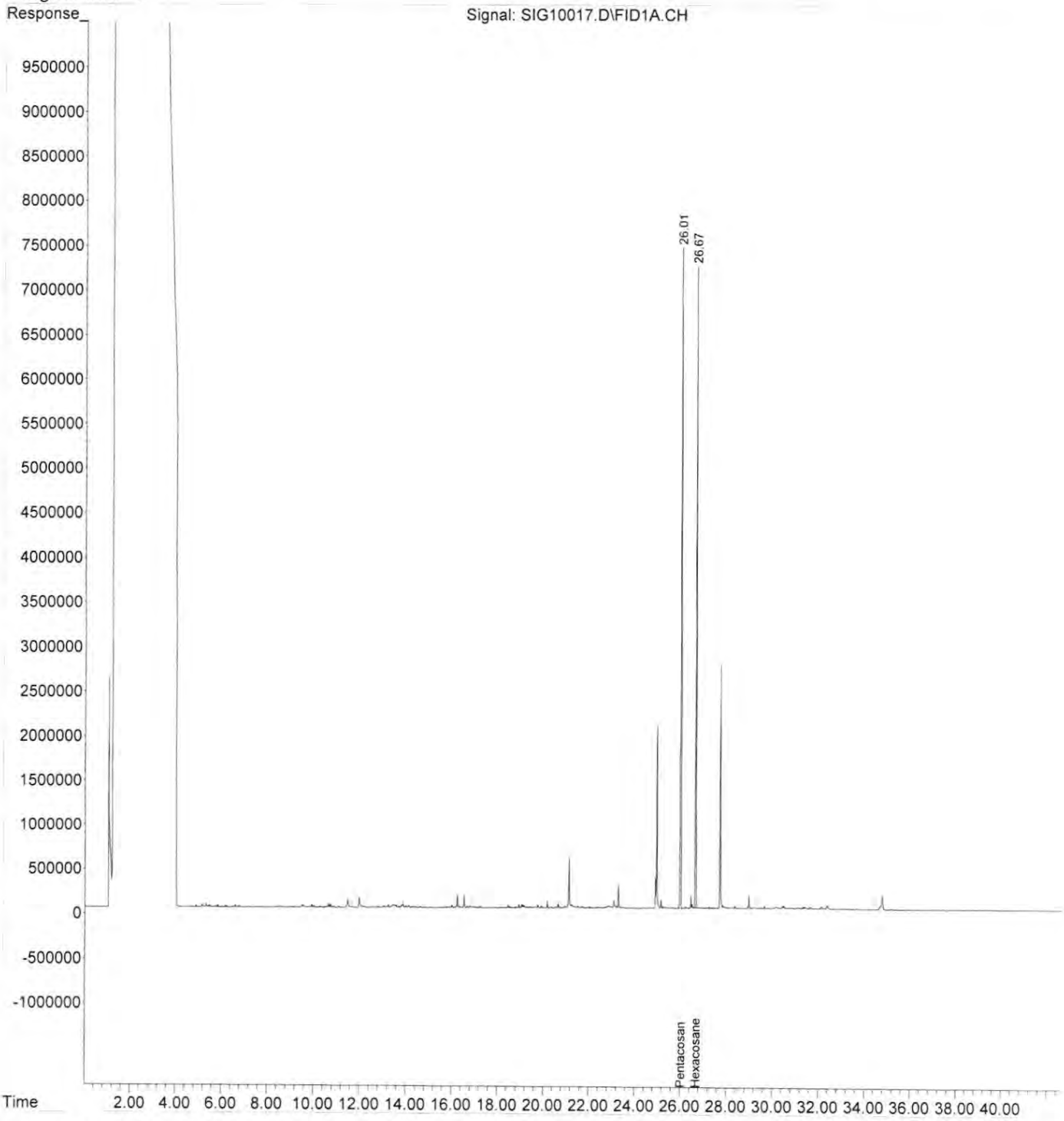
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10017.D Vial: 17
Acq On : 12 Jul 2024 9:51 pm Operator: BAM
Sample : E-1 DUP Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 14:06 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10018.D Vial: 1
Acq On : 12 Jul 2024 10:46 pm Operator: BAM
Sample : BLK Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:10 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	Pentacosane	26.01	137212197	50.000 ppm
	System Monitoring Compounds			
2) S	Hexacosane	26.67	128404492	49.927 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.85%
	Target Compounds			
3) H	TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4) H	TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H	Mineral Oil	0.00	0	N.D. ppm
6) h	HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h	HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h	HCID Oil (>C14)	0.00	0	N.D. ppm

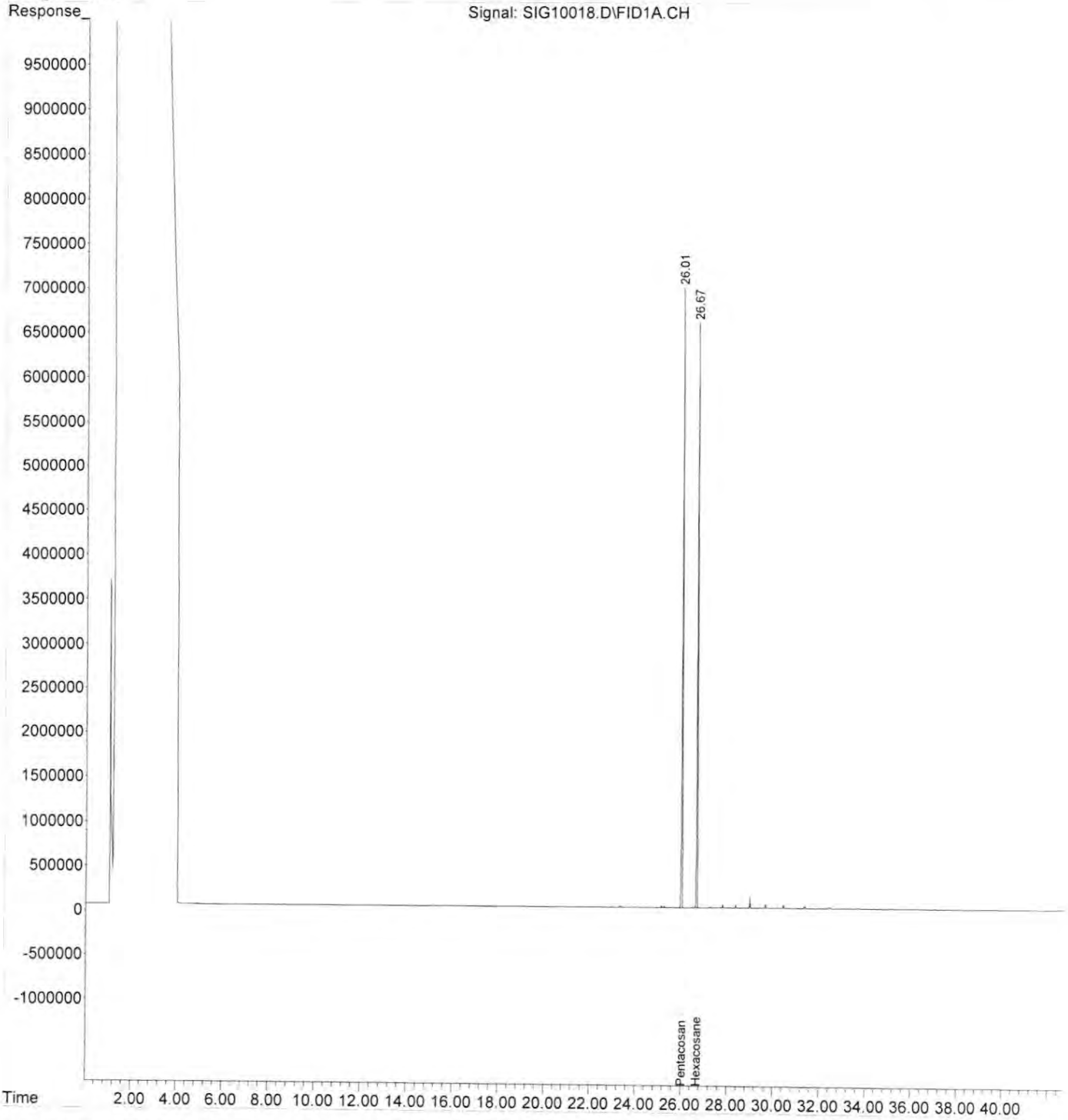
(f) = RT Delta > 1/2 Window (m) = manual int.
SIG10018.D 240709DHT.M Mon Jul 15 16:15:37 2024

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10018.D Vial: 1
Acq On : 12 Jul 2024 10:46 pm Operator: BAM
Sample : BLK Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 9:05 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10019.D Vial: 2
Acq On : 12 Jul 2024 11:41 pm Operator: BAM
Sample : ICV 500PPM Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:43 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.02	207902060	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.68	191321156	49.097 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	98.19%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	15.50	1954635077	522.786 ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

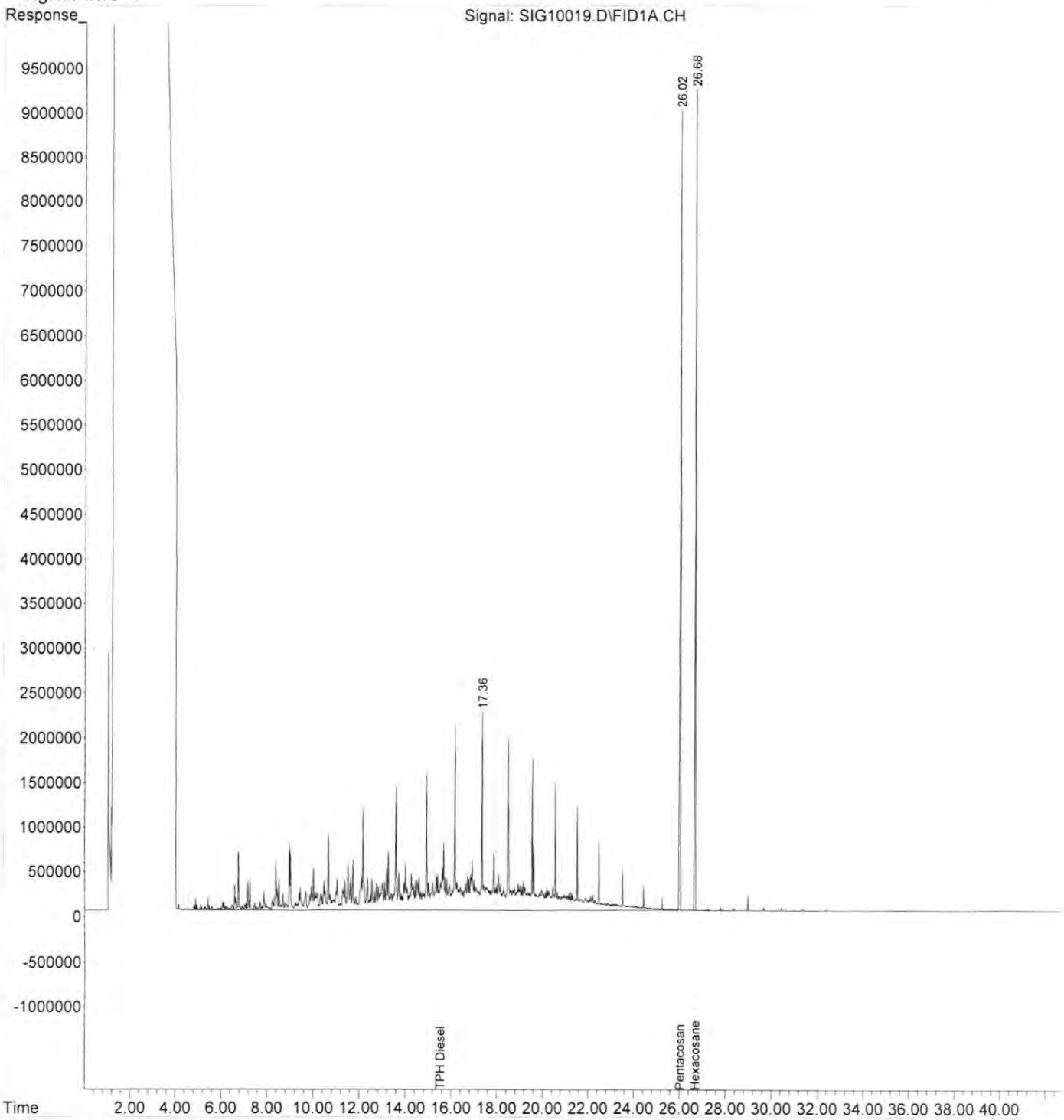
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10019.D Vial: 2
Acq On : 12 Jul 2024 11:41 pm Operator: BAM
Sample : ICV 500PPM Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 9:05 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10020.D Vial: 3
Acq On : 13 Jul 2024 12:36 am Operator: BAM
Sample : DX 500PPM CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:45 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	Pentacosane	26.01	129991603	50.000 ppm
	System Monitoring Compounds			
2) S	Hexacosane	26.67	121846944	50.009 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.02%
	Target Compounds			
3) H	TPH Diesel (C12-C14)	15.50	1168434632	499.812 ppm
4) H	TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H	Mineral Oil	0.00	0	N.D. ppm
6) h	HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h	HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h	HCID Oil (>C14)	0.00	0	N.D. ppm

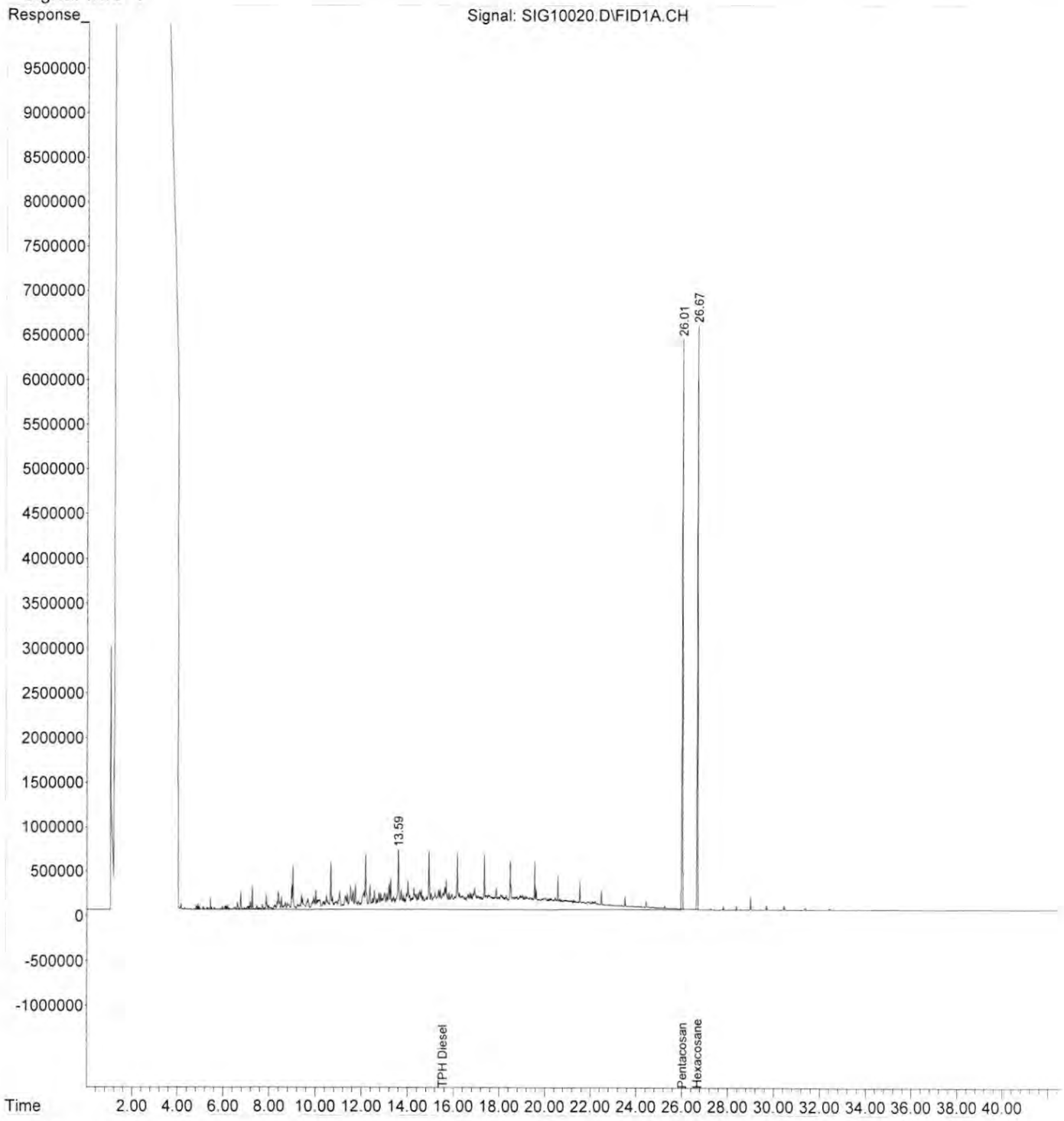
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10020.D Vial: 3
Acq On : 13 Jul 2024 12:36 am Operator: BAM
Sample : DX 500PPM CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 9:05 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10021.D Vial: 4
Acq On : 13 Jul 2024 1:32 am Operator: BAM
Sample : LO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:46 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1)	I Pentacosane	0.00	0	N.D.	ppm
	System Monitoring Compounds				
2)	S Hexacosane	0.00	0	N.D.	ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.00%#	
	Target Compounds				
3)	H TPH Diesel (C12-C14)	15.50	8444813	N.D.	ppm
4)	H TPHDX-Lube Oil (>C14)	29.00	14292177	N.D.	ppm
5)	H Mineral Oil	20.00	5714971	N.D.	ppm
6)	h HCID Gas (C7-C12)	7.00	2633210	N.D.	ppm
7)	h HCID Diesel (C12-C14)	15.50	137227414	N.D.	ppm
8)	h HCID Oil (>C14)	27.80	9522658	N.D.	ppm

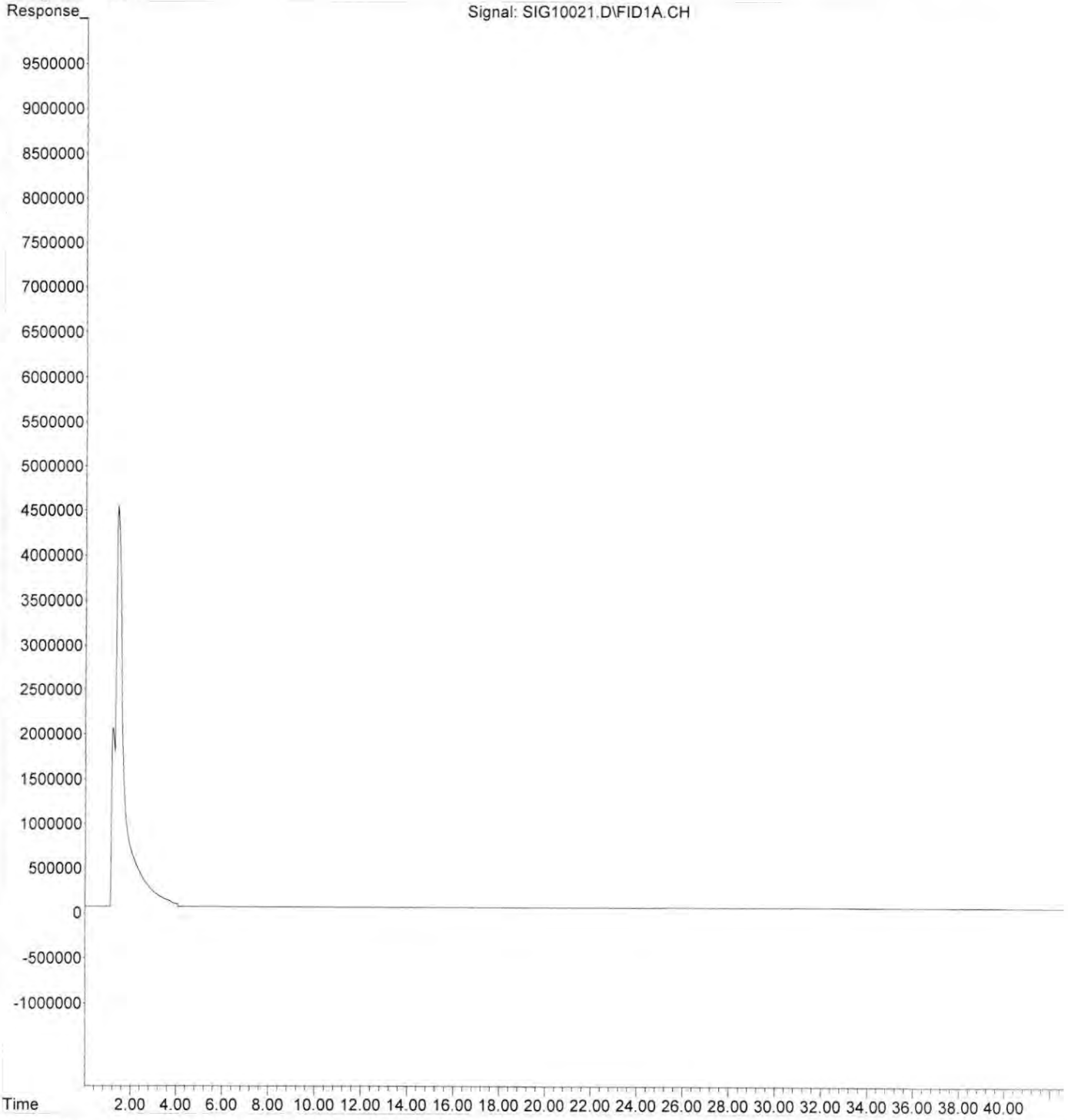
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10021.D Vial: 4
Acq On : 13 Jul 2024 1:32 am Operator: BAM
Sample : LO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 8:46 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10022.D Vial: 5
Acq On : 13 Jul 2024 2:26 am Operator: BAM
Sample : MO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:48 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.02	168533471	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.67	156151299	49.432 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	98.86%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	20.00	3039615891	969.859 ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

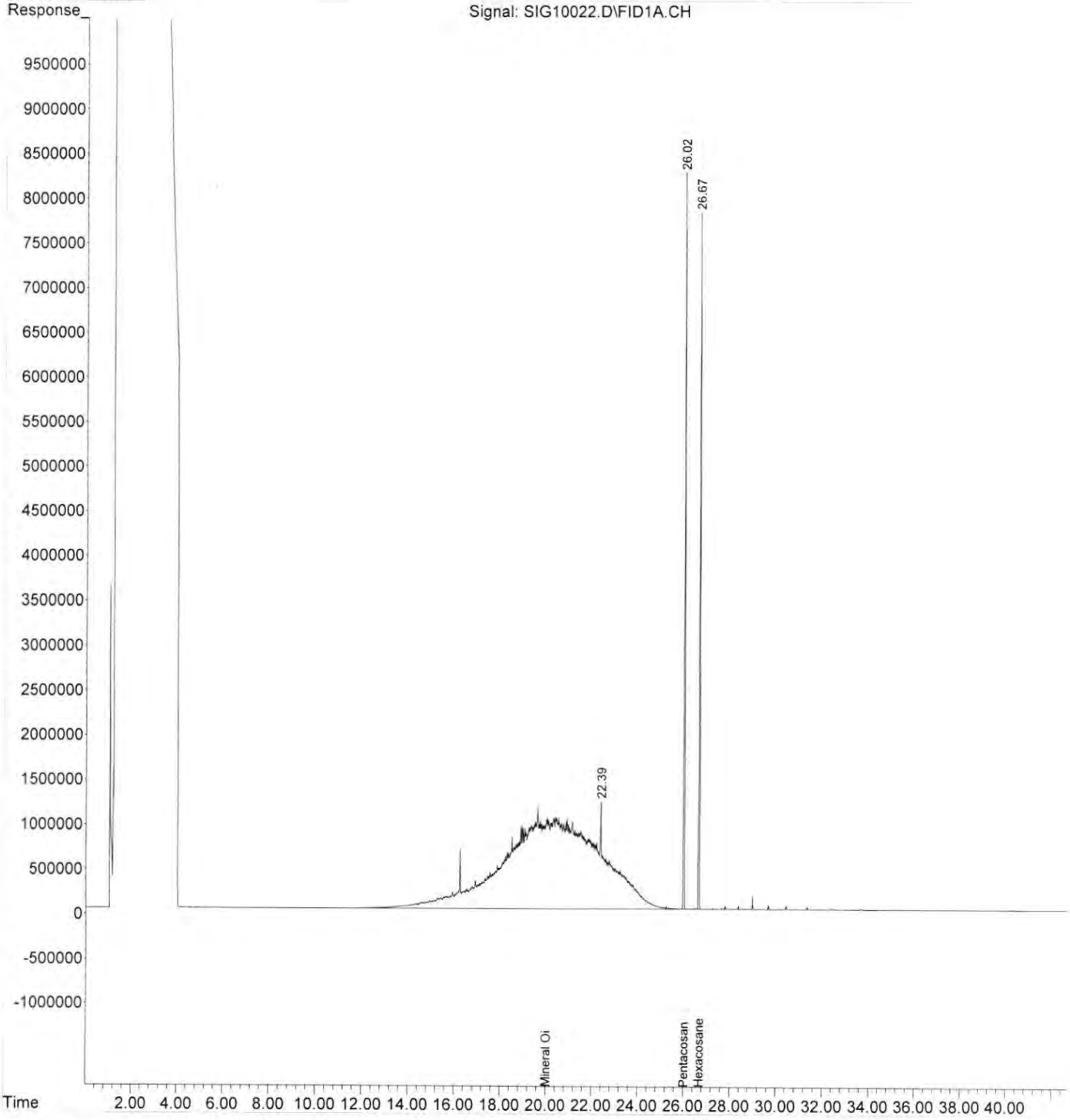
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10022.D Vial: 5
Acq On : 13 Jul 2024 2:26 am Operator: BAM
Sample : MO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 9:06 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10023.D Vial: 6
Acq On : 13 Jul 2024 3:22 am Operator: BAM
Sample : GAS 40 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:49 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.01	133521979	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.67	125670303	50.215 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.43%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	7.00	35761233	43.576 ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

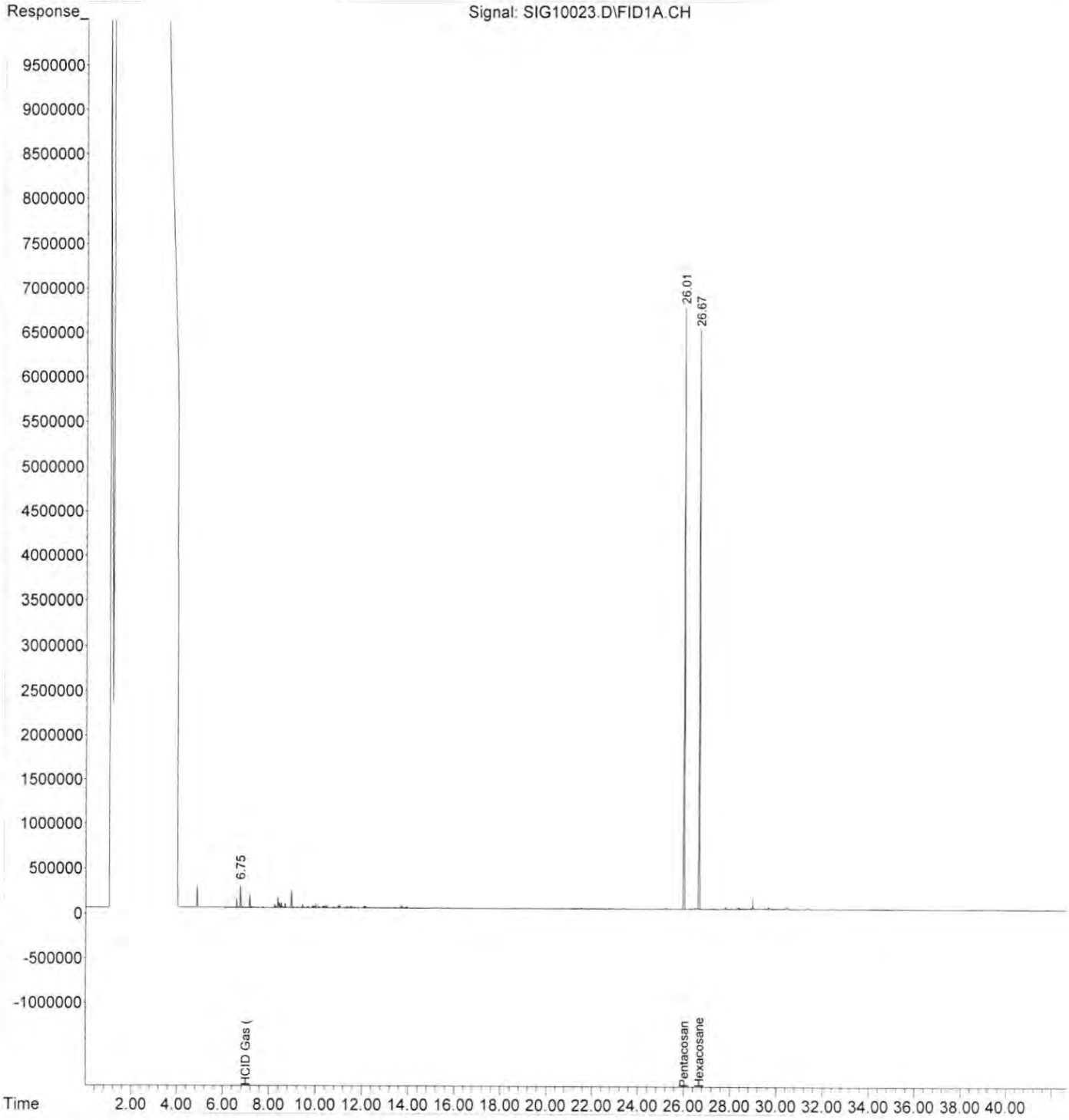
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10023.D Vial: 6
Acq On : 13 Jul 2024 3:22 am Operator: BAM
Sample : GAS 40 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 9:06 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10024.D Vial: 18
Acq On : 13 Jul 2024 4:16 am Operator: BAM
Sample : WEG0469-07 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:51 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	Pentacosane	26.01	151523701	50.000 ppm
	System Monitoring Compounds			
2) S	Hexacosane	26.66	120883542	42.563 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	85.13%
	Target Compounds			
3) H	TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4) H	TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H	Mineral Oil	0.00	0	N.D. ppm
6) h	HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h	HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h	HCID Oil (>C14)	0.00	0	N.D. ppm

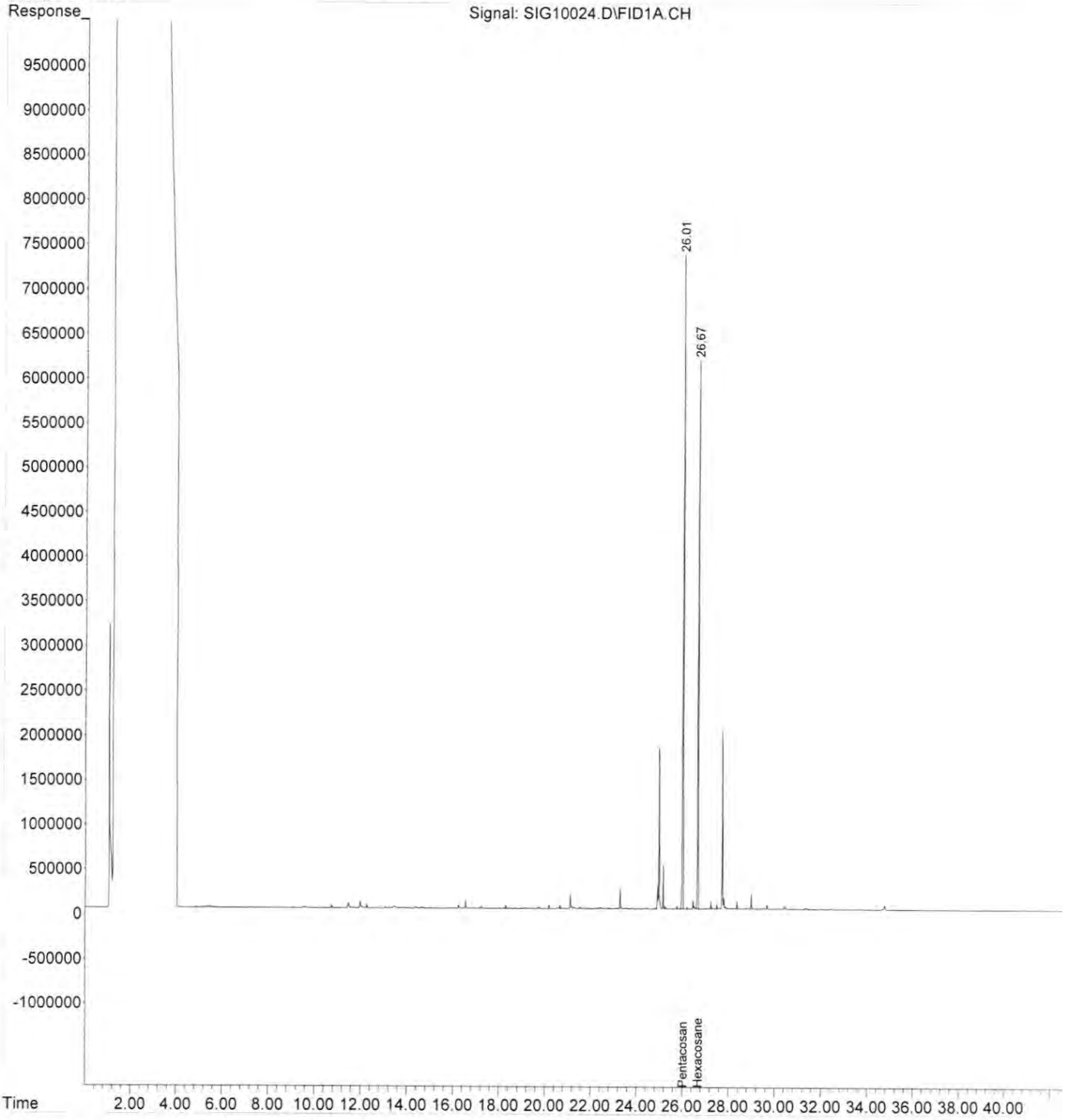
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10024.D Vial: 18
Acq On : 13 Jul 2024 4:16 am Operator: BAM
Sample : WEG0469-07 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 14:07 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10025.D Vial: 19
Acq On : 13 Jul 2024 5:12 am Operator: BAM
Sample : WEG0469-08 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:53 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	Pentacosane	26.01	139650869	50.000 ppm
	System Monitoring Compounds			
2) S	Hexacosane	26.66	121848668	46.551 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	93.10%
	Target Compounds			
3) H	TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4) H	TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H	Mineral Oil	0.00	0	N.D. ppm
6) h	HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h	HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h	HCID Oil (>C14)	0.00	0	N.D. ppm

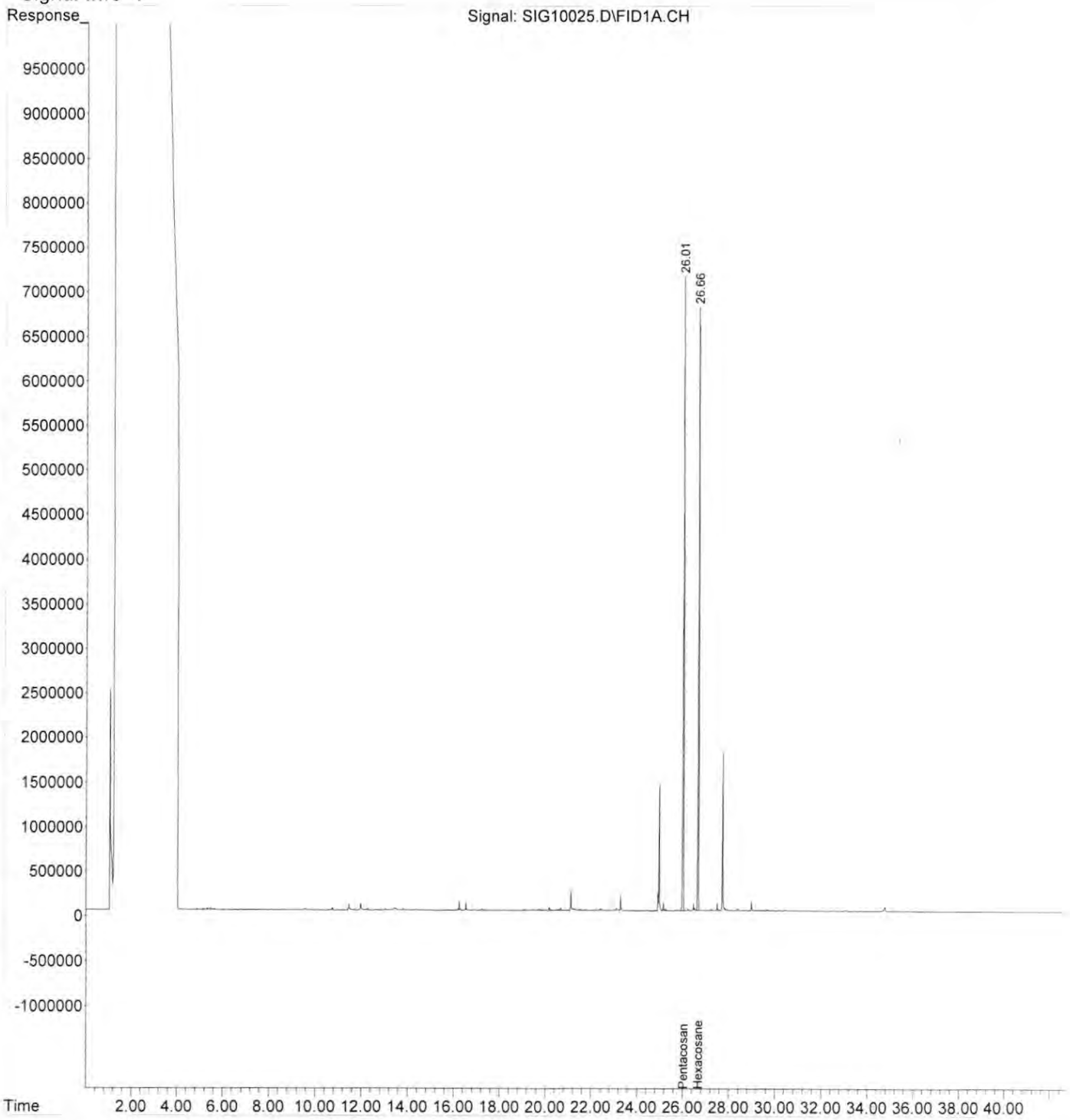
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10025.D Vial: 19
Acq On : 13 Jul 2024 5:12 am Operator: BAM
Sample : WEG0469-08 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 14:08 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10026.D Vial: 20
Acq On : 13 Jul 2024 6:07 am Operator: BAM
Sample : WEG0469-09 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:54 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.00	133866967	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.66	117903564	46.990 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	93.98%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	29.00	201469161	137.016 ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

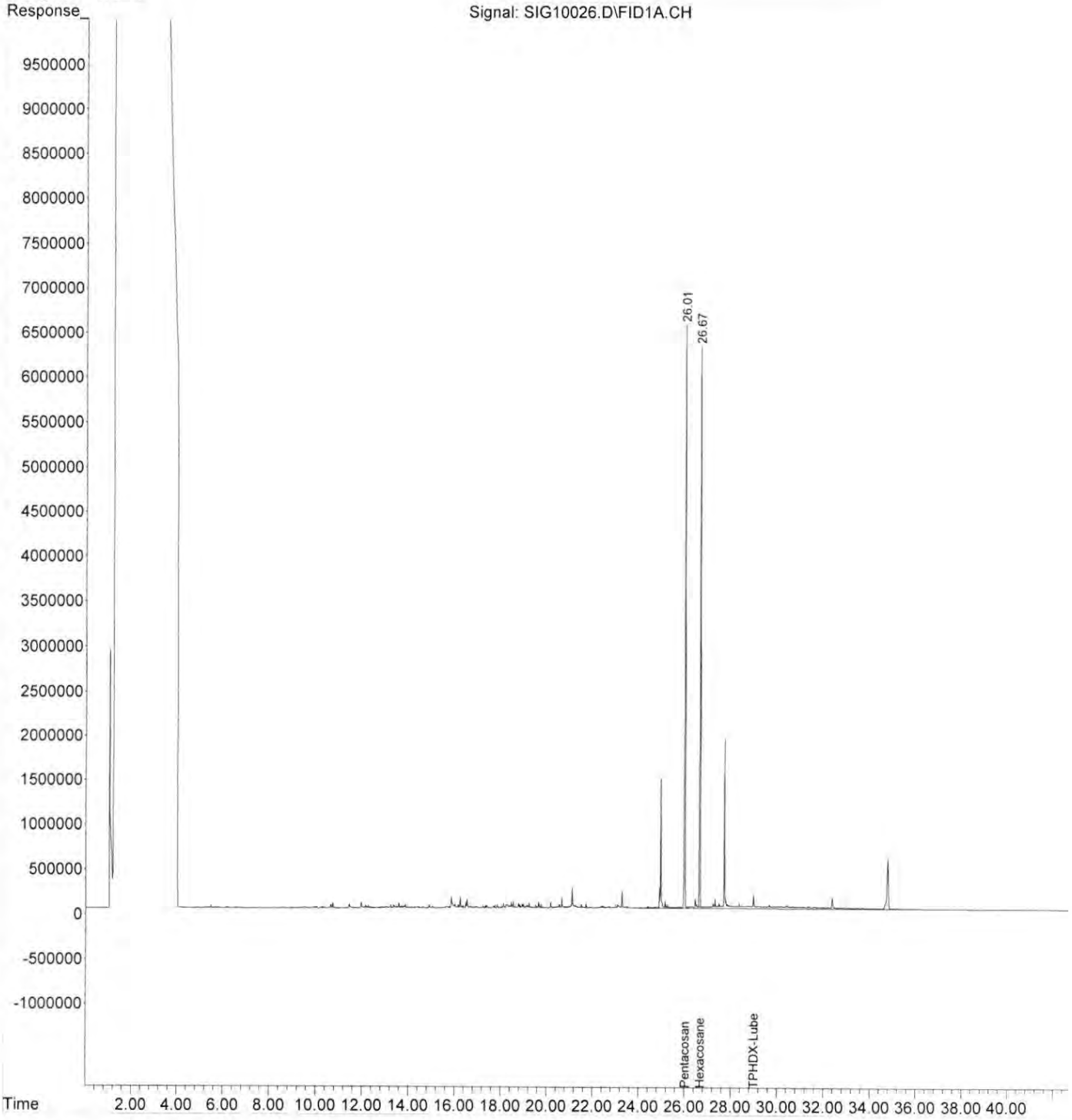
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10026.D Vial: 20
Acq On : 13 Jul 2024 6:07 am Operator: BAM
Sample : WEG0469-09 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 13:54 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10027.D Vial: 21
Acq On : 13 Jul 2024 7:02 am Operator: BAM
Sample : WEG0469-10 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:56 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.02	184153562	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.66	123063786	35.653 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	71.31%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

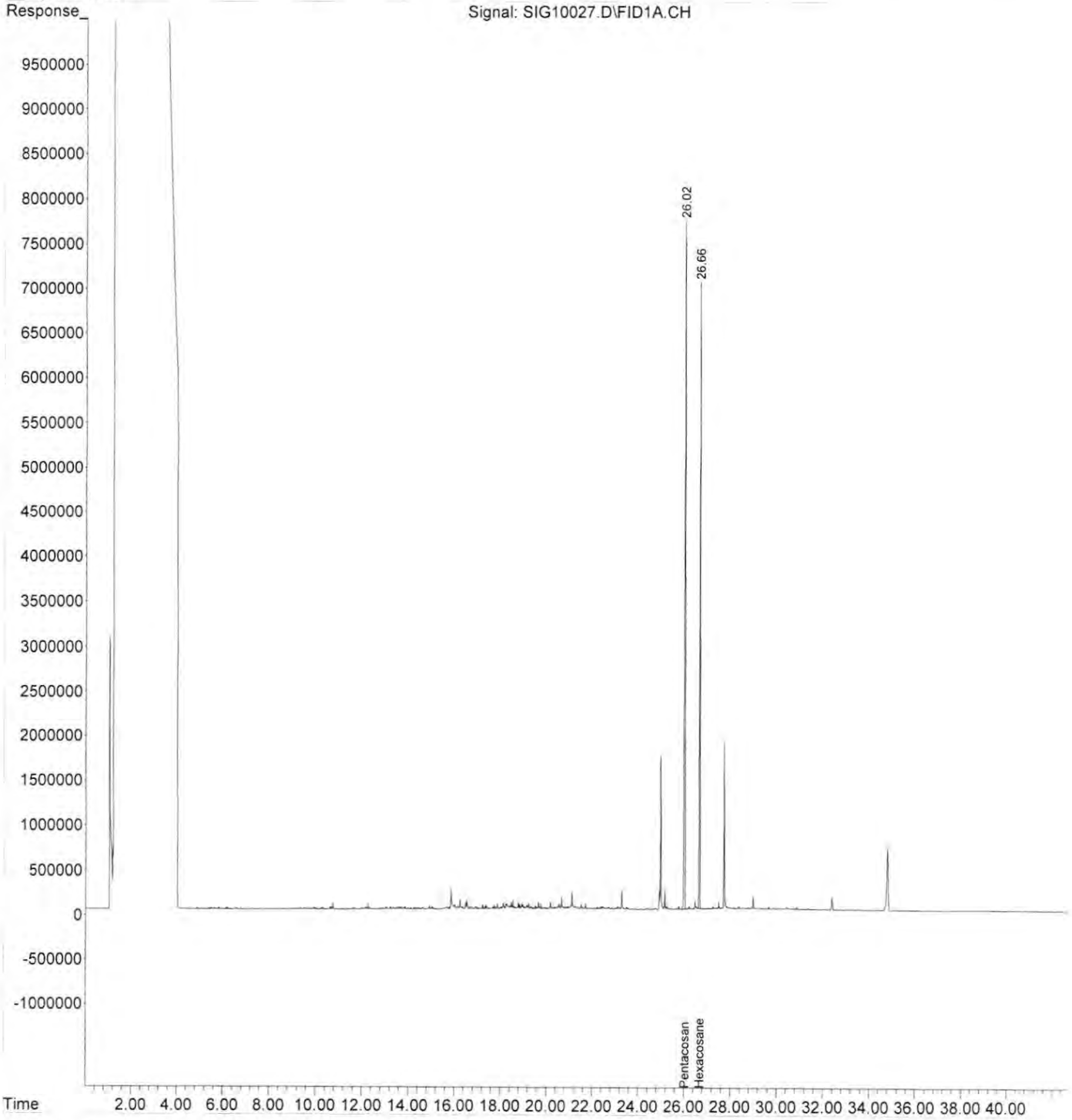
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10027.D Vial: 21
Acq On : 13 Jul 2024 7:02 am Operator: BAM
Sample : WEG0469-10 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 14:08 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10028.D Vial: 22
Acq On : 13 Jul 2024 7:57 am Operator: BAM
Sample : WEG0469-11 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:57 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.01	144250099	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.66	128197367	47.415 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	94.83%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

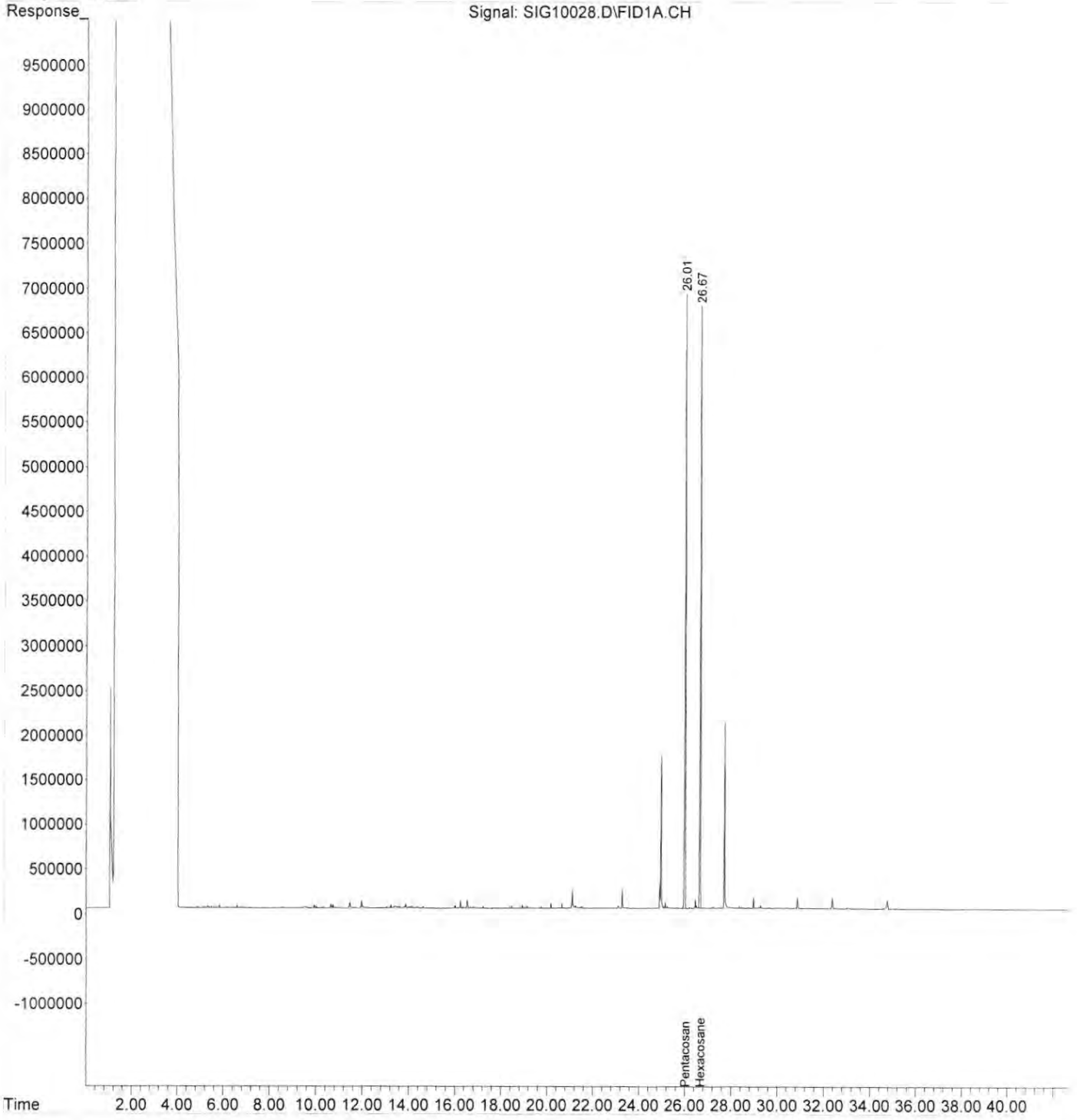
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10028.D Vial: 22
Acq On : 13 Jul 2024 7:57 am Operator: BAM
Sample : WEG0469-11 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 14:08 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10029.D Vial: 23
Acq On : 13 Jul 2024 8:52 am Operator: BAM
Sample : WEG0469-12 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:43:59 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.00	110780217	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.66	101399767	48.834 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	97.67%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	29.00	220669059	181.350 ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

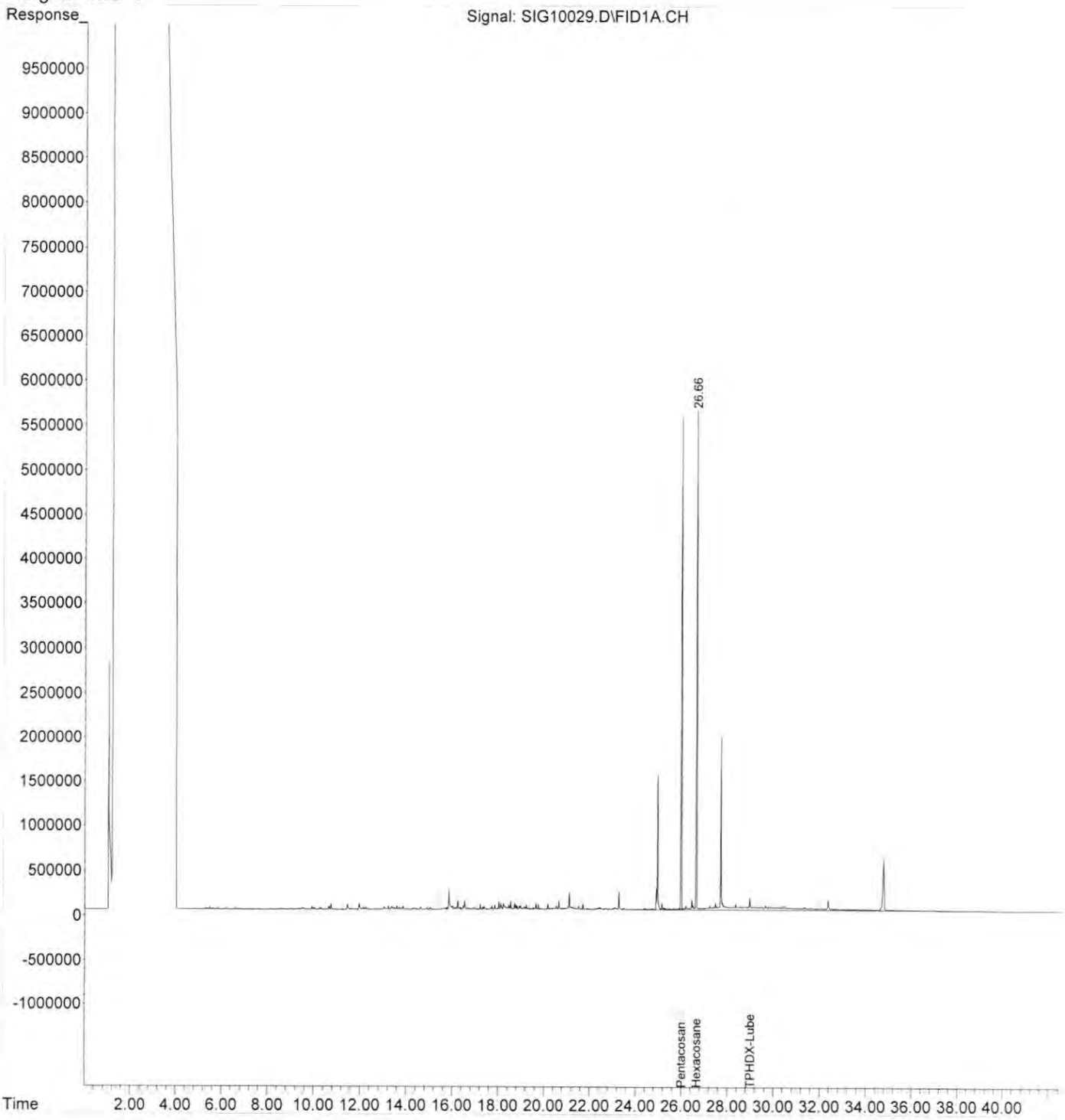
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10029.D Vial: 23
Acq On : 13 Jul 2024 8:52 am Operator: BAM
Sample : WEG0469-12 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 13:52 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10031.D Vial: 1
Acq On : 13 Jul 2024 10:42 am Operator: BAM
Sample : BLK Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:44:02 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	Pentacosane	26.01	145503324	50.000 ppm
	System Monitoring Compounds			
2) S	Hexacosane	26.67	136211389	49.945 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	99.89%
	Target Compounds			
3) H	TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4) H	TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H	Mineral Oil	0.00	0	N.D. ppm
6) h	HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h	HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h	HCID Oil (>C14)	0.00	0	N.D. ppm

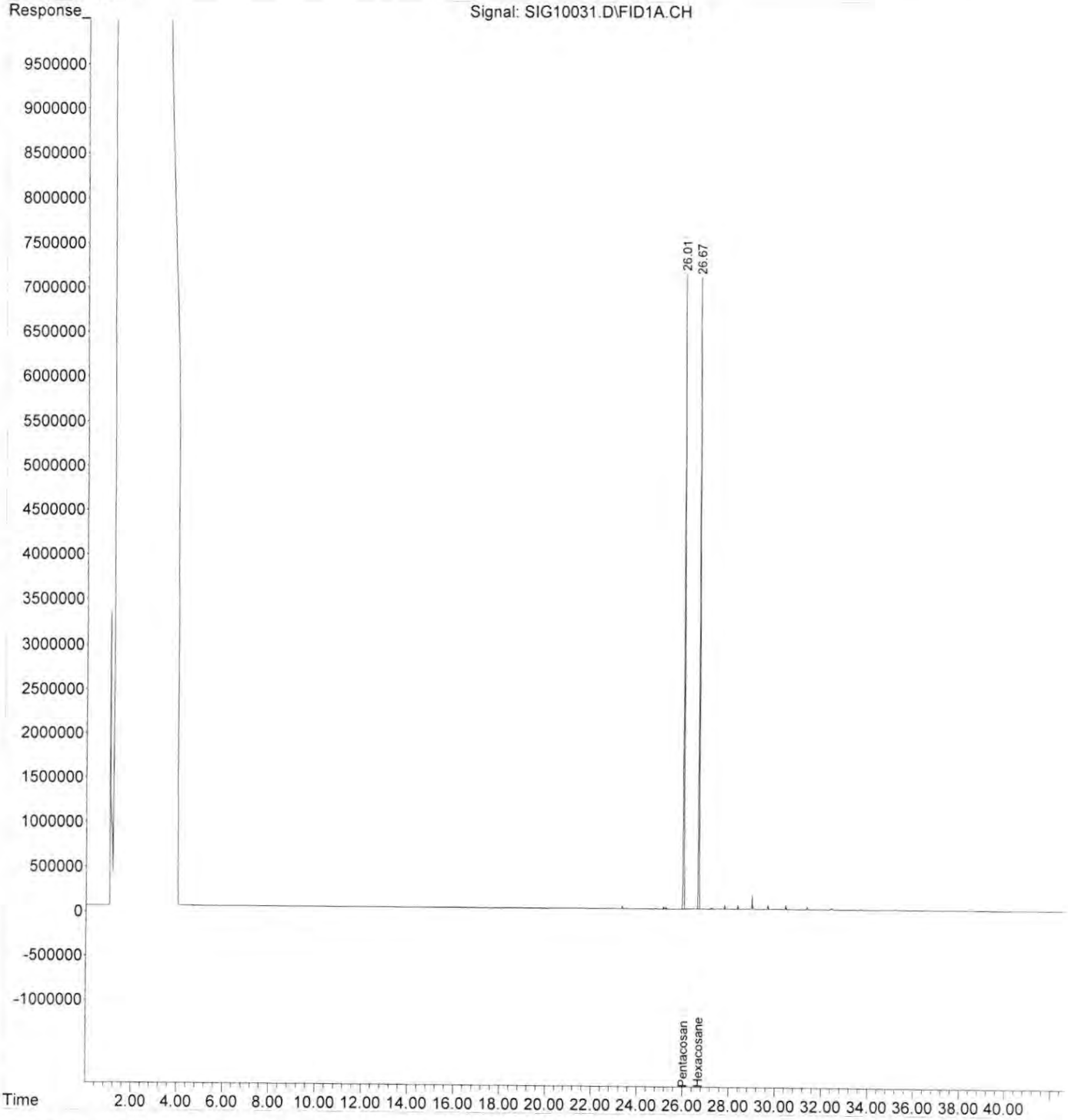
(f) = RT Delta > 1/2 Window (m) = manual int.
SIG10031.D 240709DHT.M Mon Jul 15 16:15:56 2024

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10031.D Vial: 1
Acq On : 13 Jul 2024 10:42 am Operator: BAM
Sample : BLK Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 8:50 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



SIG10031.D 240709DHT.M Mon Jul 15 16:15:57 2024

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10032.D Vial: 2
Acq On : 13 Jul 2024 11:38 am Operator: BAM
Sample : ICV 500PPM Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:44:04 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
Internal Standards			
1) I Pentacosane	26.03	291157542	50.000 ppm
System Monitoring Compounds			
2) S Hexacosane	26.69	268217180	49.148 ppm
Spiked Amount 50.000	Range 50 - 150	Recovery = 98.30%	
Target Compounds			
3) H TPH Diesel (C12-C14)	15.50	2728014584	520.998 ppm
4) H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H Mineral Oil	0.00	0	N.D. ppm
6) h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h HCID Oil (>C14)	0.00	0	N.D. ppm

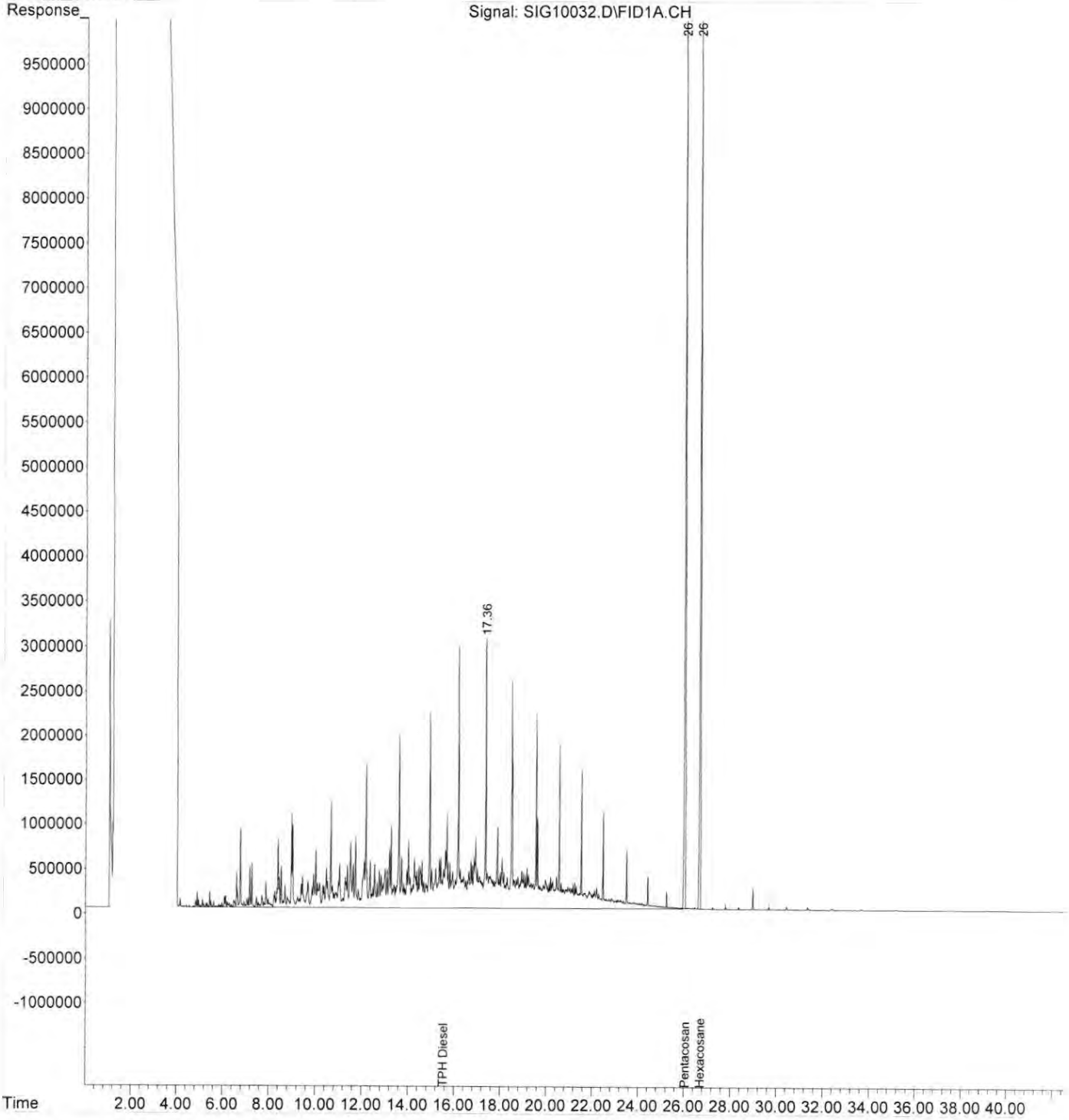
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10032.D Vial: 2
Acq On : 13 Jul 2024 11:38 am Operator: BAM
Sample : ICV 500PPM Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 8:50 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



SIG10032.D 240709DHT.M Mon Jul 15 16:15:58 2024 Page 2

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10033.D Vial: 3
Acq On : 13 Jul 2024 12:34 pm Operator: BAM
Sample : DX 500PPM CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:44:05 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.00	132317501	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.66	124280462	50.111 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.22%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	15.50	1173123659	492.996 ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

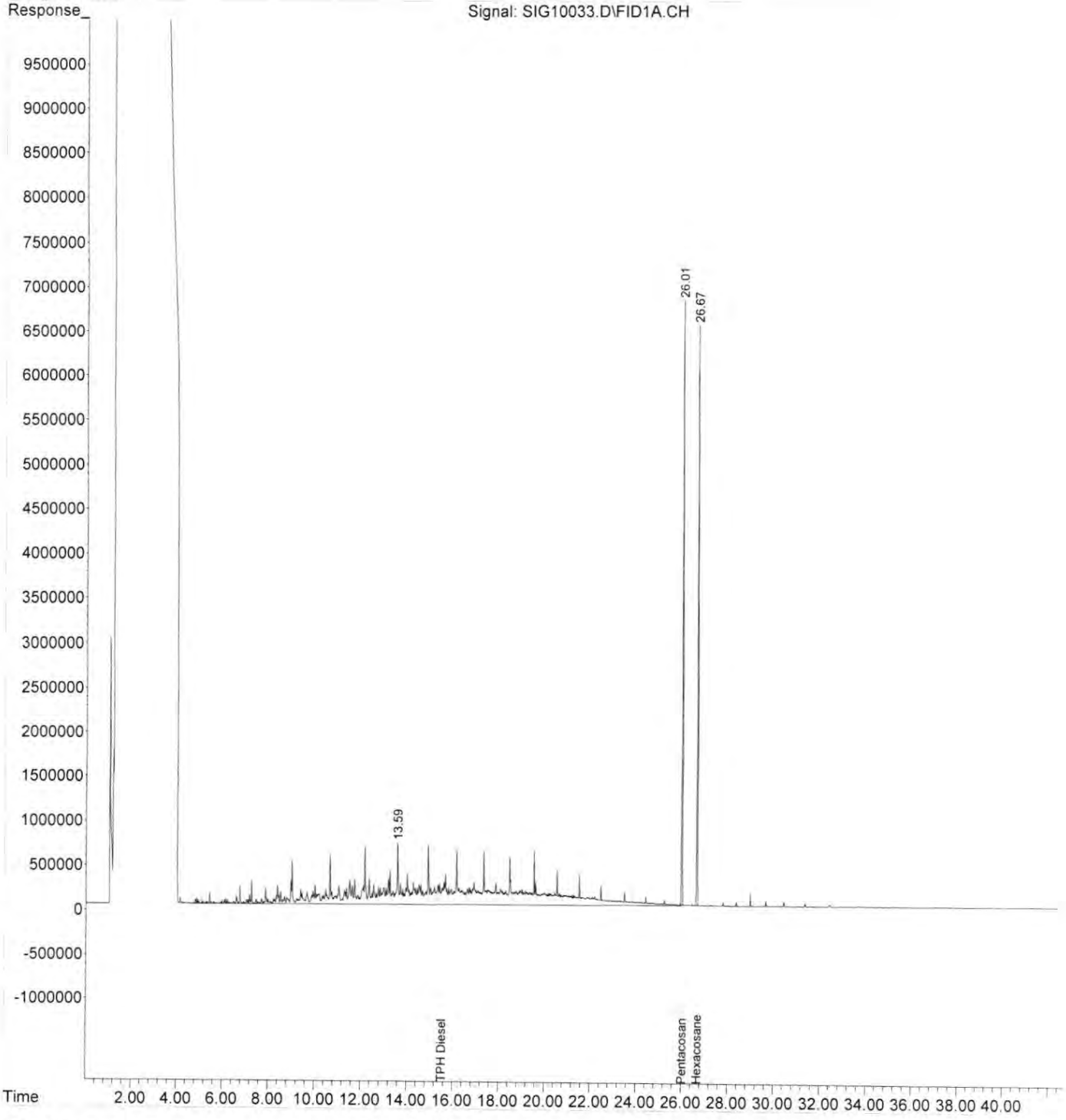
(f) = RT Delta > 1/2 Window (m) = manual int.
SIG10033.D 240709DHT.M Mon Jul 15 16:15:59 2024

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10033.D Vial: 3
Acq On : 13 Jul 2024 12:34 pm Operator: BAM
Sample : DX 500PPM CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 8:50 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10034.D Vial: 4
Acq On : 13 Jul 2024 1:29 pm Operator: BAM
Sample : LO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:44:07 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	0.00	0	N.D. ppm
	System Monitoring Compounds			
2)	S Hexacosane	0.00	0	N.D. ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	0.00%#
	Target Compounds			
3)	H TPH Diesel (C12-C14)	15.50	11338562	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	29.00	15340775	N.D. ppm
5)	H Mineral Oil	20.00	7310041	N.D. ppm
6)	h HCID Gas (C7-C12)	7.00	2176245	N.D. ppm
7)	h HCID Diesel (C12-C14)	15.50	52663945	N.D. ppm
8)	h HCID Oil (>C14)	27.80	12026367	N.D. ppm

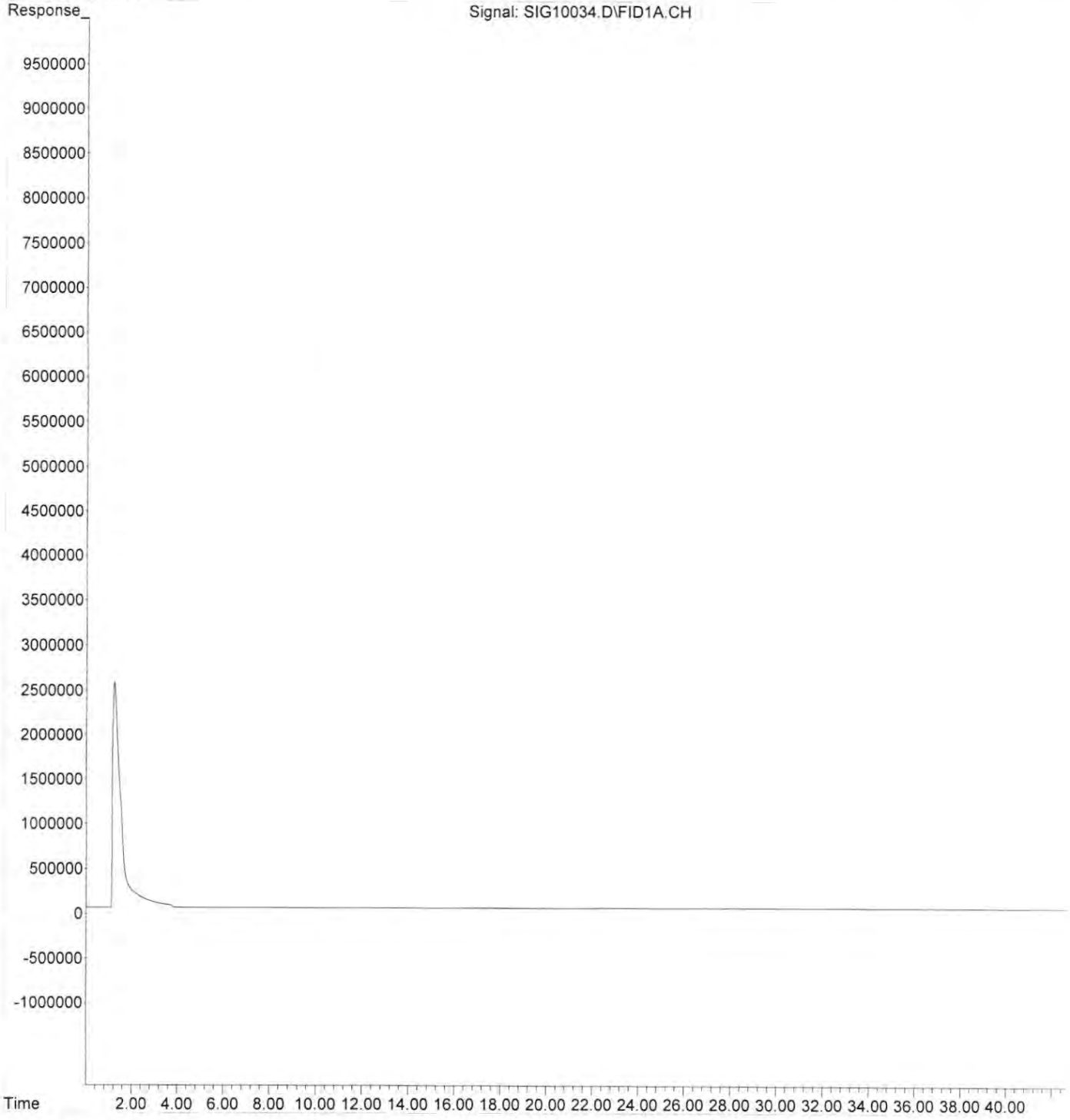
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10034.D Vial: 4
Acq On : 13 Jul 2024 1:29 pm Operator: BAM
Sample : LO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 8:46 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10035.D Vial: 5
Acq On : 13 Jul 2024 2:25 pm Operator: BAM
Sample : MO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:44:09 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.02	197225481	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.68	182533943	49.378 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	98.76%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	20.00	3537190288	964.431 ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

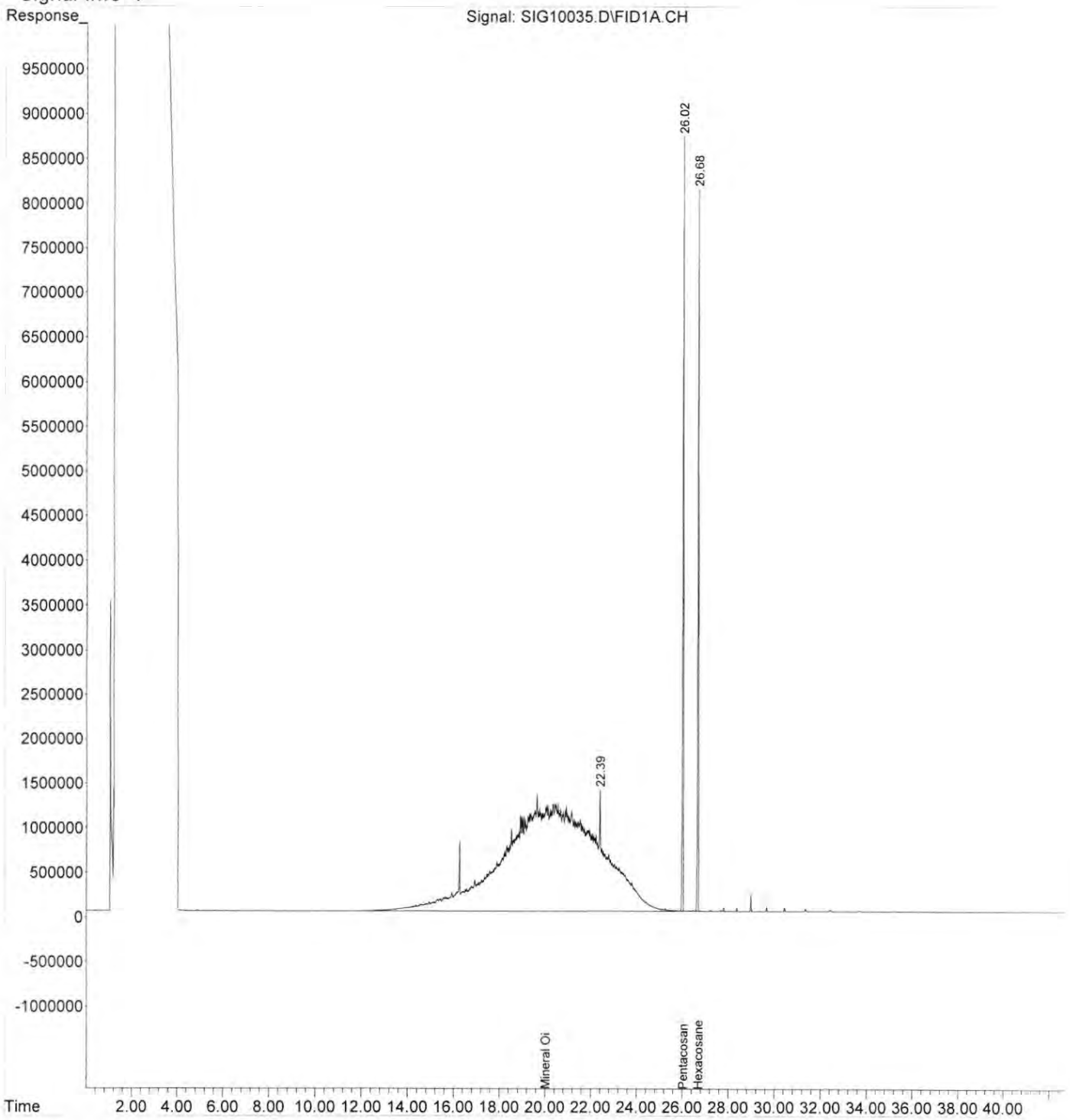
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10035.D Vial: 5
Acq On : 13 Jul 2024 2:25 pm Operator: BAM
Sample : MO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 8:51 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10036.D Vial: 6
Acq On : 13 Jul 2024 3:20 pm Operator: BAM
Sample : GAS 40 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 08:44:10 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	Pentacosane	26.01	143517548	50.000 ppm
	System Monitoring Compounds			
2) S	Hexacosane	26.67	134877699	50.140 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	100.28%
	Target Compounds			
3) H	TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4) H	TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5) H	Mineral Oil	0.00	0	N.D. ppm
6) h	HCID Gas (C7-C12)	7.00	37759843	42.807 ppm
7) h	HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h	HCID Oil (>C14)	0.00	0	N.D. ppm

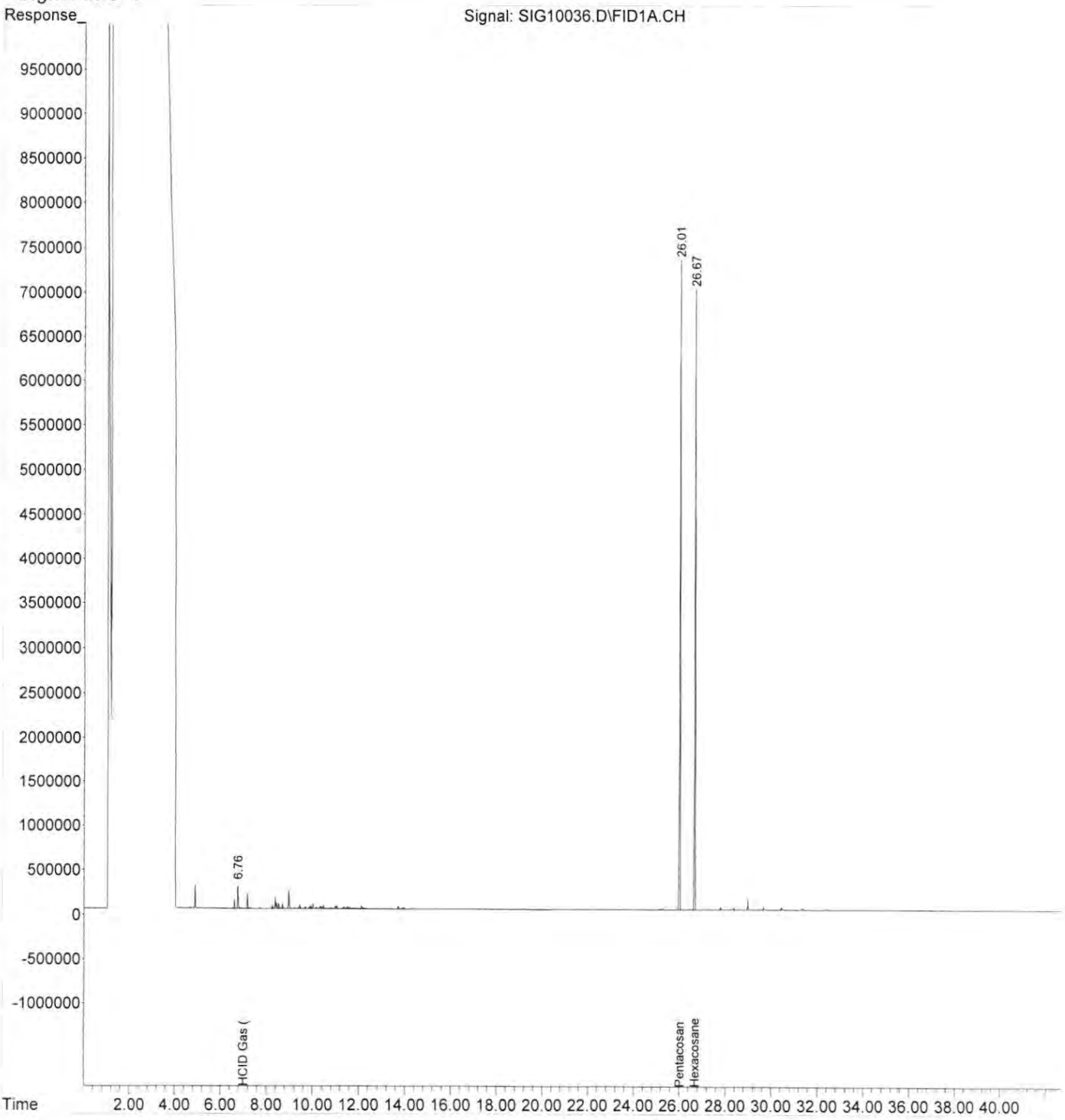
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071224\SIG10036.D Vial: 6
Acq On : 13 Jul 2024 3:20 pm Operator: BAM
Sample : GAS 40 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 8:52 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071524\SIG10001.D Vial: 1
Acq On : 15 Jul 2024 12:15 pm Operator: BAM
Sample : BLK Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 12:58:36 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I Pentacosane	26.00	145309098	50.000 ppm
	System Monitoring Compounds			
2)	S Hexacosane	26.65	124069914	45.554 ppm
Spiked Amount	50.000	Range 50 - 150	Recovery =	91.11%
	Target Compounds			
3)	H TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4)	H TPHDX-Lube Oil (>C14)	0.00	0	N.D. ppm
5)	H Mineral Oil	0.00	0	N.D. ppm
6)	h HCID Gas (C7-C12)	0.00	0	N.D. ppm
7)	h HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8)	h HCID Oil (>C14)	0.00	0	N.D. ppm

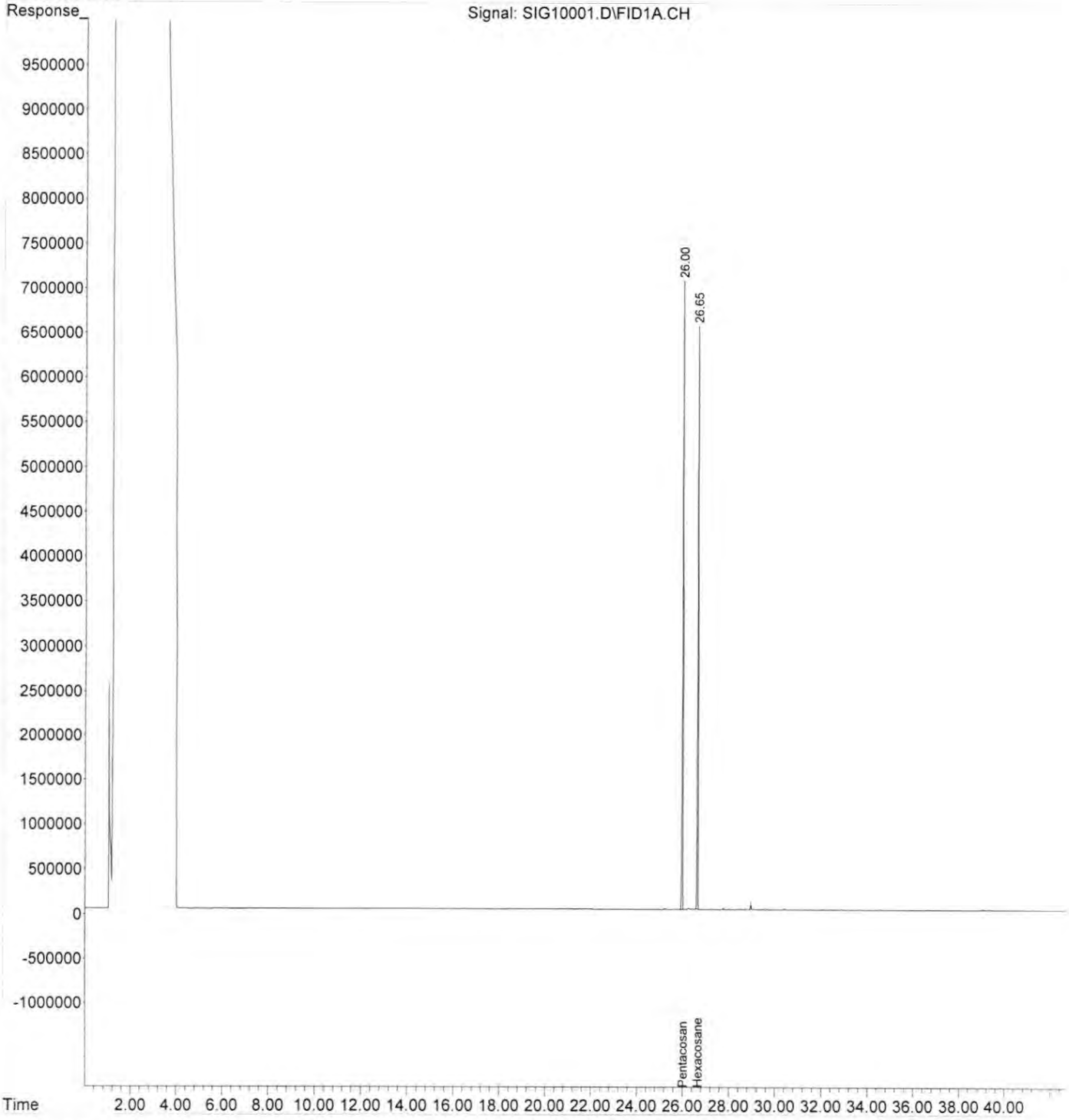
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071524\SIG10001.D Vial: 1
Acq On : 15 Jul 2024 12:15 pm Operator: BAM
Sample : BLK Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 13:01 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071524\SIG10002.D Vial: 2
Acq On : 15 Jul 2024 1:10 pm Operator: BAM
Sample : LO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 13:56:13 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Initial Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	Pentacosane	26.01	142839075	50.000 ppm
	System Monitoring Compounds			
2) S	Hexacosane	26.66	130875057	48.883 ppm m
Spiked Amount	50.000	Range 50 - 150	Recovery =	97.77%
	Target Compounds			
3) H	TPH Diesel (C12-C14)	0.00	0	N.D. ppm
4) H	TPHDX-Lube Oil (>C14)	29.00	1574091467	1003.276 ppm
5) H	Mineral Oil	0.00	0	N.D. ppm
6) h	HCID Gas (C7-C12)	0.00	0	N.D. ppm
7) h	HCID Diesel (C12-C14)	0.00	0	N.D. ppm
8) h	HCID Oil (>C14)	0.00	0	N.D. ppm

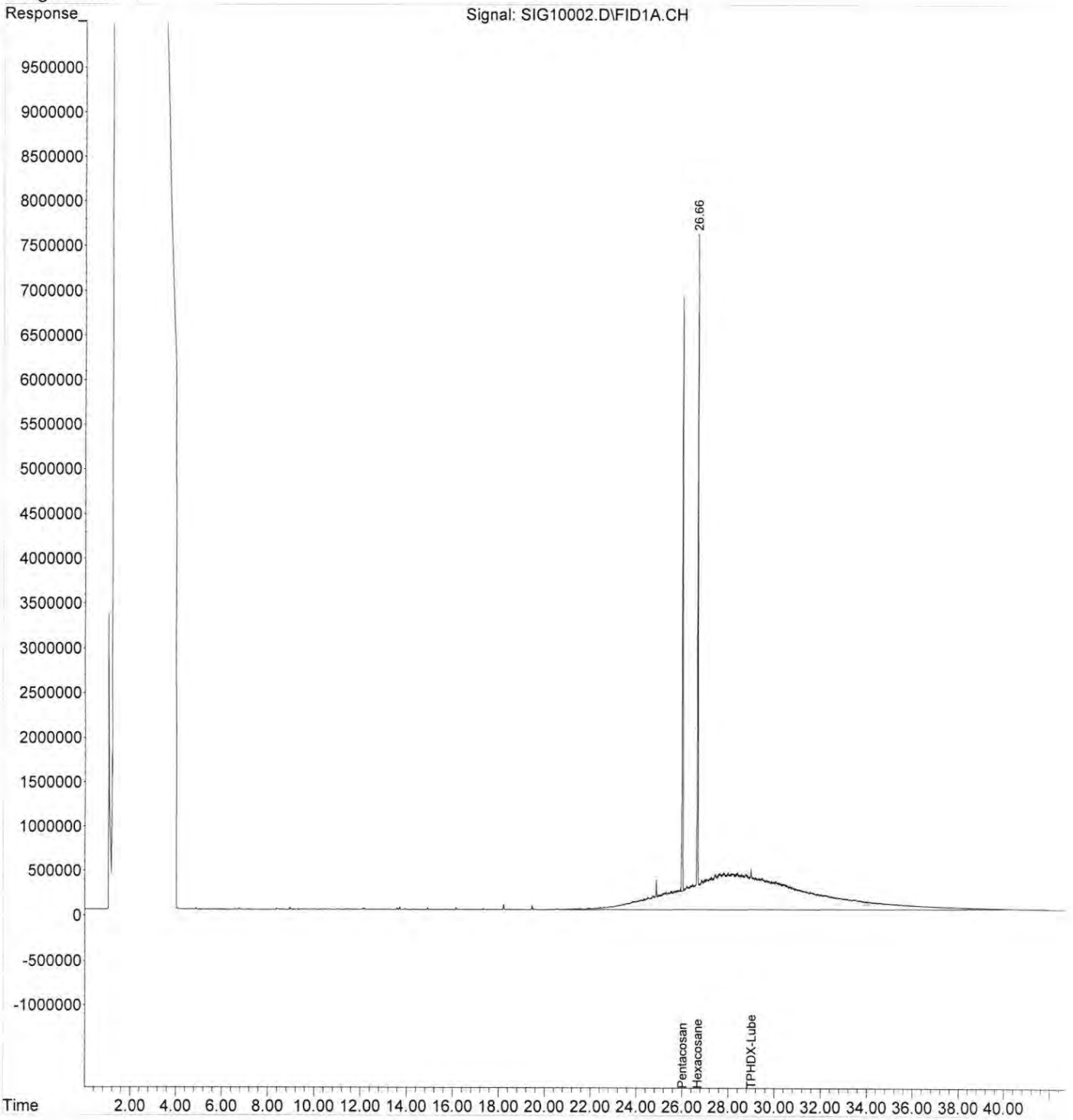
(f) = RT Delta > 1/2 Window (m) = manual int.

Quantitation Report (QT Reviewed)

Data File : Z:\HPCHEM\1\2024DATA\071524\SIG10002.D Vial: 2
Acq On : 15 Jul 2024 1:10 pm Operator: BAM
Sample : LO 1000 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS1.E
Quant Time: Jul 15 13:59 2024 Quant Results File: 240709DHT.RES

Quant Method : Z:\HPCHEM\1\METHODS\240709DHT.M (Chemstation Integrator)
Title :
Last Update : Fri Jul 12 06:42:34 2024
Response via : Multiple Level Calibration
DataAcq Meth : DXHCID7.M

Volume Inj. :
Signal Phase :
Signal Info :



Report Generated By Teledyne CETAC QuickTrace

Analyst: Mercury

Worksheet file: C:\Users\Public\Documents\Teledyne CETAC\QuickTrace\Worksheets\07182024 Hg 245.wszf

Creation Date: 7/18/2024 11:12:08 AM

Comment:

Results

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Residual	Flags	% Recovery
Calibration Blank					STD	07/18/24 12:44:30 pm	0.000	-329	2.46	-52.62		N/A
Replicates	-334.8	-324.6	-319.6	-336.4								
Standard #1 (0.1 ug/L)					STD	07/18/24 12:47:01 pm	0.100	2957	0.62	-5.64		N/A
Replicates	2930.8	2959.1	2970.1	2968.5								
Standard #2 (0.5 ug/L)					STD	07/18/24 12:49:33 pm	0.500	11866	0.63	-7.17		N/A
Replicates	11784.0	11827.7	11898.2	11952.3								
Standard #3 (2.0 ug/L)					STD	07/18/24 12:52:05 pm	2.000	48226	0.50	119.23		N/A
Replicates	47953.3	48129.7	48304.6	48514.7								
Standard #4 (5.0 ug/L)					STD	07/18/24 12:54:37 pm	5.000	111271	0.61	-60.74		N/A
Replicates	110440.0	111080.2	111508.9	112054.9								
Standard #5 (10.0 ug/L)					STD	07/18/24 12:57:10 pm	10.000	224565	0.41	6.94		N/A
Replicates	223521.8	224222.3	224796.0	225720.5								

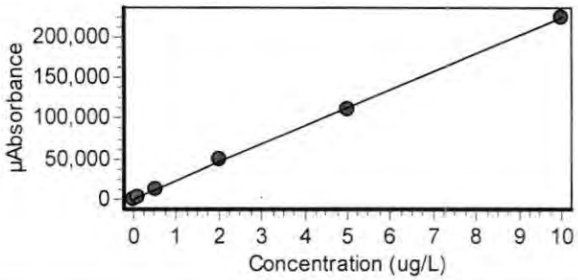
Calibration

Equation: A = 847.618 + 22356.242C

R2: 0.99973

SEE: 1612.3090

Flags:



ICV					ICV	07/18/24 12:59:53 pm	3.800	85737	0.55			94.93
Replicates	85094.4	85714.2	85959.5	86179.2								
CCV (95-105%)					OPR	07/18/24 01:02:25 pm	5.000	112593	0.65			99.97
Replicates	111737.1	112355.8	112836.3	113441.9								
ICV					ICV	07/18/24 01:04:56 pm	4.200	94637	1.01			104.88
Replicates	93547.4	94316.0	94896.4	95787.9								
CCB					CCB	07/18/24 01:07:27 pm	-0.008	659	6.85			N/A
Replicates	661.4	666.9	667.6	640.1								
BLANK					MB	07/18/24 01:09:58 pm	-0.012	580	3.89			N/A
Replicates	574.3	594.9	577.1	572.1								
LCS					LCS	07/18/24 01:12:29 pm	5.140	115768	0.46		L	128.51
Replicates	115070.6	115689.3	116029.2	116281.7								
WEG0203-01					UNK	07/18/24 01:15:01 pm	0.003	915	9.05			N/A
Replicates	912.4	918.6	921.9	908.3								

Sample Name		Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Residual Flags	% Recovery
WEG0469-01		UNK	07/18/24 01:17:32 pm	-0.001	815	33.60		N/A
Replicates	809.0	831.5	809.7	810.7				
MS1		UNK	07/18/24 01:20:04 pm	5.830	131258	2.93		N/A
Replicates	125799.6	131431.4	134069.1	133732.9				
MSD1		UNK	07/18/24 01:22:35 pm	5.440	122563	0.62		N/A
Replicates	121634.0	122330.7	122889.0	123398.2				
WEG0469-02		UNK	07/18/24 01:25:07 pm	-0.033	121	1.69		N/A
Replicates	117.2	127.4	133.2	105.2				
WEG0469-03		UNK	07/18/24 01:27:39 pm	0.003	904	16.82		N/A
Replicates	898.0	905.2	917.4	896.6				
WEG0469-04		UNK	07/18/24 01:30:11 pm	-0.004	752	26.87		N/A
Replicates	750.3	735.0	732.6	788.5				
WEG0469-05		UNK	07/18/24 01:32:44 pm	-0.011	597	1.67		N/A
Replicates	596.1	594.4	594.1	603.1				
MS2		UNK	07/18/24 01:35:16 pm	-0.035	61	19.42		N/A
Replicates	252.7	105.8	-17.7	-97.5				
MSD2		UNK	07/18/24 01:37:47 pm	4.840	109096	0.43		N/A
Replicates	108465.0	109051.8	109332.5	109534.0				
WEG0469-06		UNK	07/18/24 01:40:18 pm	-0.027	249	2.05		N/A
Replicates	240.4	260.7	259.1	237.2				
WEG0469-07		UNK	07/18/24 01:42:49 pm	-0.013	548	2.68		N/A
Replicates	541.7	559.8	547.8	544.1				
WEG0469-08		UNK	07/18/24 01:45:21 pm	-0.010	631	4.57		N/A
Replicates	630.0	643.0	632.1	618.8				
WEG0469-09		UNK	07/18/24 01:47:52 pm	-0.004	767	21.23		N/A
Replicates	768.7	755.9	790.2	752.2				
BLK		UNK	07/18/24 01:50:23 pm	4.710	106062	0.78		N/A
Replicates	104956.8	105950.4	106535.3	106805.8				
MDL 0.1 1		UNK	07/18/24 01:52:54 pm	0.084	2721	0.59		N/A
Replicates	2713.2	2709.8	2733.5	2725.7				
MDL 0.1 2		UNK	07/18/24 01:55:26 pm	0.098	3028	1.08		N/A
Replicates	2994.9	3031.5	3049.1	3038.1				
MDL 0.1 3		UNK	07/18/24 01:57:57 pm	0.109	3290	1.33		N/A
Replicates	3249.2	3280.3	3310.3	3321.6				
WEG0469-10		UNK	07/18/24 02:00:29 pm	0.000	840	102.47		N/A
Replicates	844.2	828.0	842.9	844.4				
WEG0469-11		UNK	07/18/24 02:03:01 pm	-0.019	429	2.15		N/A
Replicates	422.3	420.0	436.1	437.1				
WEG0469-12		UNK	07/18/24 02:05:32 pm	-0.006	712	12.92		N/A
Replicates	719.6	688.1	710.8	729.1				

Sample Name		Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Residual Flags	% Recovery
WEG0509-02		UNK	07/18/24 02:08:05 pm	-0.004	757	20.50		N/A
Replicates	737.6	755.0	754.1	782.3				
WEG0509-04		UNK	07/18/24 02:10:37 pm	-0.005	725	6.05		N/A
Replicates	730.5	728.0	713.8	726.5				
WEG0509-05		UNK	07/18/24 02:13:09 pm	-0.032	136	5.70		N/A
Replicates	97.7	144.1	114.1	190.1				
WEG0509-06		UNK	07/18/24 02:15:41 pm	-0.027	242	5.68		N/A
Replicates	276.9	263.2	223.5	202.7				
WEG0509-07		UNK	07/18/24 02:18:13 pm	-0.009	649	3.19		N/A
Replicates	654.8	649.4	640.0	651.5				
WEG0615-01@10		UNK	07/18/24 02:20:44 pm	1.390	31868	0.25		N/A
Replicates	31753.7	31916.6	31919.1	31883.4				
WEG0615-01		UNK	07/18/24 02:23:15 pm	O/R	285898	0.23	O	N/A
Replicates	284943.8	286063.1	286349.4	286236.4				
BLK		UNK	07/18/24 02:27:50 pm	-0.021	380	2.90		N/A
Replicates	379.9	392.8	387.1	361.6				
LCS		UNK	07/18/24 02:30:22 pm	5.260	118422	0.14		N/A
Replicates	118194.2	118559.2	118542.1	118391.2				
BLANK		UNK	07/18/24 02:45:52 pm	0.002	889	23.45		N/A
Replicates	893.8	874.8	896.3	890.0				
CK		UNK	07/18/24 02:48:24 pm	2.290	51989	0.11		N/A
Replicates	51912.6	51989.5	52024.1	52029.1				
CK		UNK	07/18/24 02:50:56 pm	5.410	121696	0.50		N/A
Replicates	121068.8	121419.2	121832.5	122465.2				
MSDB		UNK	07/18/24 05:06:37 pm	5.120	115421	1.20		N/A
Replicates	113810.4	114919.2	115942.2	117012.2				
WEG0509-05		UNK	07/18/24 05:09:09 pm	-0.006	706	142.94		N/A
Replicates	969.5	745.0	610.6	500.6				
WEG0509-06		UNK	07/18/24 05:11:42 pm	-0.038	8	2.09		N/A
Replicates	-11.5	4.5	31.0	8.0				
BK		UNK	07/18/24 05:14:13 pm	-0.002	811	41.76		N/A
Replicates	801.7	797.9	811.3	832.3				
WEG0509-06		UNK	07/18/24 05:16:45 pm	-0.006	717	6.70		N/A
Replicates	713.5	705.9	726.3	720.4				
CK		UNK	07/18/24 05:19:17 pm	0.519	12451	1.59		N/A
Replicates	12227.1	12392.1	12528.1	12657.6				

Starting sequence Wed Jul 24 16:05:35 2024

Instrument Name: MSD4
Sequence File: T:\Data1\MSD4\SEQUENCES\2024\052424C.s
Comment: CARDNO 625
Operator: MAH
Data Path: T:\DATA1\MSD4\2024\JUL\24C\
Method Path: C:\MSDCHEM\1\METHODS\

Line	Type	Vial	DataFile	Method	Sample Name
1)	Sample	1	00101001	SVOCT1	SYS
2)	Sample	2	00201002	CARDSIM	CARDNO 10 PPM
3)	Sample	3	00301003	CARDSIM	CARDNO 5 PPM
4)	Sample	4	00401004	CARDSIM	CARDNO 2.5 PPM
5)	Sample	5	00501005	CARDSIM	CARDNO 1 PPM
6)	Sample	6	00601006	CARDSIM	CARDNO 0.5 PPM
7)	Sample	7	00701007	CARDSIM	CARDNO 0.1 PPM
8)	Sample	8	00801008	CARDSIM	CARDNO 0.05 PPM
9)	Sample	11	01101009	CARDSIM	BEG1115-MS1
10)	Sample	12	01201010	CARDSIM	BEG1115-MSD1
11)	Sample	13	01301011	CARDSIM	BEG1115-BS1
12)	Sample	14	01401012	CARDSIM	BEG1115-BLK1
13)	Sample	15	01501013	CARDSIM	WEG0469-01
14)	Sample	16	01601014	CARDSIM	WEG0469-04
15)	Sample	17	01701015	CARDSIM	WEG0469-05
16)	Sample	18	01801016	CARDSIM	WEG0469-06

Sequence completed Wed Jul 24 23:26:19 2024

T:\DATA1\MSD4\2024\JUL\24C\2024 Jul 24 1605 Quality Log.LOG
T:\DATA1\MSD4\2024\JUL\24C\2024 Jul 24 1605 Sequence Log .LOG

Anatek Labs, Inc.

Carbno Chly

QC Checklist for EPA 8270/625.1 - SOCs

Analysis Date: 7-24-24

☒	QC Parameter	Acceptance Criteria	Frequency	Notes
✓	DFTPP Tune	See SOP/Method	Every 12 hours	
✓	Sys Check	DDT breakdown <20%	Every 12 hours	
NA	System Performance	Anthracene & phenanthrene baseline separated	Each analysis batch	
NA	System Performance	Benzo[a]anthracene & chrysene valley >75%	Each analysis batch	
NA	System Performance	Benzo(b/k)fluoranthenes - valley >50% of average of both peaks	Each analysis batch	
✓	System Performance	Peak tailing factors for benzidine & PCP <2	Each analysis batch	
✓	Initial Calibration	90% of compounds RRF RSD<20% 8270: True value within 30%		
✓	RF	See table on back of this checklist		Include CCRF report in packet
✓	Internal Standard	±30% of CCV and ±50% of ICAL average	All samples	
✓	Surrogate Recovery	Per control chart	All samples	
✓	ICV/QCS	±30%, 50% at MRL	Each ICAL	
✓	Blanks	No interferences	Each extraction batch	
✓	CCV - 8270	80-120% - 80% of analytes pass	Each analysis batch w/o an ICAL	ICAL
✓	CCV - 625	80-120% - all reported analytes must pass	Each analysis batch w/o an ICAL	↓
✓	MS/MSD or LFB/LFB Dup	Per control chart	Every 20 samples	

✓	Bench Sheet Present	Standards/reagents noted	
✓	Cal Prep Form Present	Standards/reagents noted	
✓	Dilutions Noted?		

Comments:

Analyst: [signature] Checklist Completed Date: 7-25-24

Reviewed By: [signature] *Date:* 7/25/24

Guidance Response Factors – EPA Method 8270E – Table 4			
2,3,4,6-Tetrachlorophenol	0.01	bis(2-Ethylhexyl)phthalate	0.01
2,4,5-Trichlorophenol	0.2	Butyl benzyl phthalate	0.01
2,4,6-Trichlorophenol	0.2	Carbazole	0.01
2,4-Dichlorophenol	0.2	Chrysene	0.7
2,4-Dimethylphenol	0.2	Dibenz[a,h]anthracene	0.4
2,4-Dinitrophenol	0.01	Dibenzofuran	0.8
2,4-Dinitrotoluene	0.2	Diethyl phthalate	0.01
2,6-Dinitrotoluene	0.2	Dimethyl phthalate	0.01
2-Chloronaphthalene	0.8	Di-n-butyl phthalate	0.01
2-Chlorophenol	0.8	Di-n-octyl phthalate	0.01
3,3'-Dichlorobenzidine	0.01	Fluoranthene	0.6
4,6-Dinitro-2-methylphenol	0.01	Fluorene	0.9
4-Bromophenyl-phenylether	0.1	Hexachlorobenzene	0.1
4-Chloro-3-methylphenol	0.2	Hexachlorobutadiene	0.01
4-Chloroaniline	0.01	Hexachlorocyclopentadiene	0.05
4-Chlorophenyl phenyl ether	0.4	Hexachloroethane	0.3
Acenaphthene	0.9	Indeno[1,2,3-cd]pyrene	0.5
Acenaphthylene	0.9	Isophorone	0.4
Aniline	0.7	Naphthalene	0.7
Benzo[a]anthracene	0.8	Nitrobenzene	0.2
Benzo[a]pyrene	0.7	n-Nitroso-di-n-propylamine	0.5
Benzo[b]fluoranthene	0.7	n-Nitrosodiphenylamine	0.01
Benzo[ghi]perylene	0.5	Pentachlorophenol	0.05
Benzo[k]fluoranthene	0.7	Phenanthrene	0.7
bis(2-Chloroethoxy)methane	0.3	Phenol	0.8
bis(2-Chloroethyl)ether	0.7	Pyrene	0.6
bis(2-chloroisopropyl)ether	0.01		

From Method 8270E, 11.3.4.2. *Table 4 contains minimum RFs that may be used as guidance in determining if the system is behaving properly and as a check to see if calibration standards are prepared correctly. Because the minimum RFs in Table 4 were determined using specific ions and instrument conditions that may vary, it is neither expected nor required that all analytes meet these minimum RFs. The information is provided as guidance only.*

Anatek Labs, Inc
1282 Alturas Drive
Moscow, ID 83843

1,4-Dioxane Cal. Standard Prep. Form **Method: EPA 625.1/8270D**

IS/Surrogate Standards

Standard	Reagent ID	Expiration	Concentration (ppm)
CLP B/N Surrogate	2303399	11/24	1000
CLP Internal Standard	2400200	1/25	2000

Target Compound Standards

Standard	Reagent ID	Expiration	Concentration (ppm)
Chlorpyrifos	2302538	5/26	1000
Metolachlor	2302539	12/27	1000
Atrazine	2302537	10/27	1000

Calibration Dilution Template

Desired Concentration (ppm)	Stock Concentration (ppm) **	uL Standard Added	Final Volume (uL)
10	100	100	1000
5	100	50	1000
2.5	100	25	1000
1.0	100	10	1000
0.5	100	5	1000
0.1	100	1	1000
0.05	100	0.5	1000

Calibration made from target compound standards in the table. 25 uL of surrogate and 10 uL of IS stock added to each standard point. Dilutions were made in $MeCl_2$ (2301678).

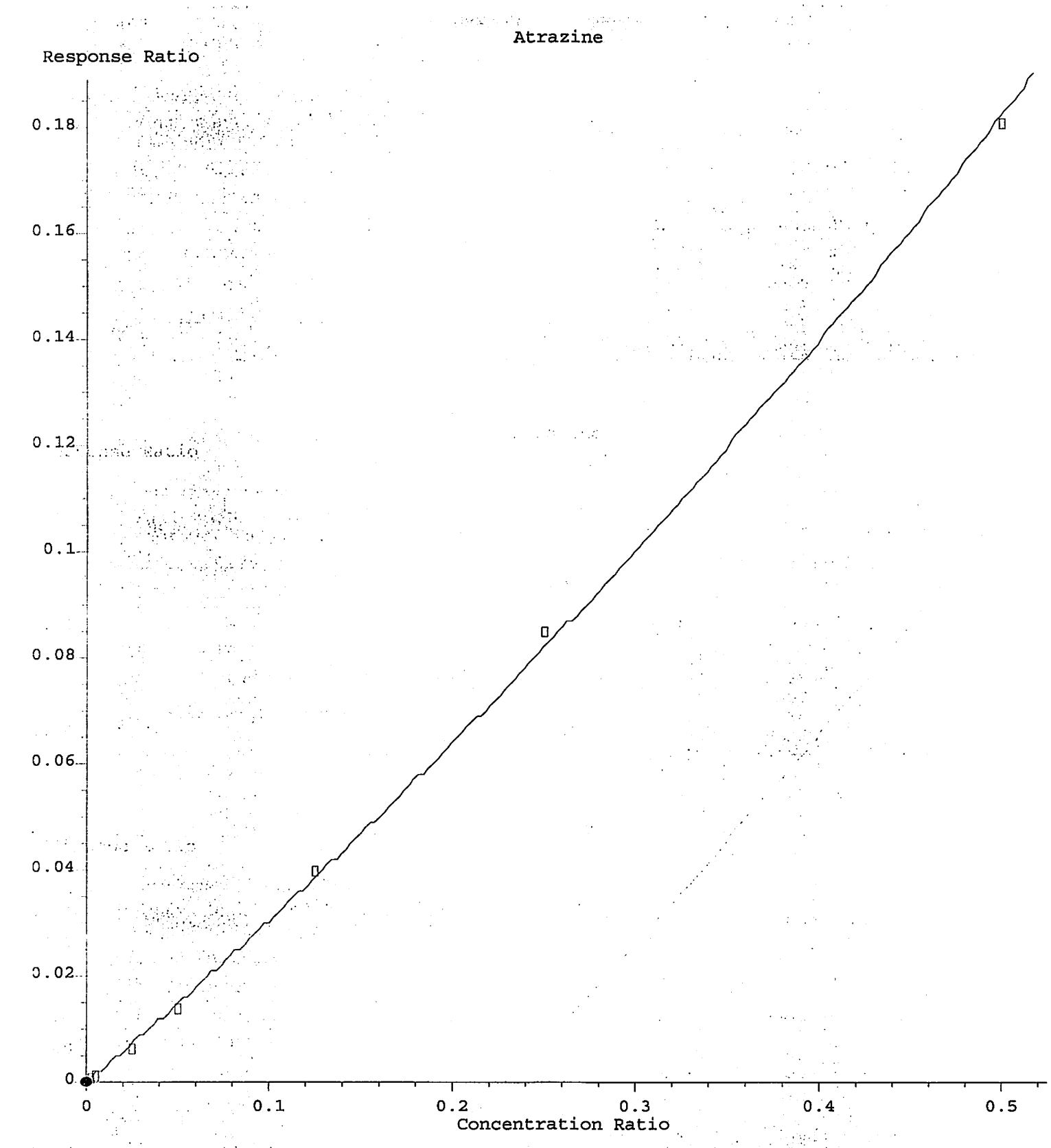
Analyst Initials: MAH Date of Preparation: 2/1/24

Method Path : T:\Data1\MSD4\METHODS\2024\
Method File : TESTCD.M
Title : EPA 8270D - GC MSD4
Last Update : Thu Jul 25 13:58:49 2024
Response Via : Initial Calibration

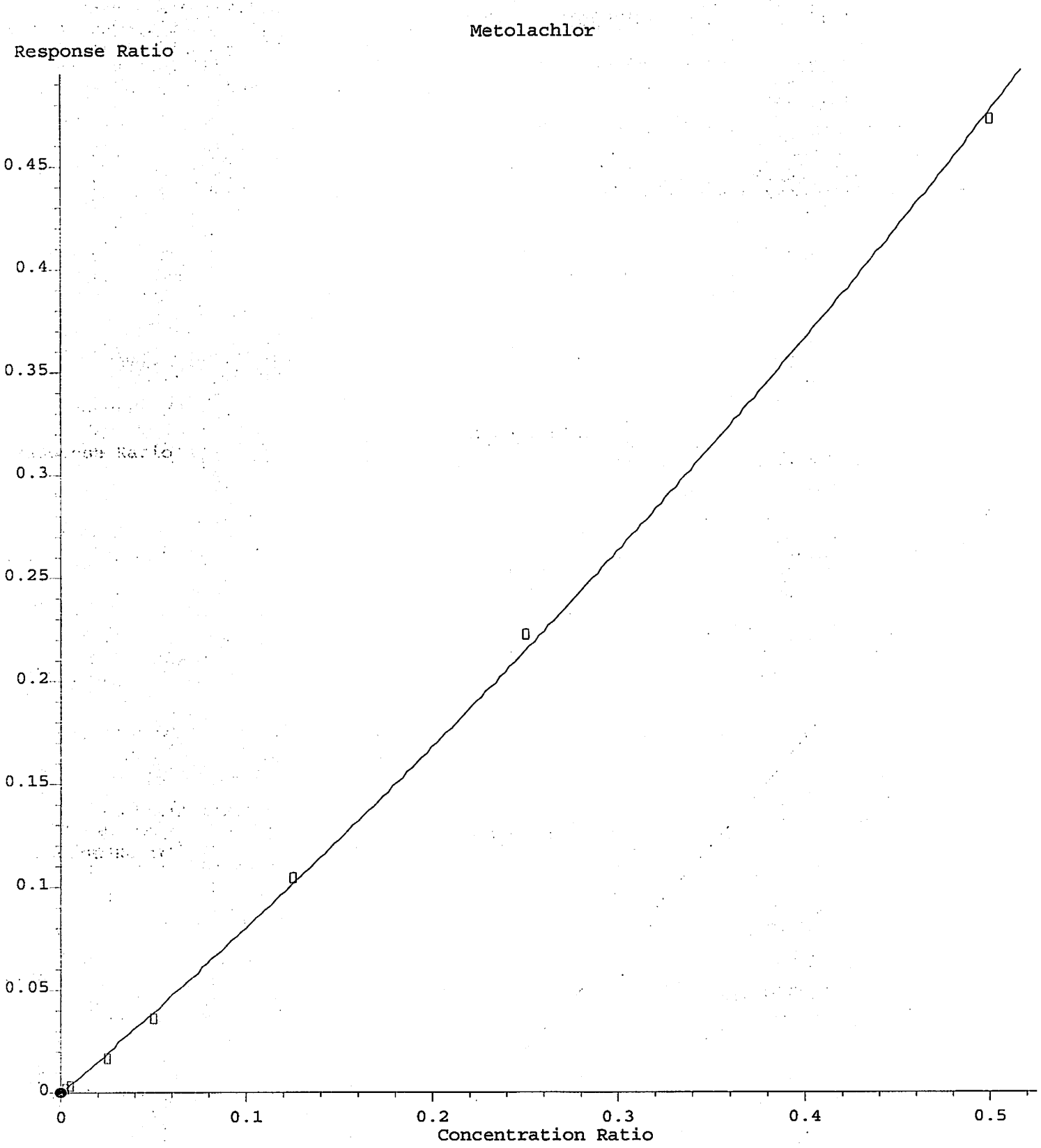
Calibration Files
0.05=00801008.D 10 =00201002.D 5 =00301003.D 2.5 =00401004.D 1 =00501005.D 0.5 =00601006.D 0.1 =00701007.D

		Compound	0.05	10	5	2.5	1	0.5	0.1	Avg	%RSD
1)	I	Acenaphthene-d10	----------ISTD----------								
2)		Atrazine	0.264	0.361	0.340	0.318	0.276	0.253	0.235	0.292	16.26
3)		Metolachlor	0.697	0.944	0.891	0.835	0.725	0.676	0.643	0.773	15.09
4)		Chlorpyrifos	0.158	0.199	0.183	0.178	0.159	0.148	0.145	0.167	11.80
5)	I	Chrysene-d12	----------ISTD----------								
6)	S	Terphenyl-d14	1.076	1.209	1.259	1.161	1.124	1.200	1.144	1.168	5.17
7)		Permerthins	2.146	0.694	0.599	0.500	0.466	0.438	0.409	0.750	83.09

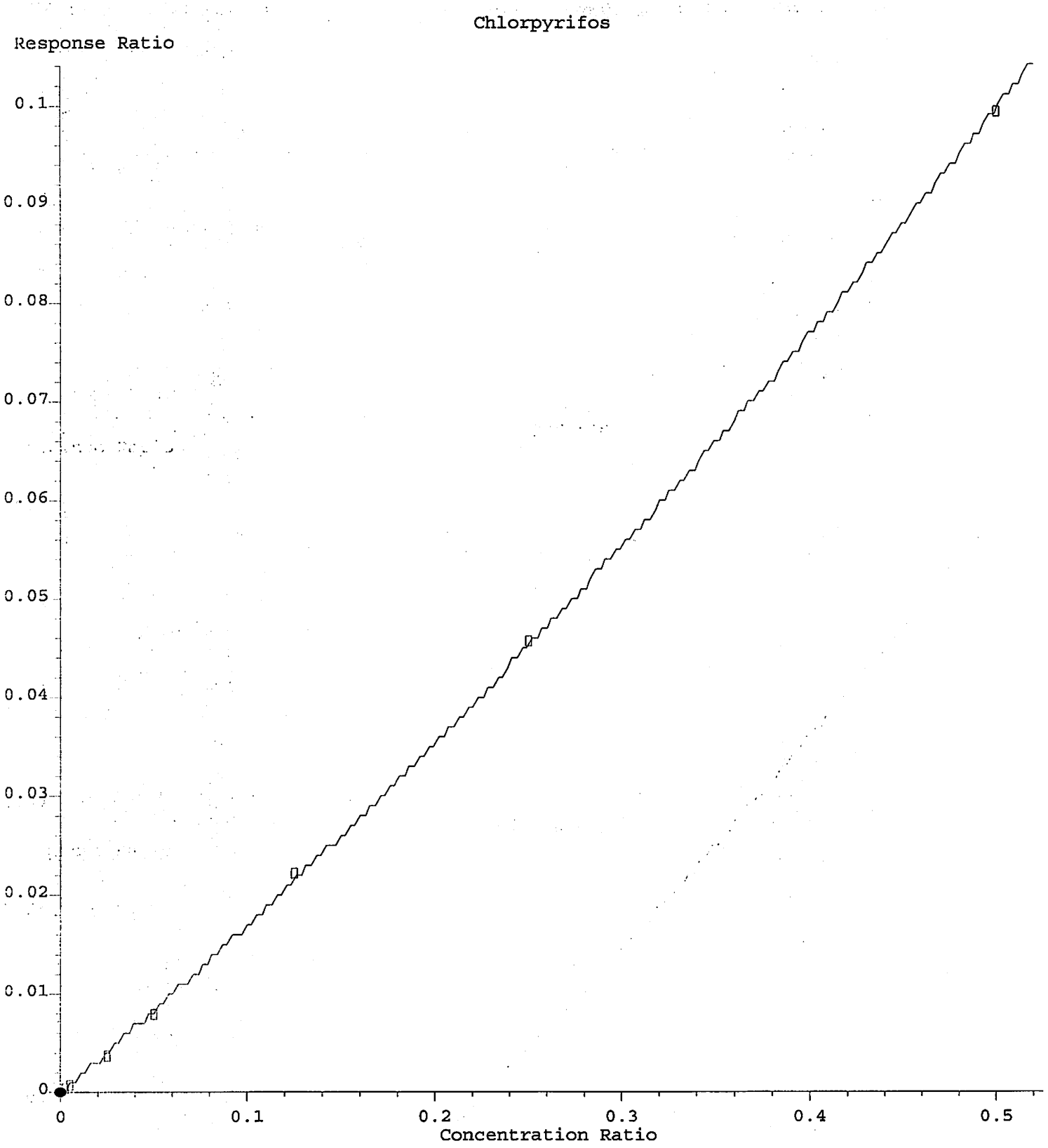
(#) = Out of Range



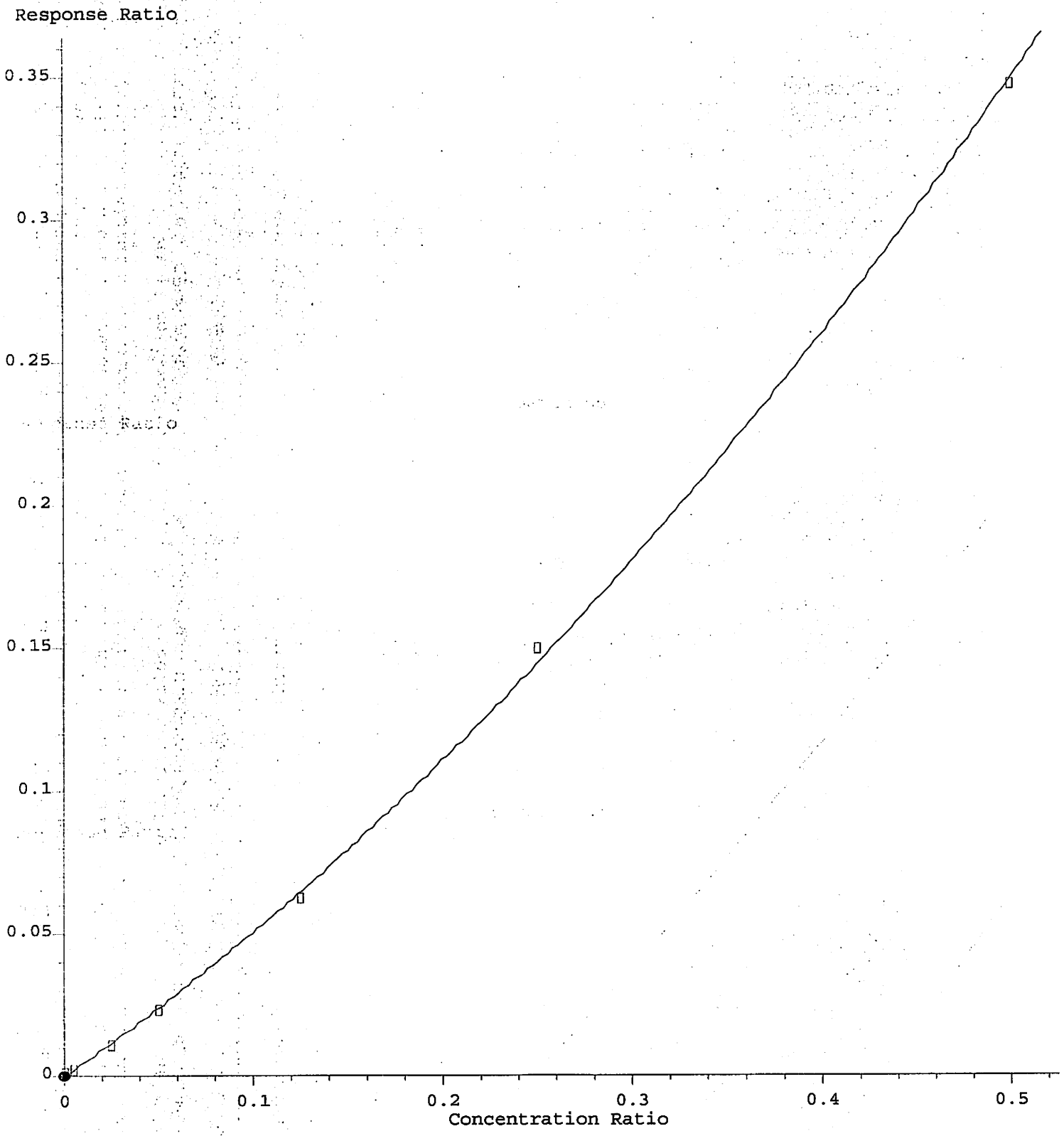
R = 1.47e-001 A*A + 2.91e-001 A + 0.00e+000
Coef of Det (r^2) = 0.999 Curve Fit: Quad w(1/a)/(0,0)
Method Name: T:\Data1\MSD4\METHODS\2024\TESTCD.M
Calibration Table Last Updated: Thu Jul 25 13:58:49 2024



R = 3.71e-001 A*A + 7.67e-001 A + 0.00e+000
Coef of Det (r^2) = 0.999 Curve Fit: Quad w(1/a)/(0,0)
Method Name: T:\Data1\MSD4\METHODS\2024\TESTCD.M
Calibration Table Last Updated: Thu Jul 25 13:58:49 2024



R = 7.37e-002 A*A + 1.62e-001 A + 0.00e+000
Coef of Det (r^2) = 1.000 Curve Fit: Quad w(1/a)/(0,0)
Method Name: T:\Data1\MSD4\METHODS\2024\TESTCD.M
Calibration Table Last Updated: Thu Jul 25 13:58:49 2024



R = 4.80e-001 A*A + 4.58e-001 A + 0.00e+000
Coef of Det (r^2) = 0.999 Curve Fit: Quad w(1/a)/(0,0)
Method Name: T:\Data1\MSD4\METHODS\2024\TESTCD.M
Calibration Table Last Updated: Thu Jul 25 13:58:49 2024

PREPARATION BENCH SHEET
Organics

BEG1115

Matrix: Water **Prepared using: SVOC - SVOC Water**

Analyses	Spiking Solution(s)	Surrogate Solution(s)
SVOC 625 MISC	2400673 Cardno Spk 100	2303399 CLP B/N 1000 2400924 CLP Acid Surr 2000

Analysis	Lab Number	Sample and Source ID	Date Due	Extract by	Prepared - By	Initial (mL)	Final (mL)	ul Spike	ul Surrogate	Extraction Comments
QC	BEG1115-BLK1	Blank			7/15/24 7:11 MAH	1000	1		25	
QC	BEG1115-BS1	LCS			7/15/24 7:11 MAH	1000	1	50	25	
QC	BEG1115-MS1	Matrix Spike [WEG0469-05]			7/15/24 7:11 MAH	500	1	50	25	
QC	BEG1115-MSD1	Matrix Spike Dup [WEG0469-05]			7/15/24 7:11 MAH	500	1	50	25	
SVOC 625 MISC	WEG0469-01	WW-3	07/22/2024	07/15/2024	7/15/24 6:11 MAH	1001	1		25	
SVOC 625 MISC	WEG0469-04	E-2	07/22/2024	07/15/2024	7/15/24 6:11 MAH	999	1		25	
SVOC 625 MISC	WEG0469-05	E-1	07/22/2024	07/15/2024	7/15/24 6:11 MAH	1063	1		25	
SVOC 625 MISC	WEG0469-06	E-1 Dup	07/22/2024	07/15/2024	7/15/24 6:11 MAH	1007	1		25	

Reagents

Standard	Description	LotNum
2000154	Acetone - GC grade	59074
2303363	Sulfuric Acid	80621
2400200	CLP I.S. Spike 2000	061422
2401071	Dichloromethane	64047

Batch Comments:
Acidic start/stop time: 3PM- 8AM
Basic start/stop tiime: 8AM-3PM
Instrument: 7890/5975 GCMS
Ext. Method: 3520C liq-liq
TurboVap: 01
Balance: 04

MM 7-24-24

Analyst: Date Run Date: Date

DFTPP

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 00101001.D
Acq On : 24 Jul 2024 4:08 pm
Operator : MAH
Sample : SYS
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e

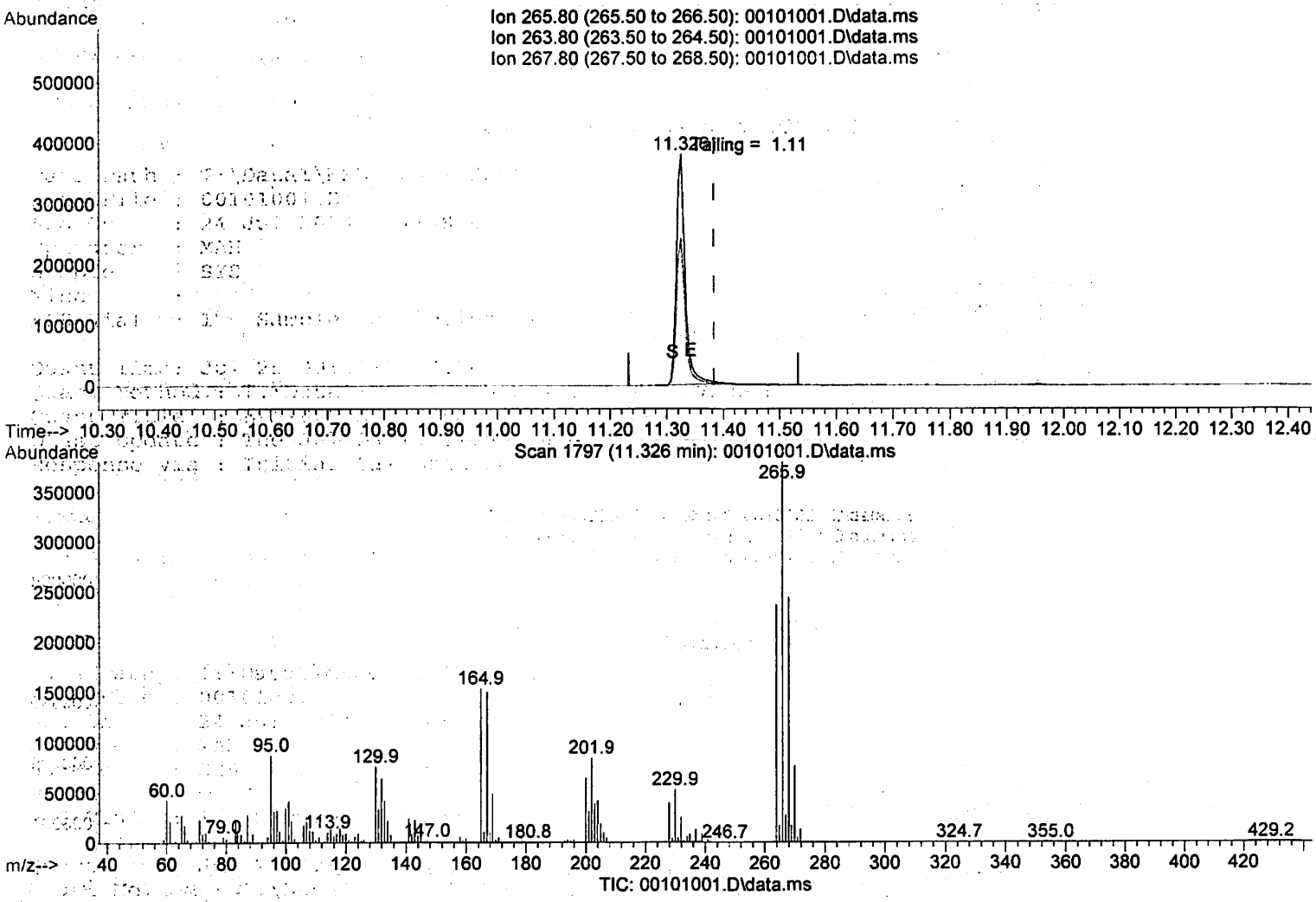
Method : T:\Data1\MSD4\METHODS\2024\Cardo-0724.M
Title : EPA 8270D - GC MSD4
Last Update : Wed Jul 24 15:48:38 2024

AutoFind: Scans 1933, 1934, 1935; Background Corrected with Scan 1923

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	35.4	250488	PASS
68	69	0.00	2	1.5	4007	PASS
69	198	0.00	100	38.1	270028	PASS
70	69	0.00	2	0.5	1229	PASS
127	198	25	75	50.7	359291	PASS
197	198	0.00	1	0.4	3171	PASS
198	198	100	100	100.0	708523	PASS
199	198	5	9	6.7	47637	PASS
275	198	10	60	28.5	202083	PASS
365	198	0.00	100	3.9	27435	PASS
441	443	0.01	100	75.8	108699	PASS
442	198	39	200	104.2	738133	PASS
443	442	15	24	19.4	143339	PASS

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 00101001.D
Acq On : 24 Jul 2024 4:08 pm
Operator : MAH
Sample : SYS
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 25 09:11:01 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\BNA-0722S.M
Quant Title : EPA 8270D / EPA 625.1 - MSD4
QLast Update : Tue Jul 23 10:01:59 2024
Response via : Initial Calibration



(68) Pentachlorophenol

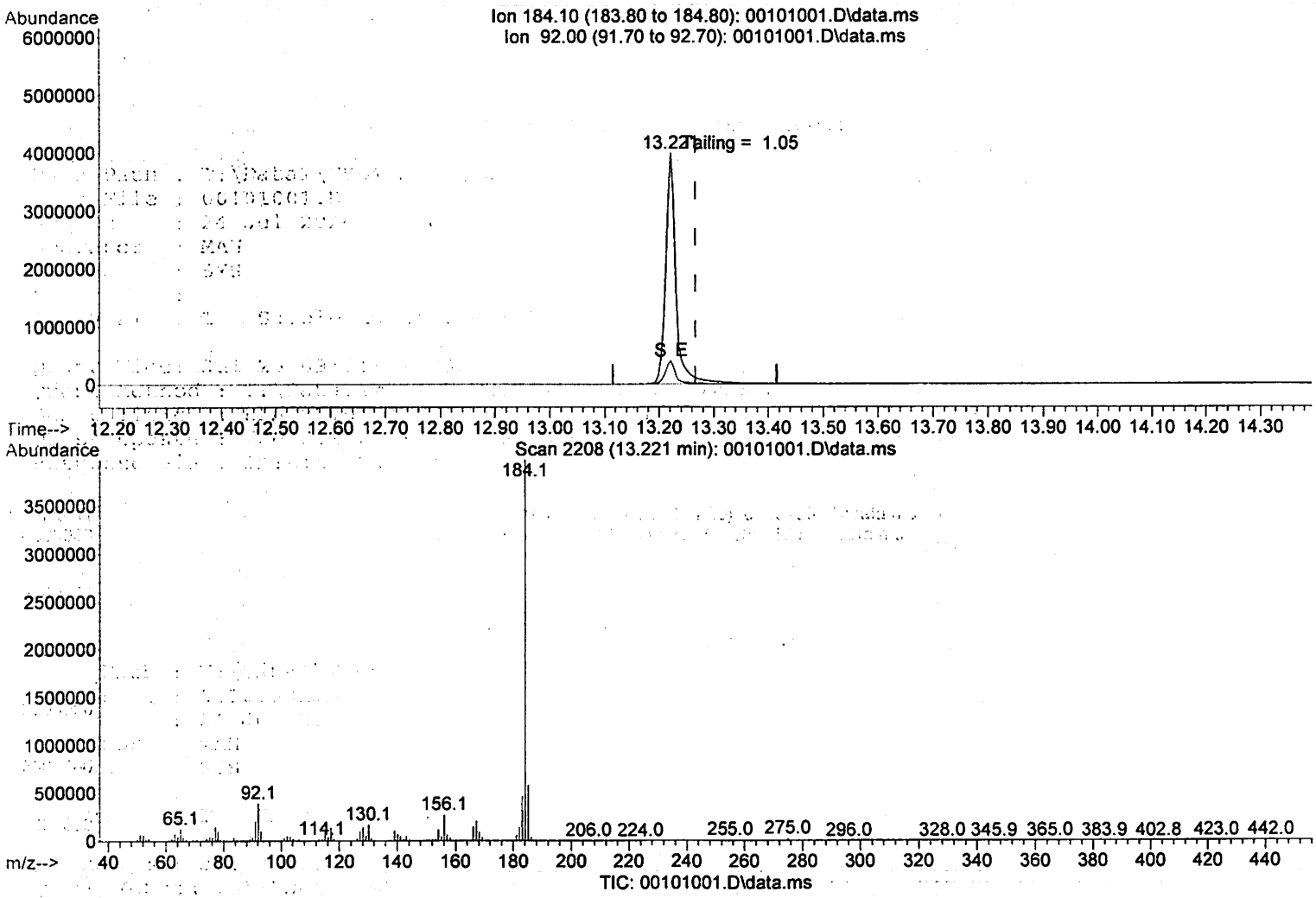
11.326min (-0.057) 0.00 ug/mL

response 4170394

Ion	Exp%	Act%
265.80	100.00	100.00
263.80	62.60	62.75
267.80	63.30	63.54
0.00	0.00	0.00

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 00101001.D
Acq On : 24 Jul 2024 4:08 pm
Operator : MAH
Sample : SYS
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 25 09:11:01 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\BNA-0722S.M
Quant Title : EPA 8270D / EPA 625.1 - MSD4
QLast Update : Tue Jul 23 10:01:59 2024
Response via : Initial Calibration



(74) Benzidine

13.223min (-0.043) 0.00 ug/mL

response 51050063

Ion	Exp%	Act%
184.10	100.00	100.00
92.00	8.80	10.03
0.00	0.00	0.00
0.00	0.00	0.00

Area Percent Report

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 00101001.D
Acq On : 24 Jul 2024 4:08 pm
Operator : MAH
Sample : SYS
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration Parameters: autoint1.e
Integrator: ChemStation

Method : T:\Data1\MSD4\METHODS\2024\BNA-0722S.M
Title : EPA 8270D / EPA 625.1 - MSD4

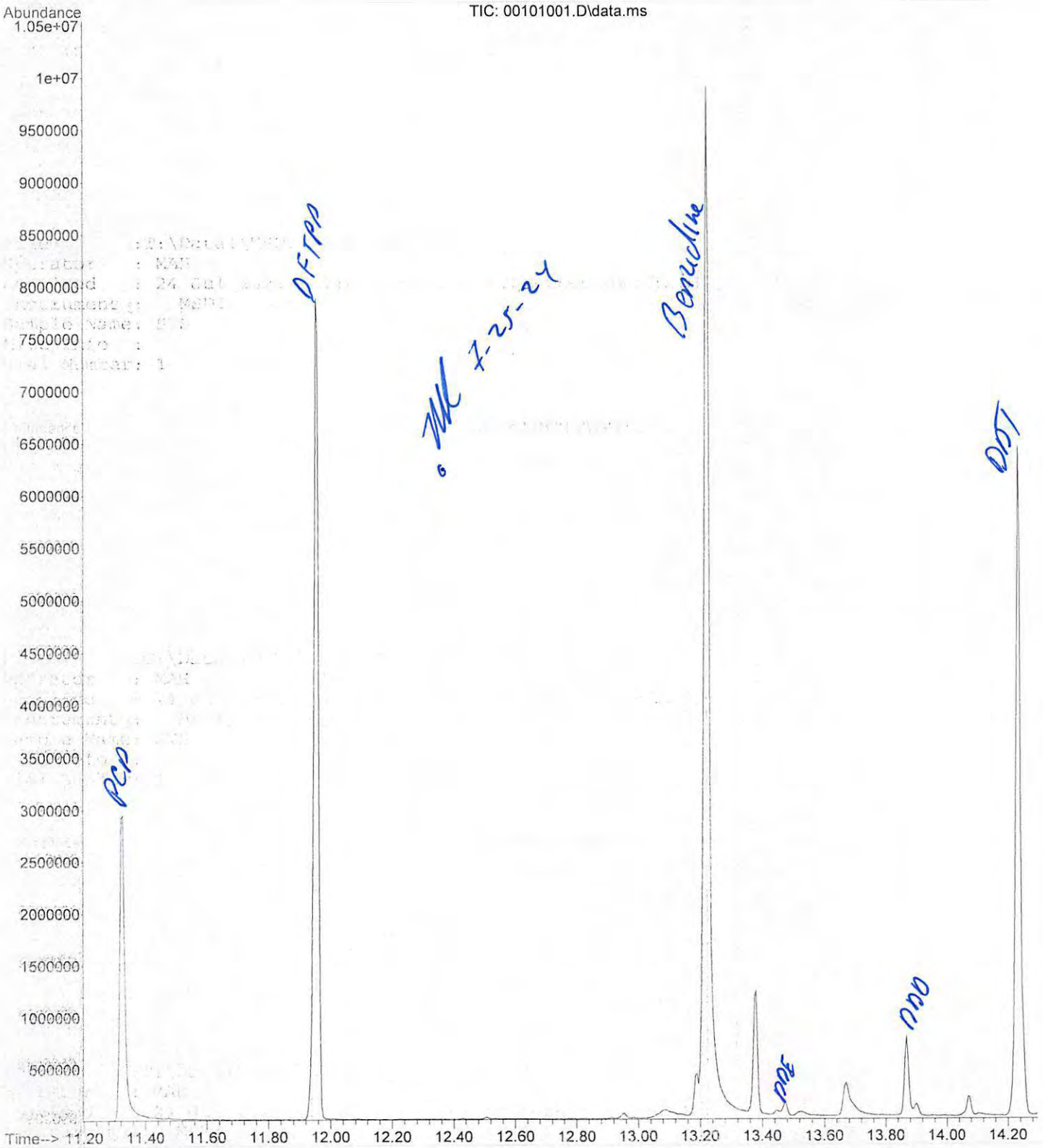
Signal : TIC: 00101001.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total	
1	13.446	2252	2257	2259	M	39537	323875	0.47%	0.424%	DDE
2	13.867	2344	2348	2352	M	732684	6565618	9.44%	8.586%	DDD
3	14.232	2418	2427	2438	M	6476937	69579589	100.00%	90.990%	DDT

Sum of corrected areas: 76469081

BNA-0722S.M Thu Jul 25 09:48:18 2024

File :T:\Data1\MSD4\2024\JUL\24C\00101001.D
Operator : MAH
Acquired : 24 Jul 2024 4:08 pm using AcqMethod SVOCT1.M
Instrument : MSD4
Sample Name: SYS
Misc Info :
Vial Number: 1



Internal Standard ICal Average Responses	CARDNO 72424 (method)

	1,4 Dichlorobenzene-d4	Naphthalene-d8	Acenaphthene-d10	Phenanthrene-d10	Chrysene-d12	Perylene-d12
0.05			71714021.39		52641982.42	
10			65946006.83		45517422.72	
5			70773628.49		45626215.8	
2.5			70046981.97		54408120.66	
1			67738482.41		49637612.19	
0.5			64297657.42		46057087.56	
0.1			60935741.3		41981568.42	
Average	#DIV/0!	#DIV/0!	67350360	#DIV/0!	47981430	#DIV/0!

50%	#DIV/0!	#DIV/0!	33675180	#DIV/0!	23990715	#DIV/0!
150%	#DIV/0!	#DIV/0!	101025540	#DIV/0!	71972145	#DIV/0!

Analyst: MAH

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 00201002.D
Acq On : 24 Jul 2024 4:37 pm
Operator : MAH
Sample : CARDNO 10 PPM
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 25 14:26:43 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.740	164	65936542	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.783	240	45535488	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.528	244	69095265	25.99	ug/mL	0.00
Spiked Amount 25.000			Recovery =	103.96%		
Target Compounds						Qvalue
2) Atrazine	11.246	200	11908056	9.93	ug/mL	98
3) Metolachlor	12.429	162	31176039	9.94	ug/mL	98
4) Chlorpyrifos	12.438	197	6547451	9.97	ug/mL	96
7) Permerthins	15.606	183	16023081m	10.06	ug/mL	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 00301003.D
Acq On : 24 Jul 2024 5:05 pm
Operator : MAH
Sample : CARDNO 5 PPM
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 25 14:27:51 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.741	164	70773628	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.783	240	45626216	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.529	244	71778082	26.95	ug/mL	0.00
Spiked Amount 25.000			Recovery =	107.80%		
Target Compounds						Qvalue
2) Atrazine	11.245	200	6012276	5.17	ug/mL	98
3) Metolachlor	12.428	162	15756023	5.16	ug/mL	100
4) Chlorpyrifos	12.438	197	3234535	5.05	ug/mL	100
7) Permerthins	15.600	183	6960614m	5.23	ug/mL	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 00401004.D
Acq On : 24 Jul 2024 5:33 pm
Operator : MAH
Sample : CARDNO 2.5 PPM
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 25 14:28:24 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.740	164	70046982	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.784	240	54408121	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.530	244	78986539	24.87	ug/mL	0.00
Spiked Amount 25.000			Recovery = 99.48%			
Target Compounds						Qvalue
2) Atrazine	11.242	200	2786321	2.57	ug/mL	98
3) Metolachlor	12.428	162	7314684	2.56	ug/mL	99
4) Chlorpyrifos	12.437	197	1555499	2.58	ug/mL	99
7) Permerthins	15.605	183	3479785m	2.47	ug/mL	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 00501005.D
Acq On : 24 Jul 2024 6:02 pm
Operator : MAH
Sample : CARDNO 1 PPM
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 25 14:29:09 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.741	164	67738482	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.783	240	49637612	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.527	244	69766923	24.08	ug/mL	0.00
Spiked Amount 25.000			Recovery =	96.32%		
Target Compounds						Qvalue
2) Atrazine	11.241	200	935045	0.93	ug/mL	98
3) Metolachlor	12.427	162	2453855	0.92	ug/mL	100
4) Chlorpyrifos	12.438	197	537186	0.96	ug/mL	98
7) Permerthins	15.600	183	1196207m	1.00	ug/mL	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 00601006.D
Acq On : 24 Jul 2024 6:30 pm
Operator : MAH
Sample : CARDNO 0.5 PPM
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 25 14:30:38 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.740	164	64297657	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.782	240	46057088	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.527	244	69067824	25.69	ug/mL	0.00
Spiked Amount 25.000			Recovery =	102.76%		
Target Compounds						Qvalue
2) Atrazine	11.235	200	426298m	0.45	ug/mL	
3) Metolachlor	12.428	162	1087137	0.44	ug/mL	99
4) Chlorpyrifos	12.436	197	238687	0.45	ug/mL	100
7) Permerthins	15.600	183	504429m	0.47	ug/mL	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 00701007.D
Acq On : 24 Jul 2024 6:58 pm
Operator : MAH
Sample : CARDNO 0.1 PPM
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 25 14:31:54 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.740	164	60935741	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.782	240	41981568	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.526	244	60045263	24.50	ug/mL	0.00
Spiked Amount 25.000			Recovery = 98.00%			
Target Compounds						Qvalue
2) Atrazine	11.244	200	79326m	0.09	ug/mL	
3) Metolachlor	12.427	162	200945m	0.09	ug/mL	
4) Chlorpyrifos	12.437	197	44250	0.09	ug/mL	94
7) Permerthins	15.600	183	85078m	0.09	ug/mL	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 01101009.D
Acq On : 24 Jul 2024 7:53 pm
Operator : MAH
Sample : BEG1115-MS1
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 25 14:05:57 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.739	164	61179784	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.782	240	45185742	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.526	244	68303668	25.89	ug/mL	0.00
Spiked Amount 25.000			Recovery =	103.56%		
Target Compounds						Qvalue
2) Atrazine	11.245	200	5045215	5.03	ug/mL	98
3) Metolachlor	12.427	162	15888526	5.92	ug/mL	99
4) Chlorpyrifos	12.436	197	3113518	5.56	ug/mL	99
7) Permerthins	15.600	183	7813463m	5.79	ug/mL	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 01201010.D
Acq On : 24 Jul 2024 8:21 pm
Operator : MAH
Sample : BEG1115-MSD1
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 25 14:07:09 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.740	164	63269104	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.782	240	46792177	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.526	244	72080893	26.39	ug/mL	0.00
Spiked Amount 25.000			Recovery =	105.56%		
Target Compounds						Qvalue
2) Atrazine	11.245	200	5360790	5.15	ug/mL	98
3) Metolachlor	12.427	162	16597790m	5.98	ug/mL	
4) Chlorpyrifos	12.437	197	3332941	5.74	ug/mL	98
7) Permerthins	15.600	183	8045133m	5.76	ug/mL	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 01301011.D
Acq On : 24 Jul 2024 8:49 pm
Operator : MAH
Sample : BEG1115-BS1
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 25 14:08:17 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.739	164	63442468	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.782	240	47590870	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.527	244	73592038	26.49	ug/mL	0.00
Spiked Amount 25.000			Recovery =	105.96%		
Target Compounds						Qvalue
2) Atrazine	11.245	200	5276546	5.07	ug/mL	97
3) Metolachlor	12.428	162	16675104	5.99	ug/mL	99
4) Chlorpyrifos	12.437	197	3318037	5.70	ug/mL	96
7) Permerthins	15.600	183	8203471m	5.78	ug/mL	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 01401012.D
Acq On : 24 Jul 2024 9:16 pm
Operator : MAH
Sample : BEG1115-BLK1
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 25 14:09:14 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.740	164	76603233	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.785	240	65176479	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.529	244	77164635	20.28	ug/mL	0.00
Spiked Amount 25.000			Recovery =	81.12%		
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 01501013.D
Acq On : 24 Jul 2024 9:43 pm
Operator : MAH
Sample : WEG0469-01
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 25 14:10:08 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.739	164	49254738	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.780	240	38002713	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.525	244	57322592	25.84	ug/mL	0.00
Spiked Amount 25.000			Recovery = 103.36%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 01601014.D
Acq On : 24 Jul 2024 10:11 pm
Operator : MAH
Sample : WEG0469-04
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 25 14:11:01 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.738	164	59243779	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.783	240	45323539	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.528	244	68523295	25.90	ug/mL	0.00
Spiked Amount 25.000			Recovery = 103.60%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 01701015.D
Acq On : 24 Jul 2024 10:38 pm
Operator : MAH
Sample : WEG0469-05
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 25 14:11:41 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.739	164	64504305	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.782	240	45985827	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.527	244	75422727	28.09	ug/mL	0.00
Spiked Amount 25.000			Recovery = 112.36%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : T:\Data1\MSD4\2024\JUL\24C\
Data File : 01801016.D
Acq On : 24 Jul 2024 11:05 pm
Operator : MAH
Sample : WEG0469-06
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 25 14:23:56 2024
Quant Method : T:\Data1\MSD4\METHODS\2024\TESTCD.M
Quant Title : EPA 8270D - GC MSD4
QLast Update : Thu Jul 25 13:58:49 2024
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Acenaphthene-d10	9.738	164	54385753	20.00	ug/mL	# 0.00
5) Chrysene-d12	14.781	240	42781600	20.00	ug/mL	0.00
System Monitoring Compounds						
6) Terphenyl-d14	13.526	244	63780097	25.54	ug/mL	0.00
Spiked Amount 25.000			Recovery = 102.16%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

PREPARATION BENCH SHEET
Metals

BEG0543

Matrix: Water **Prepared using: Metals - W 3010 Digest**

Lab Number	Prepared - By	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	Comments
BEG0543-BLK1	07/12/24 16:08 - JLG	50	50				
BEG0543-BS1	07/12/24 16:08 - JLG	50	50	2301403		250	
BEG0543-CCV1	07/12/24 16:08 - JLG	50	50	2300159		250	
BEG0543-MS1	07/12/24 16:08 - JLG	50	50	2301403	WEG0469-05	250	
BEG0543-MS2	07/12/24 16:08 - JLG	50	50	2301403	WEG0469-12	250	
BEG0543-MSD1	07/12/24 16:08 - JLG	50	50	2301403	WEG0469-05	250	
BEG0543-MSD2	07/12/24 16:08 - JLG	50	50	2301403	WEG0469-12	250	
WEG0469-01 Analytes: Arsenic	07/12/24 16:08 - JLG	50	50	Client: Stantec-GS			
WEG0469-02 Analytes: Arsenic	07/12/24 16:08 - JLG	50	50	Client: Stantec-GS			
WEG0469-03 Analytes: Arsenic	07/12/24 16:08 - JLG	50	50	Client: Stantec-GS			
WEG0469-04 Analytes: Arsenic	07/12/24 16:08 - JLG	50	50	Client: Stantec-GS			
WEG0469-05 Analytes: Arsenic	07/12/24 16:08 - JLG	50	50	Client: Stantec-GS			
WEG0469-06 Analytes: Arsenic	07/12/24 16:08 - JLG	50	50	Client: Stantec-GS			
WEG0469-07 Analytes: Arsenic	07/12/24 16:08 - JLG	50	50	Client: Stantec-GS			
WEG0469-08 Analytes: Arsenic	07/12/24 16:08 - JLG	50	50	Client: Stantec-GS			
WEG0469-09 Analytes: Arsenic	07/12/24 16:08 - JLG	50	50	Client: Stantec-GS			

Batch Prepared By _____ Date _____ Analytical Run Date _____

PREPARATION BENCH SHEET
Metals

BEG0543

(Continued)

Matrix: Water **Prepared using: Metals - W 3010 Digest**

Lab Number	Prepared - By	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	Comments
WEG0469-10 Analytes: Arsenic	07/12/24 16:08 - JLG	50	50	Client: Stantec-GS			
WEG0469-11 Analytes: Arsenic	07/12/24 16:08 - JLG	50	50	Client: Stantec-GS			
WEG0469-12 Analytes: Arsenic	07/12/24 16:08 - JLG	50	50	Client: Stantec-GS			

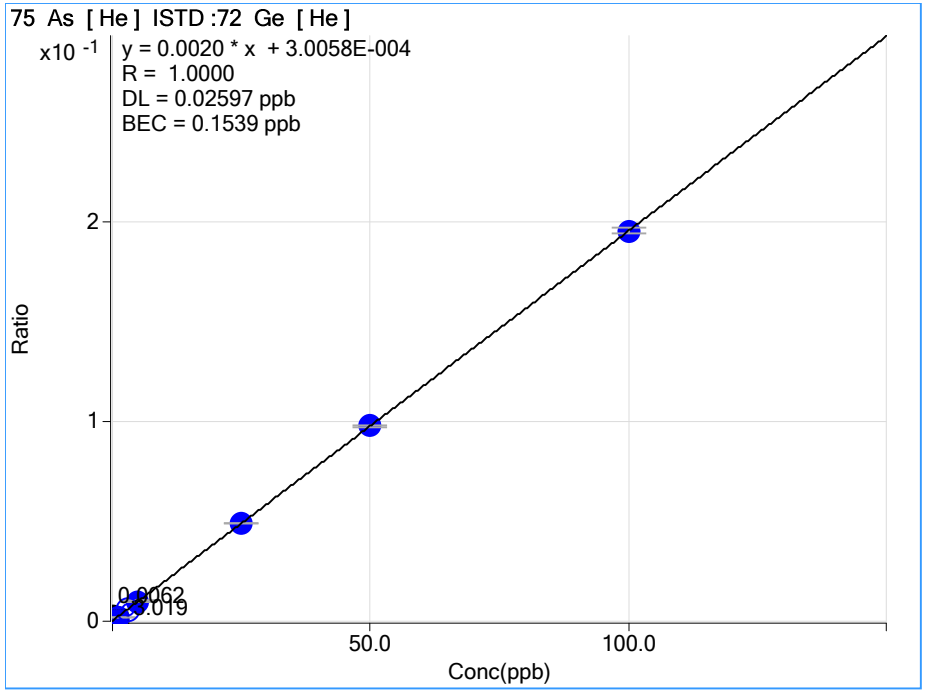
Support Equipment: W PT-04 W PT-33 W PT-21, W PT-27

Batch Comments: SAMPLE 6 WAS RAN MUTILAL TIME OVER TWO CALIBRATIONS AND ALWAYS TANKED THE INTERNAL STANDARD.

Reagent ID	Description	LotNum
2303351	P. Metals Digestion Vials	102623
2400754	Metals UHP Helium	155-402885127-1
2401119	Nitric Acid	63117
2401836	C. Internal Standard Mix	-
2402274	C. 10 ppb Tune Solution	-
2402280	P. 1:1 HCl-metals	59072

Batch Prepared By _____ Date _____

Analytical Run Date _____


75 As [He] ISTD :72 Ge [He]
x10 -1
y = 0.0020 * x + 3.0058E-004
R = 1.0000
DL = 0.02597 ppb
BEC = 0.1539 ppb
Ratio
2
1
0
50.0
100.0
Conc(ppb)

Sample Report

Sample Name	BEG0543-BS1
File Name	041_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 17:11:26
Sample Type	LCS
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	033_CCB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Fail
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	56.077	He	56.077	72	0.9	50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	1313187.87	2.2	64.8	2025953.75
Ge	72	He	385071.09	1.2	65.3	589823.706666667
Ge	72	HEHe	152283.56	0.5	64.5	236265.4
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	BEG0543-BLK1
File Name	040_Blk.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 17:09:07
Sample Type	Blank
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	033_CCB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	0.289	He	0.289	72	2.7	0.06	>DL*2.2

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	1329916.25	3.7	65.6	2025953.75
Ge	72	He	395594.07	1.2	67.1	589823.706666667
Ge	72	HEHe	156999.55	1.5	66.5	236265.4
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	WEG0469-06
File Name	039SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 17:06:46
Sample Type	Sample
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	033_CCB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Fail
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	2.270	He	2.27	72	2.1	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	1113425.71	3.2	55.0	2025953.75
Ge	72	He	345914.54	2.3	58.6	589823.706666667
Ge	72	HEHe	141300.84	2.7	59.8	236265.4
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	BEG0543-MSD1
File Name	038LFMD.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 17:04:28
Sample Type	LFMDup
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	033_CCB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Fail
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	53.496	He	53.496	72	4.6	20	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	1080499.56	6.3	53.3	2025953.75
Ge	72	He	369156.95	3.5	62.6	589823.706666667
Ge	72	HEHe	147180.97	0.3	62.3	236265.4
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	BEG0543-MS1
File Name	037_LFM.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 17:02:09
Sample Type	LFM
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	033_CCB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Fail
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	62.284	He	62.284	72	1.4	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	1116943.46	1.0	55.1	2025953.75
Ge	72	He	376260.65	2.7	63.8	589823.706666667
Ge	72	HEHe	146894.83	0.5	62.2	236265.4
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	WEG0469-05
File Name	036_ARF.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:59:49
Sample Type	AllRef
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	033_CCB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Fail
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	2.233	He	2.233	72	2.9	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	1257104.54	7.7	62.1	2025953.75
Ge	72	He	389412.85	2.0	66.0	589823.706666667
Ge	72	HEHe	136679.79	1.3	57.9	236265.4
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	WEG0469-03
File Name	035SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:57:30
Sample Type	Sample
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	033_CCB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Fail
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	3.019	He	3.019	72	2.5	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	1247668.96	2.6	61.6	2025953.75
Ge	72	He	382120.51	1.2	64.8	589823.706666667
Ge	72	HEHe	156826.78	1.8	66.4	236265.4
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	Rinse
File Name	034_RIN.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:55:12
Sample Type	RINSE
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	033_CCB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	2088266.67	1.6	103.1	2025953.75
Ge	72	He	596290.65	0.8	101.1	589823.706666667
Ge	72	HEHe	233524.94	0.8	98.8	236265.4
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	CCB
File Name	033_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:52:51
Sample Type	CalBlk
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	033_CCB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	<0.000	He	-0.008	72	10.5	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	2025953.75	4.2	100.0	2025953.75
Ge	72	He	589823.71	1.2	100.0	589823.706666667
Ge	72	HEHe	236265.40	0.8	100.0	236265.4
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	CCB
File Name	032_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:50:33
Sample Type	CalBlk
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas				2374575.58333333
Ge	72	He				694144.433333333
Ge	72	HEHe				275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	CCV
File Name	031_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:48:15
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	50.296	He	50.296	72	0.7	50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	2108770.46	3.7	88.8	2374575.58333333
Ge	72	He	587638.92	1.8	84.7	694144.433333333
Ge	72	HEHe	230989.48	0.7	83.7	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	Rinse
File Name	030_RIN.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:45:55
Sample Type	RINSE
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	2088494.83	6.1	88.0	2374575.58333333
Ge	72	He	577346.50	1.2	83.2	694144.433333333
Ge	72	HEHe	225342.70	1.3	81.7	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	BEG0543-MSD2
File Name	029LFMD.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:43:37
Sample Type	LFMDup
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	48.870	He	48.87	72	0.3	20	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	2082395.92	2.6	87.7	2374575.58333333
Ge	72	He	556408.33	1.7	80.2	694144.433333333
Ge	72	HEHe	222935.96	1.7	80.8	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	BEG0543-MS2
File Name	028_LFM.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:41:19
Sample Type	LFM
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	49.247	He	49.247	72	0.4	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	1971880.38	6.2	83.0	2374575.58333333
Ge	72	He	555584.20	1.5	80.0	694144.433333333
Ge	72	HEHe	226378.59	0.9	82.1	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	WEG0469-12
File Name	027_ARF.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:38:57
Sample Type	AllRef
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	0.307	He	0.307	72	4.3	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	2036613.83	2.8	85.8	2374575.58333333
Ge	72	He	555976.42	0.4	80.1	694144.433333333
Ge	72	HEHe	223595.57	1.1	81.1	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	WEG0469-11
File Name	026SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:36:39
Sample Type	Sample
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	0.297	He	0.297	72	4.3	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	1976463.75	1.8	83.2	2374575.58333333
Ge	72	He	565021.92	0.6	81.4	694144.433333333
Ge	72	HEHe	230614.60	0.0	83.6	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	WEG0469-10
File Name	025SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:34:20
Sample Type	Sample
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	5.201	He	5.201	72	0.9	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	2005898.71	4.9	84.5	2374575.58333333
Ge	72	He	563181.71	1.1	81.1	694144.433333333
Ge	72	HEHe	231958.35	1.0	84.1	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	WEG0469-09
File Name	024SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:31:59
Sample Type	Sample
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	0.487	He	0.487	72	1.3	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	2157333.33	1.4	90.9	2374575.58333333
Ge	72	He	577278.90	1.9	83.2	694144.433333333
Ge	72	HEHe	238754.64	1.5	86.6	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	WEG0469-08
File Name	023SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:29:40
Sample Type	Sample
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	1.609	He	1.609	72	2.0	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	1972314.42	4.3	83.1	2374575.58333333
Ge	72	He	552208.80	1.0	79.6	694144.433333333
Ge	72	HEHe	223457.84	1.2	81.0	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	WEG0469-07
File Name	022SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:26:44
Sample Type	Sample
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	1.827	He	1.827	72	1.8	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	1963294.88	3.4	82.7	2374575.58333333
Ge	72	He	549635.14	0.9	79.2	694144.433333333
Ge	72	HEHe	224052.77	1.5	81.2	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	WEG0469-04
File Name	021SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:24:26
Sample Type	Sample
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	25.385	He	25.385	72	0.2	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	1882229.04	4.7	79.3	2374575.58333333
Ge	72	He	545291.92	1.0	78.6	694144.433333333
Ge	72	HEHe	213240.26	1.0	77.3	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	WEG0469-02
File Name	020SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:22:08
Sample Type	Sample
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	0.256	He	0.256	72	5.6	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	2332950.17	2.9	98.2	2374575.58333333
Ge	72	He	644690.62	1.1	92.9	694144.433333333
Ge	72	HEHe	261110.61	0.2	94.7	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	WEG0469-01
File Name	019SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:19:46
Sample Type	Sample
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	1.242	He	1.242	72	4.7	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	2413022.83	1.1	101.6	2374575.58333333
Ge	72	He	641144.31	1.1	92.4	694144.433333333
Ge	72	HEHe	254926.63	1.3	92.4	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	BEG0543-BS1
File Name	018_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:17:28
Sample Type	LCS
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	49.061	He	49.061	72	1.3	50	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	2403723.75	3.7	101.2	2374575.58333333
Ge	72	He	653909.89	0.3	94.2	694144.433333333
Ge	72	HEHe	262909.62	0.5	95.3	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	BEG0543-MRL1
File Name	017LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:15:09
Sample Type	LLICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	1.045	He	1.045	72	2.7	1	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas				0
Sc	45	No Gas				0
Sc	45	He				0
Ge	72	No Gas	2408844.08	1.1	101.4	2374575.58333333
Ge	72	He	693837.82	1.5	100.0	694144.433333333
Ge	72	HEHe	275341.47	1.3	99.8	275847.576666667
Rh	103	No Gas				0
Rh	103	He				0
Ho	165	No Gas				0
Ho	165	He				0

Sample Report

Sample Name	BEG0543-BLK1
File Name	016_Blk.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\Method Batches\200.8\Sequences 200.8\07152024 HIGH MATTRIX RERUN.b
Acq Time	2024-07-15 16:11:53
Sample Type	Blank
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	003CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**JLG**

QC Analyte Table

Mass	Name	Conc.	Tune	Raw Conc.	ISTD	CPS RSD	LDR	QC Flag
75	As	0.024	He	0.024	72	12.9	0.06	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	ISTD Recovery %	ISTD Ref CPS
Li	6	No Gas	2112032.56	1.1		0
Sc	45	No Gas	5964354.17	6.4		0
Sc	45	He	602888.07	0.7		0
Ge	72	No Gas	2431179.75	0.9	102.4	2374575.58333333
Ge	72	He	686419.63	0.1	98.9	694144.433333333
Ge	72	HEHe	268544.47	0.8	97.4	275847.576666667
Rh	103	No Gas	5802443.67	0.7		0
Rh	103	He	4087826.92	0.6		0
Ho	165	No Gas	1342497.46	0.7		0
Ho	165	He	1151955.23	1.2		0

	Sample									
	■	Rjct	Data File	Acq. Date-Time	Type	Level	Sample Name	Comment	Total Dil.	Vial Number
1			001CALB.	2024-07-15 15:37:13	CalBlk	1	Blank		1.0000	1101
2			002CALB.	2024-07-15 15:39:31	CalBlk	1	Blank		1.0000	1101
3			003CALB.	2024-07-15 15:41:51	CalBlk	1	Blank		1.0000	1101
4			004CALS.	2024-07-15 15:44:09	CalStd	2	1 ppb cal		1.0000	1103
5			005CALS.	2024-07-15 15:46:27	CalStd	3	5 ppb cal		1.0000	1104
6			006CALS.	2024-07-15 15:48:47	CalStd	4	25 ppb cal		1.0000	1105
7			007CALS.	2024-07-15 15:51:05	CalStd	5	50 ppb cal		1.0000	1106
8			008CALS.	2024-07-15 15:53:23	CalStd	6	100 ppb cal		1.0000	1107
9			009_RIN.d	2024-07-15 15:55:44	RINSE		Rinse		1.0000	4
10			010_ICV.d	2024-07-15 15:58:01	ICV		ICV- 40ppb		1.0000	2101
11			011_ICV.d	2024-07-15 16:00:19	ICV		ICV- 40ppb		1.0000	2201
12			012_LDR.d	2024-07-15 16:02:39	LDR		Daily LDR- 500pp		1.0000	2102
13			013_RIN.d	2024-07-15 16:04:57	RINSE		Rinse		1.0000	4
14			014_RIN.d	2024-07-15 16:07:15	RINSE		Rinse		1.0000	4
15			015_RIN.d	2024-07-15 16:09:35	RINSE		Rinse		1.0000	4
16			016_Blk.d	2024-07-15 16:11:53	Blank		BEG0543-BLK1		1.0000	3101
17			017LICV.d	2024-07-15 16:15:09	LLICV		BEG0543-MRL1		1.0000	3102
18			018_LCS.d	2024-07-15 16:17:28	LCS		BEG0543-BS1		1.0000	3103
19			019SMPL.	2024-07-15 16:19:46	Sample		WEG0469-01		1.0000	3104
20			020SMPL.	2024-07-15 16:22:08	Sample		WEG0469-02		1.0000	3105
21			021SMPL.	2024-07-15 16:24:26	Sample		WEG0469-04		1.0000	3107
22			022SMPL.	2024-07-15 16:26:44	Sample		WEG0469-07		1.0000	3112
23			023SMPL.	2024-07-15 16:29:40	Sample		WEG0469-08		1.0000	3201
24			024SMPL.	2024-07-15 16:31:59	Sample		WEG0469-09		1.0000	3202
25			025SMPL.	2024-07-15 16:34:20	Sample		WEG0469-10		1.0000	3203

	Sample									
		Rjct	Data File	Acq. Date-Time	Type	Level	Sample Name	Comment	Total Dil.	Vial Number
26		☐	026SMPL.	2024-07-15 16:36:39	Sample		WEG0469-11		1.0000	3204
27		☐	027_ARF.d	2024-07-15 16:38:57	AllRef		WEG0469-12		1.0000	3205
28		☐	028_LFM.d	2024-07-15 16:41:19	LFM		BEG0543-MS2		1.0000	3206
29		☐	029LFMD.	2024-07-15 16:43:37	LFMDup		BEG0543-MSD2		1.0000	3207
30		☐	030_RIN.d	2024-07-15 16:45:55	RINSE		Rinse		1.0000	4
31		☐	031_CCV.	2024-07-15 16:48:15	CCV		CCV		1.0000	1106
32		☑	032_CCB.	2024-07-15 16:50:33	CalBlk		CCB		1.0000	1101
33		☐	033_CCB.	2024-07-15 16:52:51	CalBlk		CCB		1.0000	1101
34		☐	034_RIN.d	2024-07-15 16:55:12	RINSE		Rinse		1.0000	5
35		☐	035SMPL.	2024-07-15 16:57:30	Sample		WEG0469-03		1.0000	3106
36		☐	036_ARF.d	2024-07-15 16:59:49	AllRef		WEG0469-05		1.0000	3108
37		☐	037_LFM.d	2024-07-15 17:02:09	LFM		BEG0543-MS1		1.0000	3109
38		☐	038LFMD.	2024-07-15 17:04:28	LFMDup		BEG0543-MSD1		1.0000	3110
39		☐	039SMPL.	2024-07-15 17:06:46	Sample		WEG0469-06		1.0000	3111
40		☐	040_Blk.d	2024-07-15 17:09:07	Blank		BEG0543-BLK1		1.0000	3208
41		☐	041_LCS.d	2024-07-15 17:11:26	LCS		BEG0543-BS1		1.0000	3209
42		☐	042_RIN.d	2024-07-15 17:13:44	RINSE		Rinse		1.0000	4
43		☐	043_CCV.	2024-07-15 17:16:04	CCV		CCV		1.0000	1106
44		☐	044_CCB.	2024-07-15 17:18:22	CCB		CCB		1.0000	1101
45		☐	045_RIN.d	2024-07-15 17:20:40	RINSE		Rinse		1.0000	5
46		☐	046_RIN.d	2024-07-15 17:23:00	RINSE		Rinse		1.0000	4
47		☐	047_CCV.	2024-07-15 17:26:15	CCV		CCV		1.0000	1106
48		☐	048_CCB.	2024-07-15 17:29:29	CCB		CCB		1.0000	1101
49		☐	049_RIN.d	2024-07-15 17:32:44	RINSE		Rinse		1.0000	5
50		☐	050_RIN.d	2024-07-15 17:36:01	RINSE		Rinse		1.0000	5

	Sample									
	■	Rjct	Data File	Acq. Date-Time	Type	Level	Sample Name	Comment	Total Dil.	Vial Number
51			051_RIN.d	2024-07-15 17:39:16	RINSE		Rinse		1.0000	5

Matrix SCIENCES | PAL PACIFIC AGRICULTURAL LABORATORY

PACAGLAB.COM
503.626.7943
21830 S.W. Alexander Ln
Sherwood, OR 97140

Anatek Labs Inc
504 E Sprague Ave, Suite D
Spokane, WA 99202

Report Number: P241282
Report Date: August 08, 2024
Client Project ID: WEG0469

Analytical Report

Client Sample ID: WEG0469-01
Matrix: water

PAL Sample ID: P241282-01
Sample Date: 7/8/24
Received Date: 7/12/24

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 549.2 (LC-MS/MS)					H3
8/06/24	8/6/24	Paraquat	ND	10 ug/L	

Client Sample ID: WEG0469-04
Matrix: water

PAL Sample ID: P241282-02
Sample Date: 7/8/24
Received Date: 7/12/24

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 549.2 (LC-MS/MS)					H3
8/06/24	8/6/24	Paraquat	ND	10 ug/L	

Client Sample ID: WEG0469-05
Matrix: water

PAL Sample ID: P241282-03
Sample Date: 7/8/24
Received Date: 7/12/24

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 549.2 (LC-MS/MS)					H3
8/06/24	8/6/24	Paraquat	ND	10 ug/L	

Client Sample ID: WEG0469-05 DUP
Matrix: water

PAL Sample ID: P241282-04
Sample Date: 7/8/24
Received Date: 7/12/24

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 549.2 (LC-MS/MS)					H3
8/06/24	8/6/24	Paraquat	ND	10 ug/L	

This analytical report complies with the ISO/IEC 17025:2017 Quality Standard.

Daniel Miller, Laboratory Manager

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Anatek Labs Inc
504 E Sprague Ave, Suite D
Spokane, WA 99202

Report Number: P241282
Report Date: August 08, 2024
Client Project ID: WEG0469

Analytical Report

Client Sample ID: WEG0469-06
Matrix: water

PAL Sample ID: P241282-05
Sample Date: 7/8/24
Received Date: 7/12/24

Extraction Date	Analysis Date	Analyte	Amount Detected	Limit of Quantitation	Notes
Method: Modified EPA 549.2 (LC-MS/MS)					H3
8/06/24	8/6/24	Paraquat	ND	10 ug/L	

This analytical report complies with the ISO/IEC 17025:2017 Quality Standard.

Daniel Miller, Laboratory Manager

Matrix SCIENCES | PAL PACIFIC AGRICULTURAL LABORATORY

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504 E Sprague Ave, Suite D
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Report Number: P241282
Report Date: August 08, 2024
Client Project ID: WEG0469

Quality Assurance

Method Blank Data **Matrix:** water

Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
8/6/24	8/6/24	24H0604-BLK1	Paraquat	Not Detected	< 10 ug/L	

Blank Spike Data **Matrix:** water

Extraction Date	Analysis Date	Batch QC Sample #	Analyte	% Recovery	Expected % Recovery	Notes
8/6/24	8/6/24	24H0604-BS1	Paraquat	98	60-140	
8/6/24	8/6/24	24H0604-BSD1	Paraquat	102	60-140	

Project Notes

Notes	Definition
H3	The sample was analyzed outside of recommended hold time.

This analytical report complies with the ISO/IEC 17025:2017 Quality Standard.

Daniel Miller, Laboratory Manager

ENTHALPY ANALYTICAL
TOXICITY LABORATORY & CONSULTING

Acute Toxicity Test Results for ADC Kekaha Dry Weather Water Quality Monitoring

Monitoring Period: July 2024

Prepared for:	Stantec 737 Bishop St., Suite 3050 Honolulu, HI 96734
Testing Lab:	Enthalpy Analytical 4340 Vandever Avenue San Diego, CA 92120
Submitted:	August 20, 2024

Data Quality Assurance:

- Enthalpy Analytical (formerly Nautilus Environmental) is accredited in accordance with NELAP by the State of Oregon Environmental Laboratory Accreditation Program (Certificate No. 4053). It is also certified by the State of California Department of Health Services Environmental Laboratory Accreditation Program (Certificate No. 1802) and the State of Washington Department of Ecology (Lab ID C552).
- All data have been reviewed and verified.
- All test results have met minimum test acceptability criteria under their respective EPA protocols, unless otherwise noted in this report.
- All results have met internal Quality Assurance Program requirements, unless otherwise noted in this report.

Data Verified by: Borelo

Barbara Orelo, Project Manager

California
4340 Vandever Ave
San Diego, CA 92120
858.587.7333

Introduction

Two samples were collected during a dry weather event for the ADC Kekaha Water Quality Monitoring. Samples were submitted by Stantec. Testing was conducted at the Enthalpy Analytical Laboratory in San Diego, California. Pacific topsmelt (*Atherinops affinis*), inland silverside (*Menidia beryllina*), and mysid shrimp (*Americamysis bahia*) 96-hour acute survival tests were used for the WW-2 sample. Fathead minnow (*Pimephales promelas*), water flea (*Ceriodaphnia dubia*), and freshwater amphipod (*Hyalella azteca*) 96-hour acute survival tests were used for the WW-3 sample.

Materials and Methods

Sample Information

Client:	Stantec
Project Name:	ADC Kekaha Water Quality Monitoring
Sample IDs:	1. WW-2 2. WW-3
Sample Collection Dates, Times[a]:	1. 7/8/24, 12:45 2. 7/8/24, 13:00
Sample Receipt Dates, Times:	7/9/24, 10:15
Sample Material:	Dry weather sample
Sampling Method:	Grab

[a] Collection times adjusted to Pacific Daylight Time from Hawaii Standard Time.

Table 1. Water Quality Parameters Measured upon Sample Receipt

Sample ID	pH	DO (mg/L)	Temp. (ºC)	Cond. (µS/cm)	Salinity (ppt)	Alkalinity (mg/L as $CaCO_3$)	Hardness (mg/L as CaCO3)	Total Chlorine (mg/L)
WW-2	7.42	5.6	6.0	nm	31.0	154	nm	<0.02
WW-3	7.93	7.5	4.1	1634	0.9	187	300	0.02

nm = not measured

Acute Toxicity Test Methods

Testing was conducted in accordance with methods published in US Environmental Protection Agency (USEPA) guidance (2002). Test specifications for all marine tests are summarized in Table 2, and test specifications for freshwater tests are summarized in Table 3.

Table 2. 96-hr Acute Survival Test Specifications - Marine Organisms

Pacific topsmelt test: 7/10/24, 16:15 to 7/14/24, 16:35	Species: *Atherinops affinis.* Source & Age: Aquatic Biosystems (Ft. Collins, CO), 14 days
Inland silverside test: 7/10/24, 16:35 to 7/14/24, 16:30	Species: *Menidia beryllina.* Source & Age: Aquatic Indicators (St. Augustine, FL), 10 days
Mysid shrimp test: 7/10/24, 16:25 to 7/14/24, 16:25	Species: *Americamysis bahia.* Source & Age: Aquatic Biosystems (Ft. Collins, CO), 4 days
Protocol Used:	Acute Manual (EPA/821/R-02/012), EPA 2002
Test Acceptability Criteria:	Control mean survival ≥ 90%
Test Concentration:	100% sample (WW-2)
Lab Control Water:	20-μm filtered seawater (Source: Scripps Institution of Oceanography [SIO] Intake); diluted to 30 ppt with deionized water

Table 3. 96-hr Acute Survival Test Specifications – Freshwater Organisms

Fathead minnow test: 7/10/24, 16:10 to 7/14/24, 16:45	Species: *Pimephales promelas.* Source & Age: Aquatic Biosystems (Ft. Collins, CO), 6 days
Water flea test: 7/10/24, 14:40 to 7/14/24, 13:55	Species: *Ceriodaphnia dubia.* Source & Age: Internal culture, < 24 hours
Freshwater amphipod test: 7/10/24, 16:00 to 7/14/24, 16:45	Species: *Hyalella azteca.* Source & Age: Aquatic Research Organisms (Hampton, NH), 13 days
Protocol Used:	Acute Manual (EPA/821/R-02/012), EPA 2002
Test Acceptability Criteria:	Control mean survival ≥ 90%
Test Concentration:	100% sample (WW-3)
Lab Control Water:	Diluted mineral water (per EPA protocol) for *P. promelas* and *C. dubia*; Carbon-filtered water (CFW) for *H. azteca*

Statistical Analyses

Statistical analyses were conducted using EPA flowchart specifications as outlined in the test guidance manual (USEPA 2002). Organism performance in the sample was compared to that observed in the concurrent lab control. Results were used to calculate whether a statistically significant effect was observed between the control and sample result. Comprehensive Environmental Toxicity Information System™ (CETIS) software by Tidepool Scientific Software, version 2.1.4.11.

Results

No statistically significant effects were observed to any species that were exposed the WW-2 sample compared to the respective lab controls. A summary of results for the marine species tests is presented in Table 4.

No statistically significant effects were observed to any species that were exposed the WW-3 sample compared to the respective lab controls. A summary of results for the freshwater tests is presented in Table 5.

Raw datasheets and complete statistical summaries for all tests are provided in Appendix A. Sample receipt information is provided in Appendix B, and a copy of the chain of custody form is presented in Appendix C.

Table 4. Summary of Marine 96-hr Acute Survival Results

Sample ID	Species	Lab Control Result	100% Sample Result	Statistically Significant Effect? (Yes/No)	Percent Effect
WW-2	Pacific topsmelt	100	95.0	No	5.0
	Inland silverside	95.0	100	No	-5.3
	Mysid shrimp	100	100	No	0.0

Percent effect from control is calculated as: ((mean response in lab control - mean response in undiluted sample)/mean response in lab control) *100. A negative value results when organism performance in the sample is greater than that in the lab control.

Table 5. Summary of Freshwater 96-hr Acute Survival Results

Sample ID	Species	Lab Control Result	100% Sample Result	Statistically Significant Effect? (Yes/No)	Percent Effect
WW-3	Fathead minnow	97.5	97.5	No	0.0
	Water Flea	100	100	No	0.0
	Freshwater amphipod	97.5	100	No	-2.6

Percent effect from control is calculated as: ((mean response in lab control - mean response in undiluted sample)/mean response in lab control) *100. A negative value results when organism performance in the sample is greater than that in the lab control.

Quality Assurance

The samples were received via overnight delivery service the day after collection and within the range of 0-6 degrees Celsius (°C). The tests were initiated within the maximum allowable holding time of 72 hours.

Mean control responses met minimum acceptability criteria for all tests. Minor QA issues that were unlikely to have any bearing on the final test data, such as slight temperature deviations, are noted on the datasheets, and a list of laboratory qualifier codes can be found in Appendix D.

Reference Toxicant Testing

Results for reference toxicant testing used to monitor laboratory performance and test organism sensitivity are summarized in Table 6. The reference toxicant tests for all species tested met all acceptability criteria. The median effect concentration value (EC_{50}) was within two standard deviations of the historical mean for all endpoints, indicating organisms exhibited typical sensitivity as historically observed in our laboratory. The control charts for the previous 20 reference toxicant tests are presented in Appendix E.

Table 6. Summary of 96-hr Acute Survival Reference Toxicant Test Results

Species	NOEC (µg/L copper)	LC_{50} (µg/L copper)	Historical LC_{50} ± 2 SD (µg/L copper)	CV (%)
Pacific Topsmelt	200	229	177 ± 103	29.1
Inland Silverside	100	140	173 ± 87.7	25.3
Mysid Shrimp	200	225	207 ± 77.4	18.7
Fathead Minnow	30	89.9	69.9 ± 73.7	52.7
Water Flea	5	8.76	17.7 ± 12.3	34.8
Freshwater Amphipod	100	336	451 ± 277	30.7

NOEC = the highest concentration tested that results in no observed effect
LC_{50} = the concentration expected to cause a lethal effect to 50 percent of the test organisms
Historical LC_{50} ± 2 SD = the mean LC_{50} from the previous 20 tests performed by Enthalpy, plus or minus two standard deviations
CV = Coefficient of Variation

References

Tidepool Scientific Software. 2000-2022. CETIS Comprehensive Environmental Toxicity Information System Software, Version 2.1.4.11.

USEPA. 2002. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition. EPA/821/R-02/012. US EPA Office of Water, Washington, DC.

Appendix A

Raw Data and Statistical Summaries

WW-2

CETIS Summary Report

Pacific Topsmelt 96-h Acute Survival Test — **Nautilus Environmental (CA)**

Batch ID:	12-3728-9343	**Test Type:**	Survival (96h)	**Analyst:**	
Start Date:	10 Jul-24 16:15	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	14 Jul-24 16:35	**Species:**	Atherinops affinis	**Brine:**	Not Applicable
Test Length:	4d 0h	**Taxon:**		**Source:**	Aquatic Biosystems, CO **Age:** 14d

Sample ID:	12-5870-4253	**Code:**	24-0772	**Project:**	ADC Kekaha WQ Monitoring
Sample Date:	08 Jul-24 12:45 PDT	**Material:**	Dry Weather Sample	**Source:**	Stantec
Receipt Date:	09 Jul-24 10:15 PDT	**CAS (PC):**		**Station:**	WW-2
Sample Age:	52h (6 °C)	**Client:**	Stantec		

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
01-5333-9869	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	0.5000	100% passed 96h survival rate	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
01-5333-9869	96h Survival Rate	Control Resp	1	0.9	<<	Yes	Passes Criteria

96h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
100		4	0.950	0.791	1.110	0.800	1.000	0.050	0.100	10.53%	5.00%

96h Survival Rate Detail — MD5: E123C782296427559F3BCFFA608E98B3

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LC	1.000	1.000	1.000	1.000
100		1.000	0.800	1.000	1.000

Pacific Topsmelt 96-h Acute Survival Test — **Nautilus Environmental (CA)**

Analysis ID:	01-5333-9869	**Endpoint:**	96h Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	19 Aug-24 10:55	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	19 Aug-24 10:55	**MD5 Hash:**	E123C782296427559F3BCFFA608E98B3	**Editor ID:**	000-502-715-6

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	100% passed 96h survival rate endpoint	11.20%

Wilcoxon Rank Sum Two-Sample Test

Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Control		100	6	16	---	1	Exact	0.5000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0070885	0.0070885	1	1	0.3559	Non-Significant Effect
Error	0.0425309	0.0070885	6			
Total	0.0496194		7			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.706	0.645	0.0027	Non-Normal Distribution

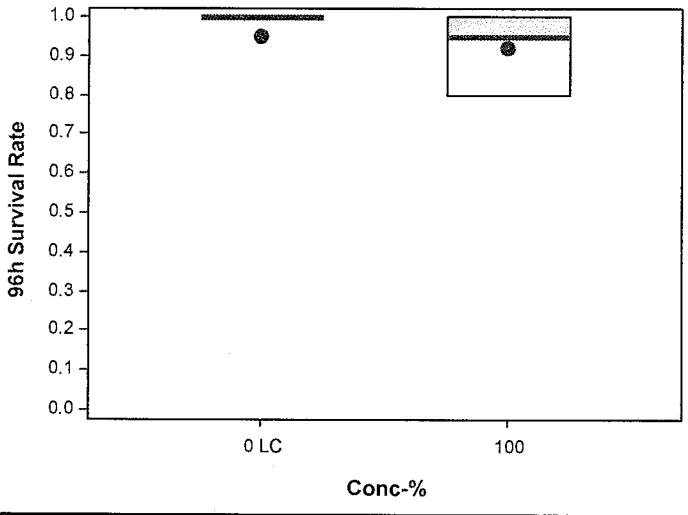
96h Survival Rate Summary

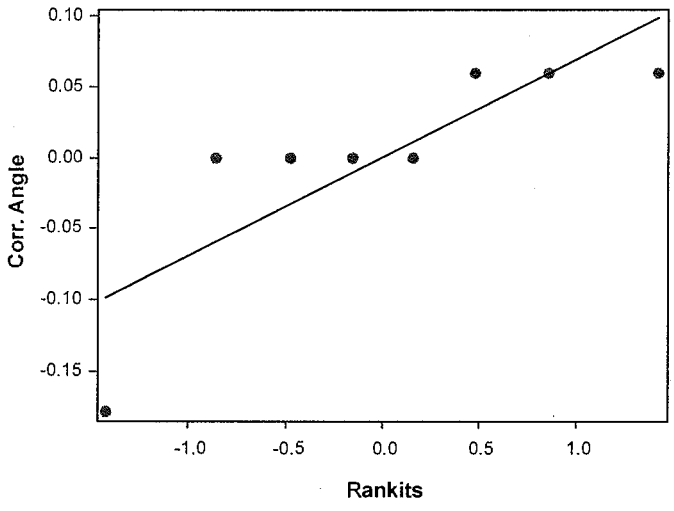
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
100		4	0.950	0.791	1.000	1.000	0.800	1.000	0.050	10.53%	5.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	0.00%
100		4	1.290	1.100	1.480	1.350	1.110	1.350	0.060	9.26%	4.43%

Graphics





Marine Acute Bioassay
Static-Renewal Conditions
DM-001

Water Quality Measurements & Test Organism Survival

Client: Stantec / ADC Kekaha
Sample ID: WW-2
Sample Log-in No.: 24-0772
Test No.: ~~2408-5230~~ (B) 2407-5230

Test Species: *A. affinis*
Start Date/Time: 7/10/24 1015
End Date/Time: 7/14/24 1635

Tech Initials	0	24	48	72	96
Counts:	KC	FM	WF	LM	GM
Readings:	RT	FM	MK	LM	FM
Dilutions made by:	GM		HH		

Concentration (%)	Rep	Number of Live Organisms					pH (units)					Dissolved Oxygen (mg/L)					Salinity (ppt)					Temperature (°C) (Q1 Q1)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
Lab Control	A	5	5	5	5	5	8.00	7.93	i 7.94	7.97	8.00	7.6	7.3	i 7.5	7.0	7.2	29.5	30.6	i 29.3	29.3	29.8	20.0	19.5	i ~~19.9~~ Q1 20.0	21.0	20.6
	B	5	5	5	5	5			f 7.94					f 7.3					f 31.0					f 19.8		
	C	5	5	5	5	5																				
	D	5	5	5	~~8~~ 5 (Q1)	5																				
100%	A	5	5	5	5	5	7.57	8.08	i 7.36	8.11	8.15	6.4	7.2	i 6.2	7.1	7.2	30.9	31.4	i 31.2	31.3	31.7	20.4	19.5	i ~~19.6~~ Q1 20.0	21.0	20.6
	B	5	5	5	5	4			f 8.08					f 7.3					f 31.9					f 19.7		
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
	A								i					i					i					i		
	B								f					f					f					f		
	C																									
	D																									
	A								i					i					i					i		
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	C																									
	D																									
	A								i					i					i					i		
	B								f					f					f					f		
	C																									
	D																									

Initial Counts QC'd by: WF
Initiated by: KC

Environmental Chamber: C

Animal Source/Date Received: ABS | 7/9/24
Age at Initiation: 14d

Animal Acclimation Qualifiers (circle all that apply): (Q22) / Q23 / Q24 / none

Feeding Times	0	24	48	72	96
AM:		0730	0740	0750	0825
PM:	1700				

Comments: i = initial reading in fresh test solution, f = final reading in test chamber prior to renewal
Organisms fed prior to initiation, circle one (y) / n) (A) Q18 WF 7/12/24 (B) Q14 GM 8/19/24
(C) Q18 KL 0800 LM 8/19/24

QC Check: GM 8/19/24

Final Review: KL 8/19/24 / ATS 8/19/24

Enthalpy Analytical. 4340 Vandever Avenue. San Diego, CA 92120.

CETIS Summary Report

Inland Silverside 96-h Acute Survival Test — **Nautilus Environmental (CA)**

Batch ID:	17-2287-7527	**Test Type:**	Survival (96h)	**Analyst:**	
Start Date:	10 Jul-24 16:35	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	14 Jul-24 16:30	**Species:**	Menidia beryllina	**Brine:**	Not Applicable
Test Length:	96h	**Taxon:**		**Source:**	Aquatic Indicators, FL **Age:** 10d

Sample ID:	20-5731-2312	**Code:**	24-0772	**Project:**	ADC Kekaha WQ Monitoring
Sample Date:	08 Jul-24 12:45 PDT	**Material:**	Dry Weather Sample	**Source:**	Stantec
Receipt Date:	09 Jul-24 10:15 PDT	**CAS (PC):**		**Station:**	WW-2
Sample Age:	52h (6 °C)	**Client:**	Stantec		

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
17-0221-6689	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	100% passed 96h survival rate	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
17-0221-6689	96h Survival Rate	Control Resp	0.95	0.9	<<	Yes	Passes Criteria

96h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LC	4	0.950	0.791	1.110	0.800	1.000	0.050	0.100	10.53%	0.00%
100		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	-5.26%

96h Survival Rate Detail — MD5: 38C5B405067C4B19EA662DDB147B72DC

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LC	1.000	1.000	1.000	0.800
100		1.000	1.000	1.000	1.000

CETIS Analytical Report

Inland Silverside 96-h Acute Survival Test — **Nautilus Environmental (CA)**

Analysis ID:	17-0221-6689	**Endpoint:**	96h Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	19 Aug-24 10:37	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	19 Aug-24 10:37	**MD5 Hash:**	38C5B405067C4B19EA662DDB147B72DC	**Editor ID:**	000-502-715-6

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	100% passed 96h survival rate endpoint	10.75%

Wilcoxon Rank Sum Two-Sample Test

Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Control		100	6	20	---	1	Exact	1.0000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0070885	0.0070885	1	1	0.3559	Non-Significant Effect
Error	0.0425309	0.0070885	6			
Total	0.0496194		7			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.706	0.645	0.0027	Non-Normal Distribution

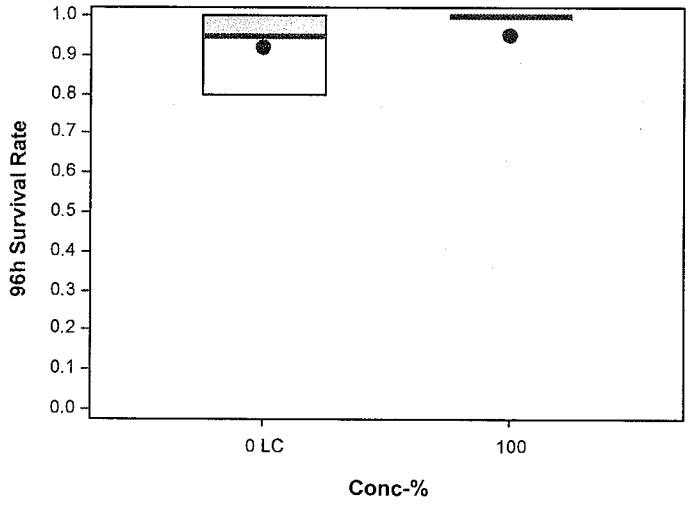
96h Survival Rate Summary

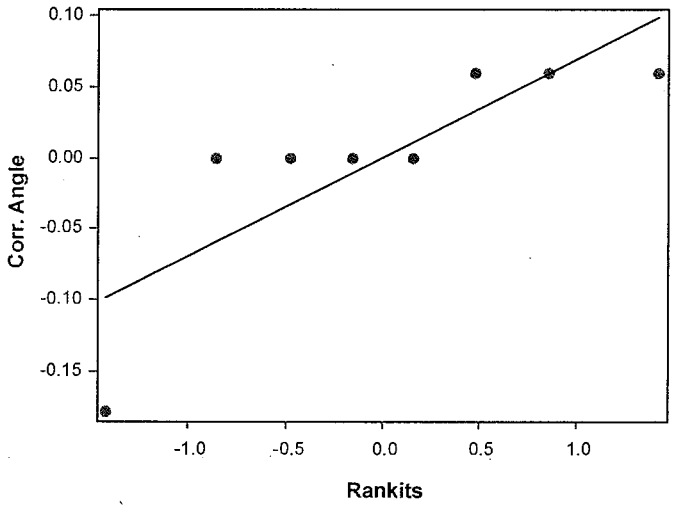
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	0.950	0.791	1.000	1.000	0.800	1.000	0.050	10.53%	0.00%
100		4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	-5.26%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.290	1.100	1.480	1.350	1.110	1.350	0.060	9.26%	0.00%
100		4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	-4.63%

Graphics





Marine Acute Bioassay
Static-Renewal Conditions
DM-001

Water Quality Measurements
& Test Organism Survival

Client: Stantec / ADC Kekaha
Sample ID: WW-2
Sample Log-in No.: 24-0572
Test No.: 2407-S231

Test Species: *M. beryllina*
Start Date/Time: 7/10/24 1635
End Date/Time: 7/14/24 1630

Tech Initials	0	24	48	72	96
Counts:	RT	FM	UF	LM	GM
Readings:	RT	FM	MK	LM	FM
Dilutions made by:	GM		HH		

Concentration (%)	Rep	Number of Live Organisms					pH (units)					Dissolved Oxygen (mg/L)					Salinity (ppt)					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
Lab Control	A	5	5	5	5	5	7.89	8.00	i 7.89	7.93	8.03	6.5	6.4	i 6.9	6.8	6.9	30.1	30.1	i 30.0	30.3	31.1	24.2	24.6	i 24.1	24.7	24.7
	B	5	5	5	5	5			f 7.96					f 6.7					f 31.0					f 24.9		
	C	5	5	5	5	5																				
	D	5	5	4	4	4															Q7					
100%	A	5	5	5	5	5	7.57	8.12	i 7.38	8.10	8.17	6.0	6.5	i 7.4	6.8	6.8	30.9	31.7	i 31.4	31.8	32.9	24.2	24.7	i 24.5	24.5	24.5
	B	5	5	5	5	5			f 8.12					f 6.6					f 32.2					f 24.5		
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
	A								i					i					i					i		
	B								f					f					f					f		
	C																									
	D																									
	A								i					i					i					i		
	B								f					f					f					f		
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	C																									
	D																									
	A								i					i					i					i		
	B								f					f					f					f		
	C																									
	D																									

Initial Counts QC'd by: AD ~~LK~~ Q1 FAT 7/10/24
Initiated by: RT

Environmental Chamber: A

Animal Source/Date Received: A1 / 7/9/24
Age at Initiation: 10 days

Animal Acclimation Qualifiers (circle all that apply): (Q22) / Q23 / (Q24) / none

Feeding Times	0	24	48	72	96
AM:		0730	0840	0750	0825
PM:	1700				

Comments: i = initial reading in fresh test solution, f = final reading in test chamber prior to renewal
Organisms fed prior to initiation, circle one (y) n)

QC Check: GM 8/19/24

Final Review: VL 8/19/24 / AIS 8/19/24

Enthalpy Analytical. 4340 Vandever Avenue. San Diego, CA 92120.

CETIS Summary Report

Report Date: 19 Aug-24 11:50 (p 1 of 1)
Test Code/ID: 2407-S232 / 20-0298-9100

Mysid 96-h Acute Survival Test — **Nautilus Environmental (CA)**

Batch ID:	08-2647-6003	**Test Type:**	Survival (96h)	**Analyst:**	
Start Date:	10 Jul-24 16:25	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	14 Jul-24 16:25	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Test Length:	96h	**Taxon:**		**Source:**	Aquatic Biosystems, CO **Age:** 4d

Sample ID:	16-9932-0756	**Code:**	24-0772	**Project:**	ADC Kekaha WQ Monitoring
Sample Date:	08 Jul-24 12:45 PDT	**Material:**	Dry Weather Sample	**Source:**	Stantec
Receipt Date:	09 Jul-24 10:15 PDT	**CAS (PC):**		**Station:**	WW-2
Sample Age:	52h (6 °C)	**Client:**	Stantec		

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
17-7521-4059	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	100% passed 96h survival rate	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
17-7521-4059	96h Survival Rate	Control Resp	1	0.9	<<	Yes	Passes Criteria

96h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
100		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%

96h Survival Rate Detail — MD5: 02835A6FE1710696B7C8F79EC2C22377

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LC	1.000	1.000	1.000	1.000
100		1.000	1.000	1.000	1.000

Mysid 96-h Acute Survival Test — **Nautilus Environmental (CA)**

Analysis ID:	17-7521-4059	**Endpoint:**	96h Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	19 Aug-24 10:46	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	19 Aug-24 10:45	**MD5 Hash:**	02835A6FE1710696B7C8F79EC2C22377	**Editor ID:**	000-502-715-6

Data Transform	Alt Hyp	Comparison Result
Angular (Corrected)	C > T	100% passed 96h survival rate endpoint

Wilcoxon Rank Sum Two-Sample Test

Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Control		100	6	18	---	1	Exact	1.0000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1			Indeterminate
Error	0	0	6			
Total	0		7			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test				Indeterminate

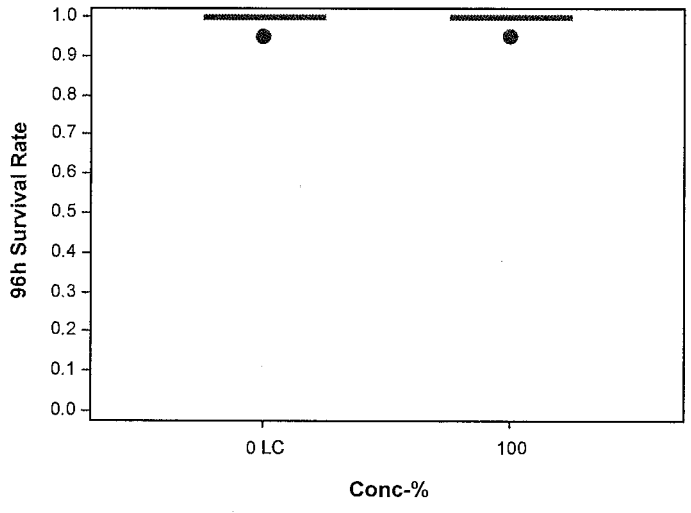
96h Survival Rate Summary

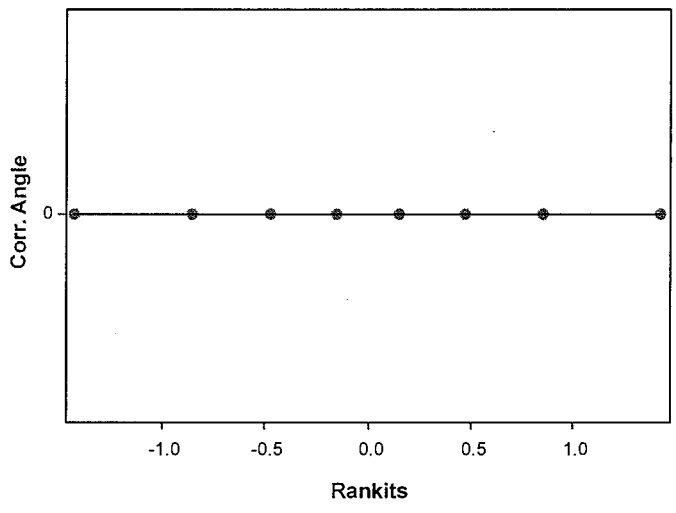
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
100		4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	0.00%
100		4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	0.00%

Graphics





Marine Acute Bioassay
Static-Renewal Conditions
DM-001

Water Quality Measurements
& Test Organism Survival

Client: Stantec/ ADC Kekaha
Sample ID: WW-2
Sample Log-in No.: 24-0772
Test No.: 2407-S232

Test Species: *A. bahia*
Start Date/Time: 7/10/24 1625
End Date/Time: 7/14/24 1625

Tech Initials	0	24	48	72	96
Counts:	RT	FM	WF	LM	GM
Readings:	RT	FM	MK	LM	FM
Dilutions made by:	GM		HH		

Concentration (%)	Rep	Number of Live Organisms					pH (units)					Dissolved Oxygen (mg/L)					Salinity (ppt)					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
Lab Control	A	5	5	5	5	5	7.89	7.98	i 7.91	7.94	8.00	6.5	6.6	i 7.0	6.9	6.9	30.1	30.8	i 29.9	30.0	30.9	24.2	24.5	i 24.2	24.8	24.8
	B	5	5	5	5	5			f 7.98					f 6.5					f 31.0					f 24.6		
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
100%	A	5	5	5	5	5	7.63	8.09	i 7.34	8.11	8.16	6.4	6.4	i 6.2	6.9	6.9	30.9	31.7	i 31.2	31.7	32.7	24.2	24.7	i 24.5	24.7	24.6
	B	5	5	5	5	5			f 8.10					f 6.6					f 32.2					f 24.5		
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
	A	5							i					i					i					i		
	B	5							f					f					f					f		
	C	5																								
	D	5																								
	A	5							i					i					i					i		
	B	5							f					f					f					f		
	C	5																								
	D	5																								
	A	5							i					i					i					i		
	B	5							f					f					f					f		
	C	5																								
	D	5																								
	A	5							i					i					i					i		
	B	5							f					f					f					f		
	C	5																								
	D	5																								
	A	5							i					i					i					i		
	B	5							f					f					f					f		
	C	5																								
	D	5																								

Initial Counts QC'd by: GM
Initiated by: RT

Environmental Chamber: A

Animal Source/Date Received: ABS/7/10/24
Age at Initiation: 4 days

Animal Acclimation Qualifiers (circle all that apply): Q22 / Q23 / Q24 / (none)

Feeding Times	0	24	48	72	96
AM:		0730	0740	0750	0825
PM:	1700	1715	1700	1630	—

Comments: i = initial reading in fresh test solution, f = final reading in test chamber prior to renewal
Organisms fed prior to initiation, circle one ((y) n)

QC Check: GM 8/19/24

Final Review: KL 8/19/24 / MCS 8/19/24

Enthalpy Analytical. 4340 Vandever Avenue. San Diego, CA 92120.

WW-3

Fathead Minnow 96-h Acute Survival Test — **Nautilus Environmental (CA)**

Batch ID:	19-8560-5723	**Test Type:**	Survival (96h)	**Analyst:**	
Start Date:	10 Jul-24 16:10	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	14 Jul-24 16:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Test Length:	4d 1h	**Taxon:**		**Source:**	Aquatic Biosystems, CO **Age:** 6d

Sample ID:	11-5474-1935	**Code:**	24-0773	**Project:**	ADC Kekaha WQ Monitoring
Sample Date:	08 Jul-24 13:00 PDT	**Material:**	Dry Weather Sample	**Source:**	Stantec
Receipt Date:	09 Jul-24 10:15 PDT	**CAS (PC):**		**Station:**	WW-3
Sample Age:	51h (4.1 °C)	**Client:**	Stantec		

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
11-0398-7665	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	0.7857	100% passed 96h survival rate	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
11-0398-7665	96h Survival Rate	Control Resp	0.975	0.9	<<	Yes	Passes Criteria

96h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LC	4	0.975	0.895	1.050	0.900	1.000	0.025	0.050	5.13%	0.00%
100		4	0.975	0.895	1.050	0.900	1.000	0.025	0.050	5.13%	0.00%

96h Survival Rate Detail — MD5: A1C3283037582165A7C7B7B397614628

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LC	1.000	1.000	1.000	0.900
100		1.000	1.000	1.000	0.900

Fathead Minnow 96-h Acute Survival Test — **Nautilus Environmental (CA)**

Analysis ID:	11-0398-7665	**Endpoint:**	96h Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	19 Aug-24 11:12	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	19 Aug-24 11:11	**MD5 Hash:**	A1C3283037582165A7C7B7B397614628	**Editor ID:**	000-502-715-6

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	100% passed 96h survival rate endpoint	7.07%

Wilcoxon Rank Sum Two-Sample Test

Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Control		100	6	18	---	2	Exact	0.7857	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1	0	1.0000	Non-Significant Effect
Error	0.039839	0.0066398	6			
Total	0.039839		7			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	1	47.5	1.0000	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.566	0.645	6.3E-05	Non-Normal Distribution

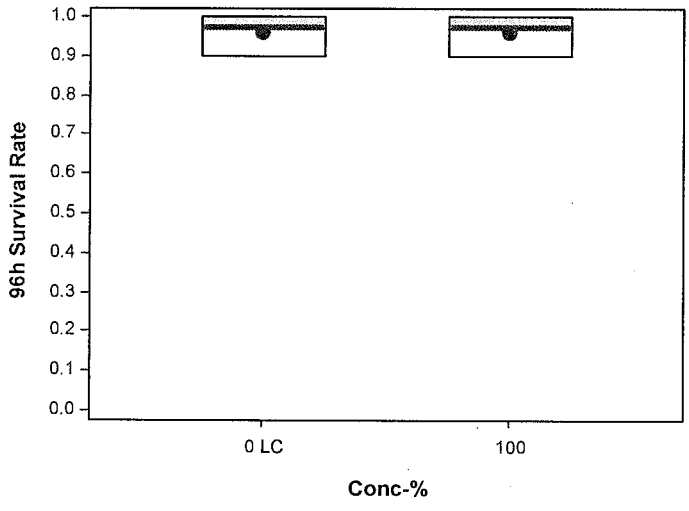
96h Survival Rate Summary

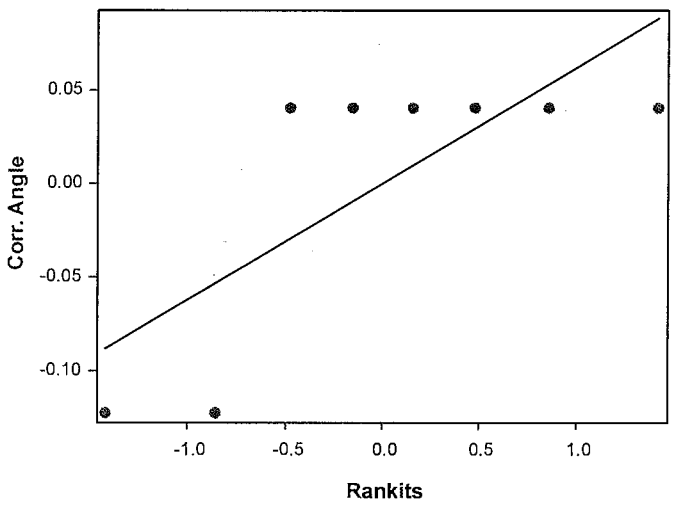
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	0.975	0.895	1.000	1.000	0.900	1.000	0.025	5.13%	0.00%
100		4	0.975	0.895	1.000	1.000	0.900	1.000	0.025	5.13%	0.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.370	1.240	1.500	1.410	1.250	1.410	0.041	5.94%	0.00%
100		4	1.370	1.240	1.500	1.410	1.250	1.410	0.041	5.94%	0.00%

Graphics





96-hour Freshwater Acute Bioassay
Static-Renewal Conditions
DF-006

Water Quality Measurements
& Test Organism Survival

Client: Stantec/ ADC Kekaha
Sample ID: WW-3
Sample Log-in No's.: 24-0773
Test No's.: 2407-S236

Test Species: *P. promelas*
Start Date/Time: 7/10/24 1610
End Date/Time: 7/14/24 1645

Tech Initials	0	24	48	72	96
Counts:	RT	WF	WF	WF	GM
Readings:	RT	WF	WF	WF	FM
Dilutions made by:	GM		HH		

Concentration (%)	Rep	Number of Live Organisms					pH (units)					Dissolved Oxygen (mg/L) Q14					Conductivity (µmhos/cm)					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
Lab Control	A	10	10	10	10	10	8.28	8.26	i 8.24	8.28	8.31	8.3	9.2	i 8.5	8.9	8.8	187	209	i 193	200	201	20.4	19.4	i 19.9	20.3	20.2
	B	10	10	10	10	10			f 8.27				Q14	f 9.3					f 210					f 19.2		
	C	10	10	10	10	10																				
	D	10	10	10	10	9																				
100%	A	10	10	10	10 (A)	10	7.91	8.47	i 7.86	8.48	8.55	7.9	9.0	i 8.3	8.9	8.8	1538	1592	i 1604	1621	1609	20.1	19.5	i 19.2	20.3	20.3
	B	10	10	10	10	10			f 8.48					f 9.0					f 1574					f 19.4		
	C	10	10	10	10	10																				
	D	10	10	10	9	9																				
	A	10							i					i					i					i		
	B	10							f					f					f					f		
	C	10																								
	D	10																								
	A	10							i					i					i					i		
	B	10							f					f					f					f		
	C	10																								
	D	10																								
	A	10							i					i					i					i		
	B	10							f					f					f					f		
	C	10																								
	D	10																								
	A								i					i					i					i		
	B								f					f					f					f		
	C																									
	D																									
	A								i					i					i					i		
	B								f					f					f					f		
	C																									
	D																									

Initial Counts QC'd by: AD
Initiated by: RT

Environmental Chamber: C.

Animal Source/Date Received: ABS/ 7/10/24

Age at Initiation: 6 days

Animal Acclimation Qualifiers (circle all that apply): Q22 / Q23 / Q24 / (none)

Feeding Times	0	24	48	72	96
AM:	--	--	0740	--	--
PM:	--	--	--	--	--

Comments: i = initial reading in fresh test solution, f = final reading in test chamber prior to renewal

Organisms fed prior to initiation, circle one ((y) / n) (A) Q18 AS 0800 WF 8/19/24

QC Check: GM 8/19/24

Final Review: YL 8/19/24/ ACS 8/19/24

Enthalpy Analytical. 4340 Vandever Avenue. San Diego, CA 92120.

CETIS Summary Report

Ceriodaphnia 96-h Acute Survival Test — **Nautilus Environmental (CA)**

Batch ID:	16-3563-4048	**Test Type:**	Survival (96h)	**Analyst:**	
Start Date:	10 Jul-24 14:40	**Protocol:**	EPA/821/R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	14 Jul-24 13:55	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Test Length:	95h	**Taxon:**		**Source:**	In-House Culture **Age:** <24hr

Sample ID:	12-1369-9161	**Code:**	24-0773	**Project:**	ADC Kekaha WQ Monitoring
Sample Date:	08 Jul-24 13:00 PDT	**Material:**	Dry Weather Sample	**Source:**	Stantec
Receipt Date:	09 Jul-24 10:15 PDT	**CAS (PC):**		**Station:**	WW-3
Sample Age:	50h (4.1 °C)	**Client:**	Stantec		

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
17-3932-7861	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	100% passed 96h survival rate	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
17-3932-7861	96h Survival Rate	Control Resp	1	0.9	<<	Yes	Passes Criteria

96h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
100		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%

96h Survival Rate Detail MD5: 02835A6FE1710696B7C8F79EC2C22377

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LC	1.000	1.000	1.000	1.000
100		1.000	1.000	1.000	1.000

(A) QA KL 8/19/24

Ceriodaphnia 96-h Acute Survival Test — **Nautilus Environmental (CA)**

Analysis ID:	17-3932-7861	**Endpoint:**	96h Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	19 Aug-24 11:15	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	19 Aug-24 11:14	**MD5 Hash:**	02835A6FE1710696B7C8F79EC2C22377	**Editor ID:**	000-502-715-6

Data Transform	Alt Hyp	Comparison Result
Angular (Corrected)	C > T	100% passed 96h survival rate endpoint

Wilcoxon Rank Sum Two-Sample Test

Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Control		100	6	18	---	1	Exact	1.0000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1			Indeterminate
Error	0	0	6			
Total	0		7			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test				Indeterminate

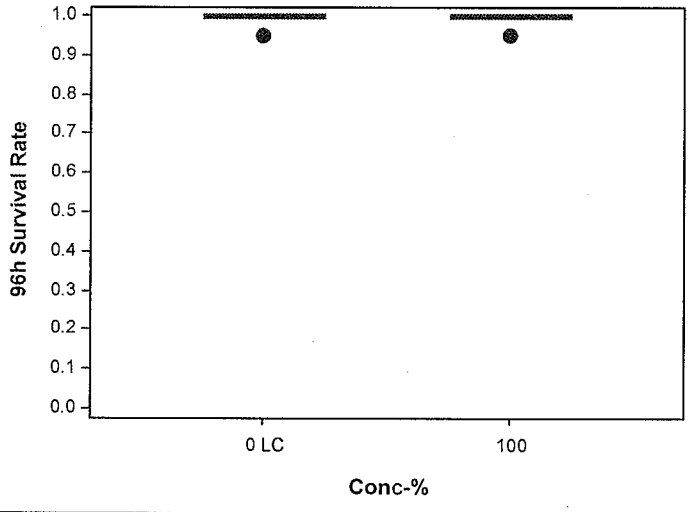
96h Survival Rate Summary

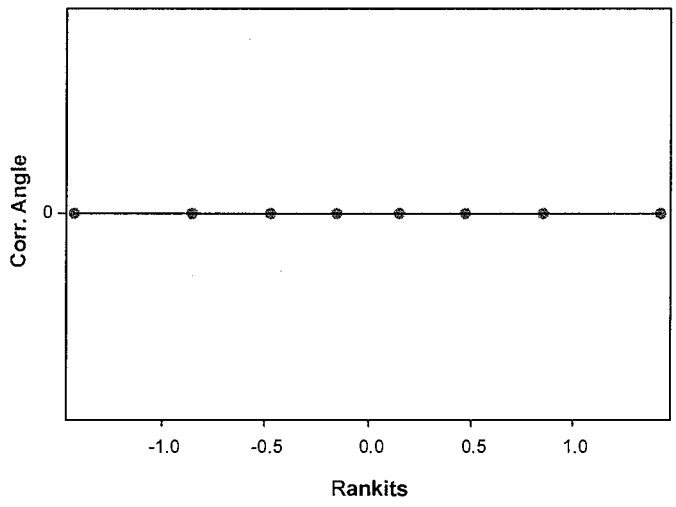
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
100		4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	0.00%
100		4	1.350	1.340	1.350	1.350	1.350	1.350	0.000	0.00%	0.00%

Graphics





96-hour Freshwater Acute Bioassay
Static-Renewal Conditions
DF-002

Water Quality Measurements & Test Organism Survival

Client: Stantec/ ADC Kekaha
Sample ID: WW-3
Test No.: 2407-5238
Log#: 24-0773

Test Species: *C. dubia*
Start Date/Time: 7/10/24 1440
End Date/Time: 7/14/24 1355

Tech Initials	0	24	48	72	96
Counts:	RT	WF	HH	WF	GM
Readings:	RT	WF	HH	WF	GM
Dilutions made by:	GM	--	HH	--	--

Concentration (%)	Rand #	Number of Live Organisms					pH (units)					Dissolved Oxygen (mg/L)					Conductivity (µmhos/cm)					Temperature (°C) Q1				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
Lab Control	A	5	5	5	5	5	8.18	8.26	i 8.24	8.27	8.20	8.3	8.8	8.5	8.7	8.7	183	196	i 192	195	196 (D)	20.6	20.2	i 20.3	21.0	20.9
	B	5	5	5	5	5			f 8.12	(A) 8.16				f 8.3					f 210		202			f 20.0		
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
100	A	5	5	5	5	5	7.97	8.34	i 7.99	8.32	8.37	8.1	8.8	9.0	8.8	8.6	1527	1629	i 1599	1611	1575	20.6	19.9	i 20.6	21.1	20.9
	B	5	5	5	5	5			f 8.31					f 8.3					f 1561					f 20.0		
	C	5	5	5	5	5																				
	D	5	5	5	5	5																				
									i					i					i					i		
									f					f					f					f		
									i					i					i					i		
									f					f					f					f		
									i					i					i					i		
									f					f					f					f		
									i					i					i					i		
									f					f					f					f		

Initiated by (B) Rand # QC: RT
Initial Count QC'd by: WF

Environmental Chamber: C.

Animal Source/Date Received: Internal / NA
Age at Initiation: < 24 hr

Feeding Times	0	24	48	72	96
AM:	--	--	1220	--	--
PM:	--	--	--	--	--

Comments: i = initial reading in fresh test solution, f = final reading in test chamber prior to renewal
Organisms fed prior to initiation, circle one (y) n) @218 7/14/24 GM @0848 7/19/24

QC Check: GM 8/19/24
Final Review: VL 8/19/24 / AIS 8/19/24

Enthalpy Analytical. 4340 Vandever Avenue. San Diego, CA 92120.

CETIS Summary Report

Report Date: 19 Aug-24 11:47 (p 1 of 1)
Test Code/ID: 2407-S237 / 02-6014-8054

Acute Amphipod Survival Test — **Nautilus Environmental (CA)**

Batch ID:	10-7375-1793	**Test Type:**	Survival (96h)	**Analyst:**	
Start Date:	10 Jul-24 16:00	**Protocol:**	EPA/600/R-99/064 (2000)	**Diluent:**	Not Applicable
Ending Date:	14 Jul-24 16:45	**Species:**	Hyalella azteca	**Brine:**	Not Applicable
Test Length:	4d 1h	**Taxon:**		**Source:**	Aquatic Research Organisms **Age:** 13d

Sample ID:	07-5423-7632	**Code:**	24-0773	**Project:**	ADC Kekaha WQ Monitoring
Sample Date:	08 Jul-24 ~~12:45~~ 1300 PDT (A)	**Material:**	(B) Wet Weather Sample	**Source:**	Stantec
Receipt Date:	09 Jul-24 10:15 PDT	**CAS (PC):**	Dry	**Station:**	WW-3
Sample Age:	51h (4.1 °C)	**Client:**	Stantec		

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result	S
05-1657-7846	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	100% passed 96h survival rate	1

Test Acceptability

				TAC Limits			
Analysis ID	**Endpoint**	**Attribute**	**Test Stat**	**Lower**	**Upper**	**Overlap**	**Decision**
05-1657-7846	96h Survival Rate	Control Resp	0.975	0.9	<<	Yes	Passes Criteria

96h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LC	4	0.975	0.895	1.050	0.900	1.000	0.025	0.050	5.13%	0.00%
100		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	-2.56%

96h Survival Rate Detail — MD5: D48F5AD17E130283B443426C0FF3BF0E

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LC	1.000	1.000	0.900	1.000
100		1.000	1.000	1.000	1.000

(A) QA KL 8/19/24

(B) QA HLS 8/19/24

Acute Amphipod Survival Test — **Nautilus Environmental (CA)**

Analysis ID:	05-1657-7846	**Endpoint:**	96h Survival Rate	**CETIS Version:**	CETISv2.1.4
Analyzed:	19 Aug-24 11:47	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	19 Aug-24 11:46	**MD5 Hash:**	D48F5AD17E130283B443426C0FF3BF0E	**Editor ID:**	000-502-715-6

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	100% passed 96h survival rate endpoint	5.20%

Wilcoxon Rank Sum Two-Sample Test

Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Control		100	6	20	---	1	Exact	1.0000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0033199	0.0033199	1	1	0.3559	Non-Significant Effect
Error	0.0199195	0.0033199	6			
Total	0.0232394		7			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.706	0.645	0.0027	Non-Normal Distribution

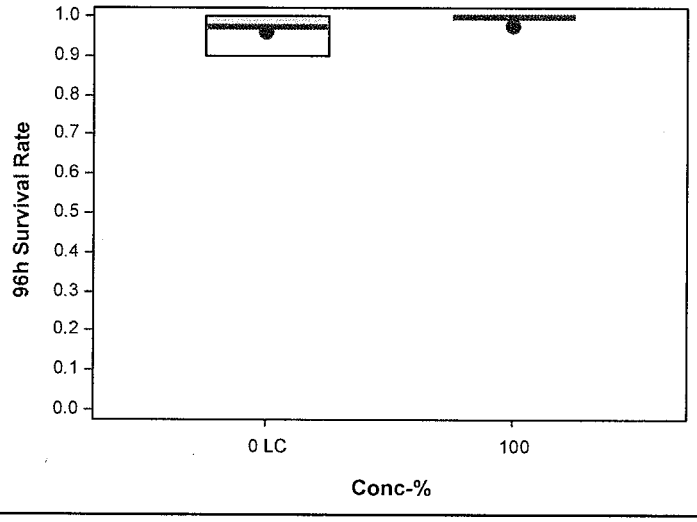
96h Survival Rate Summary

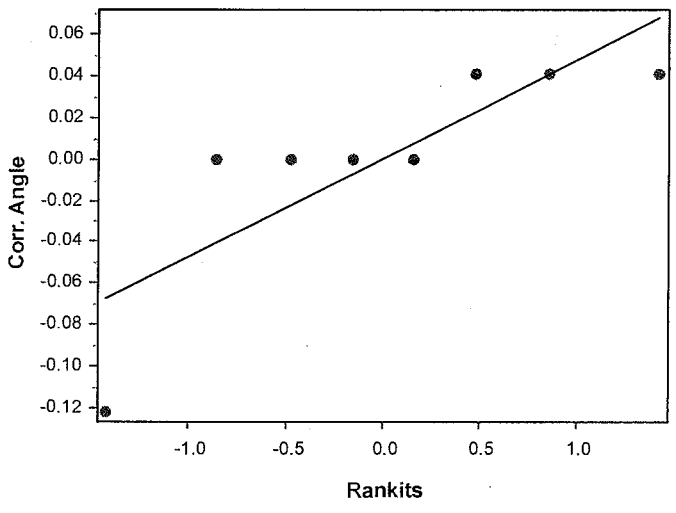
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	0.975	0.895	1.000	1.000	0.900	1.000	0.025	5.13%	0.00%
100		4	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	-2.56%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LC	4	1.370	1.240	1.500	1.410	1.250	1.410	0.041	5.94%	0.00%
100		4	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	-2.97%

Graphics





96-hour Freshwater Acute Bioassay
Static-Renewal Conditions
DF-006

Water Quality Measurements
& Test Organism Survival

Client: Stantec/ ADC Kekaha
Sample ID: WW-3
Sample Log-in No's.: 24-0773
Test No's.: 2407-S237

Test Species: *H. azteca*
Start Date/Time: 7/10/24 1600
End Date/Time: 7/14/24 1645

Tech Initials	0	24	48	72	96
Counts:	WF	WF	WF	WF	GM
Readings:	RT	WF	WF	WF	GM
Dilutions made by:	GM		HH		

Concentration (%)	Rep	Number of Live Organisms					pH (units)					Dissolved Oxygen (mg/L)					Conductivity (µmhos/cm)					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
Lab Control	A	10	10	10	10	10	9.40	8.33	i 8.41	8.36	8.38	9.0	9.2	i 9.0	8.9	8.9	777	850	i 821	837	840	19.8	19.7	i 19.6	20.3	20.6
(CFW)	B	10	10	10	10	10			f 8.33				Q14	f 9.0					f 849					f 19.3		
	C	10	9	9	9	9																				
	D	10	10	10	10	10																				
100%	A	10	10	10	10	10	7.97	8.49	i 8.07	8.51	8.46	8.1	9.1	i 9.0	8.9	8.8	1539	1634	i 1605	1638	1643	20.0	19.5	i 20.1	20.2	20.5
	B	10	10	10	10	10			f 8.48				Q14	f 9.0					f 1633					f 19.2		
	C	10	~~9~~ 10	10	10	10																				
	D	10	10	10	10	10																				
	A	10							i					i					i					i		
	B	10							f					f					f					f		
	C	10																								
	D	10																								
	A	10							i					i					i					i		
	B	10							f					f					f					f		
	C	10																								
	D	10																								
	A	10							i					i					i					i		
	B	10							f					f					f					f		
	C	10																								
	D	10																								
	A								i					i					i					i		
	B								f					f					f					f		
	C																									
	D																									
	A								i					i					i					i		
	B								f					f					f					f		
	C																									
	D																									

Initial Counts QC'd by: RT
Initiated by: WF

Environmental Chamber: C

Animal Source/Date Received: ARO / 7/10/24
Age at Initiation: 13d

Animal Acclimation Qualifiers (circle all that apply): Q22 / Q23 / Q24 / (none)

Feeding Times	0	24	48	72	96
AM:	--	--	0740	--	--
PM:	--	--	--	--	--

Comments: i = initial reading in fresh test solution, f = final reading in test chamber prior to renewal
Organisms fed prior to initiation, circle one ((y) / n) Ⓐ Q18 WF 7/12/24

QC Check: GM 8/19/24

Final Review: KL 8/19/24 / ATS 8/19/24

Enthalpy Analytical. 4340 Vandever Avenue. San Diego, CA 92120.

Appendix B

Sample Check-In Information

Enthalpy Analytical
4340 Vandever Avenue
San Diego, CA 92120

WW-2: acute topsmelt, silverside, Mysid
WW-3: acute fathead, Hyalella, waterflea

Sample Check-In Information
DC-006

Client: Stantec GS
Project: ADC Kekaha
Tests Performed: WW-3: acute fathead, Hyalella, waterflea
Test ID No.(s): 2407-S230 to S244, S232 & S236 to S238 (B)

Sample Descriptions:
1) light yellow, clear, no odor, no debri
2) light brown, clear, no odor no debri
3)
4)

	1) WW-2	2) WW-3	3	4)
Sample ID:				
Log-in No. (24-xxxx):	(A) ~~00~~ 0772	0773		
Sample Collection Date & Time:	718124 1245 PDT	718124 1300 PDT		
Sample Receipt Date & Time:	719124 1015	719124 1015		
Number of Containers & Container Type:	2x4L wbi	2x4L wbi		
Approx. Total Volume Received (L):	~8	~8		
Check-in Temp (°C)	6.0	4.1		
Temperature OK? [1]	(Y) N	(Y) N	Y N	Y N
DO (mg/L)	(A) ~~7.0~~ 5.6	7.5		
pH (units)	7.42	7.93		
Conductivity (µS/cm)	—	1634		
Salinity (ppt)	31.0	0.9		
Alkalinity (mg/L) [2]	154	187		
Hardness (mg/L) [2,3]	—	300		
Total Chlorine (mg/L)	<0.02	0.02		
Technician Initials	SM	SM		

COC Complete? (Y) N

Filtration? Y (N)
Initials: 1) 2) 3) 4)
Pore Size: _____
Organisms or Debris

pH Adjustment? Y (N)

	1	2	3	4	5	6
Initial pH:						
Amount of HCl added:						
Final pH:						

Freshwater Tests: WW-3
Control/Dilution Water Source: (8:2) Coast Other: CFW(Hyalella) Alkalinity: 96/110 Hardness: 89/210
Additional Control? Y (N) = _____ Alkalinity: _____ Hardness: _____

Marine Tests: WW-2
Control/Dilution Water Source: (LAB SW) ART SW Other: _____ Alkalinity: 107 Salinity: 30ppt
Additional Control? Y (N) = _____ Alkalinity: _____ Salinity: _____
Sample Salted w/ artificial salt? Y (N) If yes, target ppt and source? _____
Sample salted w/brine? Y (N) If yes, target ppt? _____

Cl_2 Adjustment? Y (N)

	1	2	3	4	5	6
Initial Free Cl_2:						
STS added:						
Final Free Cl_2:						

Sample Aeration? Y (N)

	1	2	3	4	5	6
Initial D.O.						
Duration & Rate						
Final D.O.						

Measure NH3 via test strip (circle one)? Y (N)
NH3 Strip Result* A:_____ B:_____ C:_____
*(if 6 or more, notify PM)

Subsamples for Additional Chemistry Required? Y (N)
NH3 Other _____
Tech Initials: _____

Notes [1] Temperature for sample must be 0-6°C if received >24 hours past collection time.
[2] mg/L as CaCO3, [3] Measured for freshwater samples only, NA = Not Applicable

Additional Comments (A) QC'd HH 7/9/24 (B) QC'd AMS 8/19/24

QC Check: GM 8/19/24

Final Review: KL 8/19/24 / AMS 8/19/24

Appendix C

Chain-of-Custody Form

Enthalpy Analytical - Environmental Toxicology

4340 Vandever Avenue
San Diego, CA 92120
Phone 858.587.7333
infoSD@enthalpy.com

Chain of Custody

Date 7/8/24 Page 1 of 1

Sample Collection By:

Report to:		Invoice To: Same as Report to ☑	
Company	Stantec GS (Formerly Cardno-GS)	Company	
Address	737 Bishop St Suite 3050	Address	
City/State/Zip	Honolulu, HI 96734	City/State/Zip	
Contact	Benjamin Berridge	Contact	
Phone	808-476-0067	Phone	
Email	benjamin.berridge@cardno-gs.com	Email	

Login # 24-	SAMPLE ID	SAMPLE Date	SAMPLE Time	SAMPLE Type (G or C)	MATRIX CODE (FW, SW, Sed, STRM, GW, WW, O)	Container Type (*)	Container Qty	COMMENTS	ANALYSES REQUIRED: *P. promelas* 96-hr Acute Survival	*C. dubia* 96-hr Acute Survival	*H. azteca* 96-hr Acute Survival	A. affinis 96-hr Acute Survival	*M.beryllina* 96-hr Acute Survival	A. bahia 96-hr Acute Survival	Receipt Temperature (°C)
0772 1	WW-2 Toxicity	7/8/2024	0945	G	STRM-SW	2.5 Gal Plastic	2					X	X	X	6.0
0773 2	WW-3 Toxicity	7/8/2024	1000	G	STRM-SW	2.5 Gal Plastic	2		X	X	X	X	X	X (A)	4.1
3															
4															
5															
6															
7															
8															
9															
10															

Enthalpy Matrix Codes: G = Grab; C = Composite; FW = Freshwater; SW = Seawater; Sed = Sediment; STRM = Stormwater; GW = Groundwater; WW = Wastewater; O = Other (specify)

PROJECT INFORMATION		SAMPLE RECEIPT	
Project Name:	ADC Water Quality Monitoring	Total No. of Containers	4
PO No.:	090942	Received Good Condition?	Y
Shipped Via:	FedEx	Matches Test Schedule?	Y

SPECIAL INSTRUCTIONS/COMMENTS:
(A) Q18 HH 7/9/24
Freshwater species tested dve to <1 ppt sample salinity
(*) we received 2, 4L cubes per sample on 7/8/24. KL 8/9/24

1) RELINQUISHED BY (CLIENT)	2) RECEIVED BY (COURIER)
(Signature) Sydney Gabitzer (Time) 1300	(Signature) (Time)
(Printed Name) SYDNEY GABITZER (Date) 07/08/24	(Printed Name) (Date)
(Company) Stantec GS	(Company)
3) RELINQUISHED BY (COURIER)	**4) RECEIVED BY (LABORATORY)**
(Signature) (Time)	(Signature) (Time) 1015
(Printed Name) (Date)	(Printed Name) Sarah Mathiesen (Date) 7/9/24
(Company)	(Company) EA-SD (Log-in #s) 24-0772, 0773

Additional costs may be required for sample disposal or storage. Payment net 30 unless otherwise contracted.
Shaded areas are for lab use only
Report turn-around-time varies depending on length of test; please inquire with your project manager.

http://enthalpy.com/environmental-toxicology-2/

Appendix D

Qualifier Code Glossary

Glossary of Qualifier Codes

Q1 - Temperature out of recommended range; corrective action taken and recorded in Test Temperature Correction Log

Q2 - Temperature out of recommended range; no action taken, test terminated same day

Q3 - Sample pH adjusted to within range of 6-9 with reagent grade NaOH or HCl, as needed

Q4 - Test aerated; D.O. levels dropped below 4.0 mg/L

Q5 - Test initiated with continuous aeration due to an anticipated drop in D.O.

Q6 - Airline obstructed or fell out of replicate and replaced; drop in D.O. occurred

Q7 - Salinity out of recommended range

Q8 - Spilled test chamber/ Unable to recover test organism(s)

Q9 - Inadequate sample volume remaining, partial renewal performed

Q10 - Inadequate sample volume remaining, no renewal performed

Q11 - Sample out of holding time; refer to QA section of report

Q12 - Replicate(s) not initiated; excluded from data analysis

Q13 - Survival counts not recorded due to poor visibility or heavy debris

Q14 - D.O. percent saturation was checked and was ≤ 110%

Q15 - Did not meet minimum test acceptability criteria. Refer to QA section of report.

Q16 - Percent minimum significant difference (PMSD) was below the lower bound limit for acceptability. This indicates that statistics may be over-sensitive in detecting a difference from the control due to low variability in the data set. Test results were reviewed and reported in accordance with guidance found in EPA-833-R-00-003, 2000 unless otherwise specified.

Q17 - Percent minimum significant difference (PMSD) was above the upper bound limit for acceptability. This indicates that statistics may be under-sensitive in detecting a difference from the control due to high variability in the data set. Test results were reviewed and reported in accordance with EPA-833-R-00-003, 2000 guidance unless otherwise specified.

Q18 - Incorrect or illegible Entry

Q19 - Miscalculation

Q20 - PMSD criteria do not apply to the test of significant toxicity (TST) analysis

Q21 - Other (provide reason in comments section)

Q22 - Greater than 10% batch mortality observed upon receipt and/or in holding prior to test initiation. Organisms acclimated to test conditions at Enthalpy and ultimately deemed fit to use for testing.

Q23 - Test organisms experienced a temperature shift greater than 3°C within 1 day or were received at a temperature greater than 3°C outside the recommended test temperature range and had minimal time to acclimate prior to test initiation. However, due to age-specific protocol requirements and/or sample holding time constraints, the organisms were used to initiate test(s). Organisms were ultimately deemed fit to use for testing.

Q24 - Test organisms experienced a salinity shift greater than 3 ppt within 1 day or were received at a salinity greater than 3 ppt outside the recommended test salinity range and had minimal time to acclimate prior to test initiation. However, due to age-specific protocol requirements and/or sample holding time constraints, the organisms were used to initiate test(s). Organisms were ultimately deemed fit to use for testing.

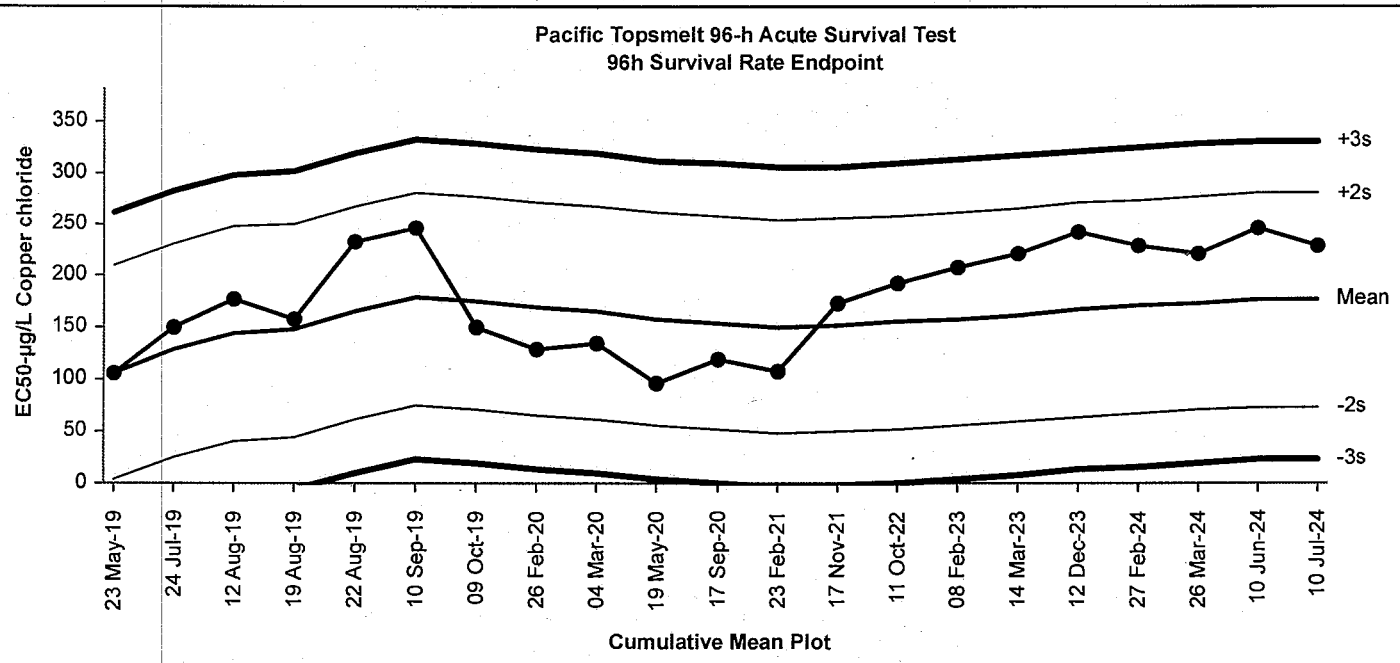
Appendix E

Reference Toxicant Test Control Charts

Marine Species

Pacific Topsmelt 96-h Acute Survival Test **Nautilus Environmental (CA)**

Test Type:	Survival (96h)	**Organism:**	Atherinops affinis	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-012 (2002)	**Endpoint:**	96h Survival Rate	**Source:**	Reference Toxicant-REF



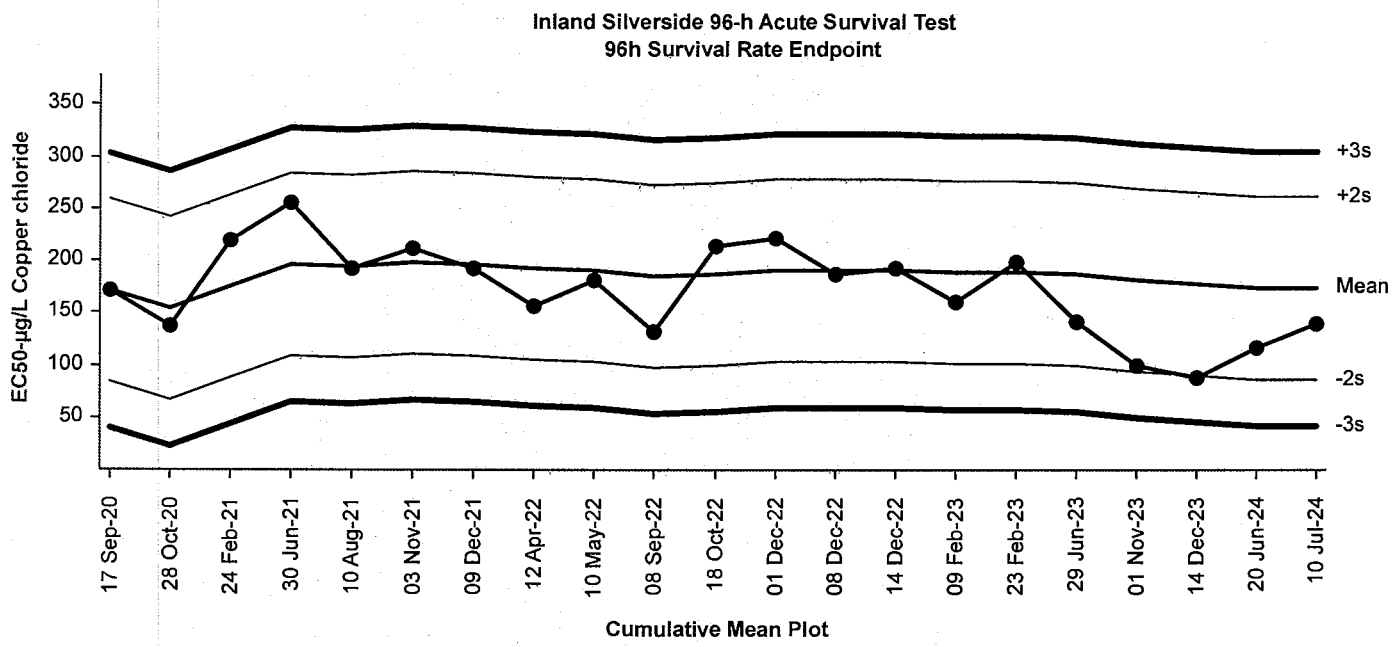
Mean:	177.2	**Count:**	20	**-2s Warning Limit:**	74	**-3s Action Limit:**	22.5
Sigma:	51.58	**CV:**	29.10%	**+2s Warning Limit:**	280	**+3s Action Limit:**	332

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2019	May	23	15:30	106.6	-70.57	-1.368			03-2154-6851	19-3512-2662
2		Jul	24	16:25	150.4	-26.79	-0.5194			02-4547-9337	03-4444-2456
3		Aug	12	16:15	176.5	-0.7274	-0.0141			05-6999-0080	19-2452-0933
4			19	19:30	158.7	-18.46	-0.3579			00-1616-6988	16-4823-3084
5			22	16:45	232	54.83	1.063			14-6253-4066	09-6589-6472
6		Sep	10	11:15	246.2	69.03	1.338			01-3190-7470	00-5901-5932
7		Oct	9	15:40	149.6	-27.6	-0.5351			12-2483-9958	16-7314-6828
8	2020	Feb	26	15:20	129.7	-47.52	-0.9212			04-4275-3329	19-1366-8841
9		Mar	4	17:15	134.1	-43.12	-0.836			09-0186-0501	09-2347-5750
10		May	19	17:20	96.59	-80.61	-1.563			09-8977-8612	01-6220-7123
11		Sep	17	14:25	118.9	-58.28	-1.13			07-7701-0607	03-4458-7869
12	2021	Feb	23	16:10	107.2	-70.02	-1.358			15-2183-5128	00-7227-8818
13		Nov	17	17:00	174.1	-3.09	-0.05991			10-0193-2387	14-5680-1838
14	2022	Oct	11	16:07	193.2	15.99	0.31			02-7625-1264	21-0421-1281
15	2023	Feb	8	14:45	207.1	29.85	0.5788			19-6999-8482	14-7115-7109
16		Mar	14	14:20	221.9	44.71	0.8669			15-6395-0579	17-4627-7258
17		Dec	12	16:10	243.4	66.2	1.283			16-7260-5143	20-7116-3012
18	2024	Feb	27	15:50	229.7	52.54	1.019			20-5591-0437	03-3170-5555
19		Mar	26	14:05	221.9	44.71	0.8669			17-4330-0896	11-1517-3205
20		Jun	10	13:50	246.2	69.03	1.338			10-1309-3249	11-2796-9191
21		Jul	10	16:25	228.5	51.32	0.9949			21-3298-4124	00-0054-2058

Inland Silverside 96-h Acute Survival Test **Nautilus Environmental (CA)**

Test Type:	Survival (96h)	**Organism:**	Menidia beryllina	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-012 (2002)	**Endpoint:**	96h Survival Rate	**Source:**	Reference Toxicant-REF



Cumulative Mean Plot

Mean:	173.3	**Count:**	20	**-2s Warning Limit:**	85.7	**-3s Action Limit:**	41.8
Sigma:	43.83	**CV:**	25.30%	**+2s Warning Limit:**	261	**+3s Action Limit:**	305

Quality Control Data

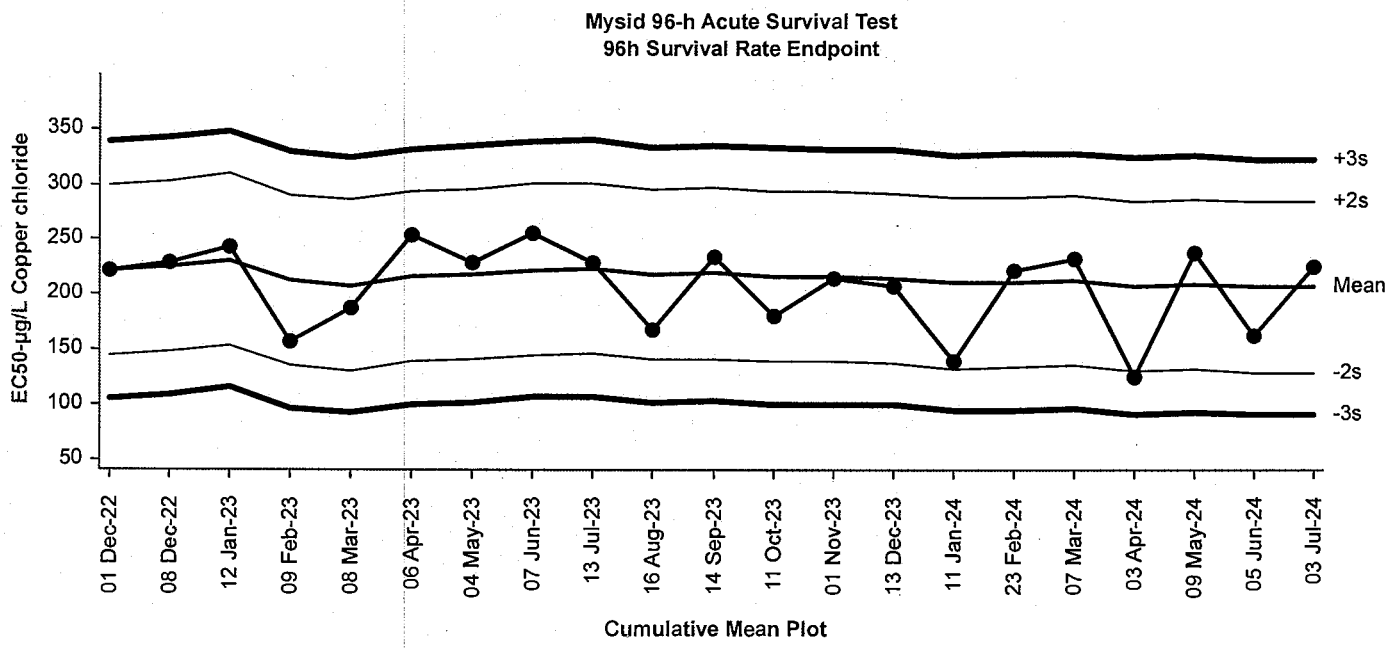
Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2020	Sep	17	14:45	172	-1.343	-0.03063			07-8442-4358	02-9347-5784
2		Oct	28	16:35	136.6	-36.7	-0.8372			10-9446-3954	10-4215-8111
3	2021	Feb	24	17:30	218.2	44.89	1.024			11-4316-4077	02-1492-4727
4		Jun	30	16:05	254.9	81.61	1.862			01-4075-9626	19-2668-9340
5		Aug	10	14:30	193.2	19.89	0.4537			20-1130-3481	09-5748-8802
6		Nov	3	17:15	211.2	37.95	0.8658			01-2577-3416	13-6085-8539
7		Dec	9	17:20	192.4	19.14	0.4368			15-9690-9061	01-9685-6201
8	2022	Apr	12	17:35	156.9	-16.38	-0.3738			07-5453-0338	19-2336-1516
9		May	10	17:15	180.3	6.95	0.1586			13-4082-2694	00-0925-3219
10		Sep	8	18:45	132	-41.35	-0.9434			01-2610-4728	13-4659-9428
11		Oct	18	15:45	213.3	39.97	0.9118			04-3098-2404	19-6506-1409
12		Dec	1	18:15	221.9	48.61	1.109			10-3325-3262	00-5431-5878
13			8	16:42	186.6	13.31	0.3036			14-7600-8927	07-7357-4624
14			14	17:05	192.4	19.14	0.4368			05-3190-6319	15-9199-6379
15	2023	Feb	9	15:55	160.8	-12.45	-0.2841			10-2868-1341	17-9597-6471
16			23	16:20	198.2	24.93	0.5688			20-7336-4922	10-8152-4222
17		Jun	29	10:05	141.4	-31.88	-0.7273			18-3139-7315	15-1717-4813
18		Nov	1	15:35	98.92	-74.38	-1.697			04-9858-3754	04-0354-7731
19		Dec	14	15:40	88.54	-84.76	-1.934			03-9728-8300	18-2064-3811
20	2024	Jun	20	18:15	116.5	-56.84	-1.297			02-4364-8651	04-2415-5001
21		Jul	10	16:40	139.5	-33.79	-0.7709			19-9326-0820	09-9824-5473

CETIS QC Plot

Report Date: 08 Jul-24 11:35 (1 of 1)

Mysid 96-h Acute Survival Test — **Nautilus Environmental (CA)**

Test Type:	Survival (96h)	**Organism:**	Americamysis bahia	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-012 (2002)	**Endpoint:**	96h Survival Rate	**Source:**	Reference Toxicant-REF



Mean:	206.8	**Count:**	20	**-2s Warning Limit:**	129	**-3s Action Limit:**	90.7
Sigma:	38.71	**CV:**	18.70%	**+2s Warning Limit:**	284	**+3s Action Limit:**	323

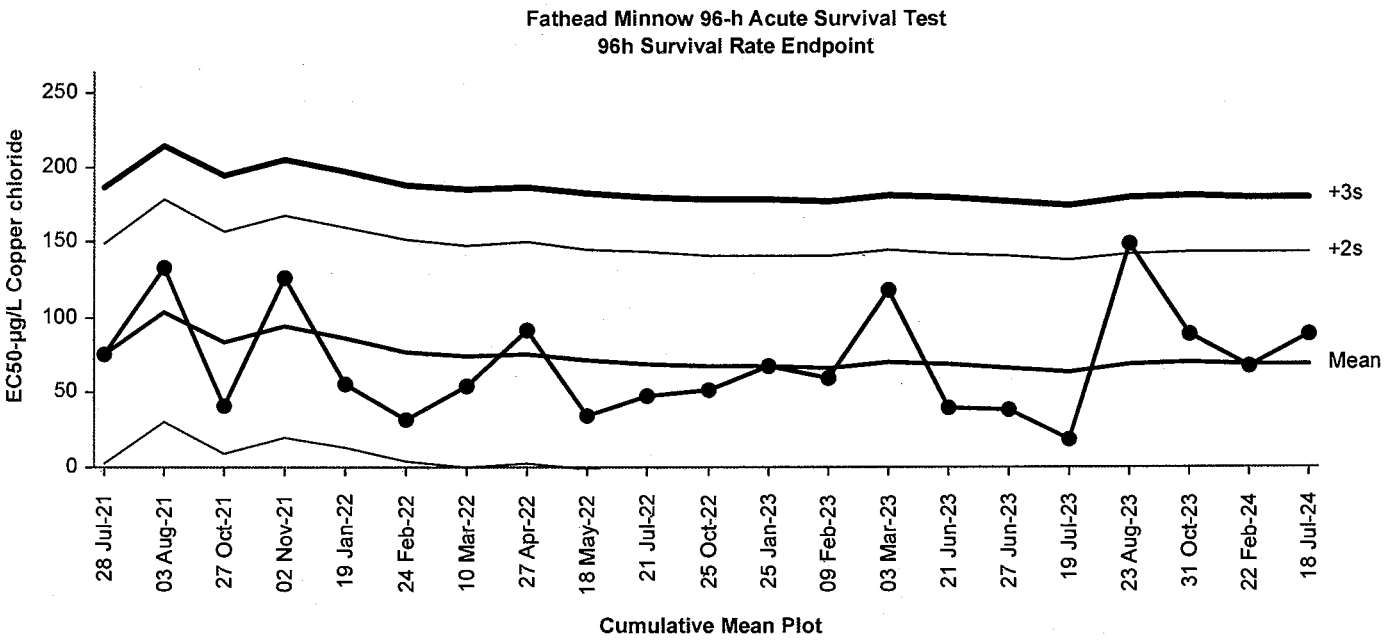
Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2022	Dec	1	17:15	221.9	15.11	0.3904			12-7728-2441	03-3819-4975
2			8	17:00	229.7	22.94	0.5926			10-3057-7335	14-3192-0583
3	2023	Jan	12	16:40	243.5	36.68	0.9475			06-4134-1621	13-1048-4946
4		Feb	9	16:00	158	-48.77	-1.26			20-3360-0175	15-2448-4691
5		Mar	8	17:35	188.5	-18.27	-0.4719			07-5876-1441	05-3317-1681
6		Apr	6	15:50	254.9	48.11	1.243			17-9538-5237	02-2975-9120
7		May	4	15:05	229.7	22.94	0.5926			00-3120-7404	17-2182-4484
8		Jun	7	16:55	255.8	48.96	1.265			19-0115-6833	15-8591-8623
9		Jul	13	17:40	229.1	22.29	0.5758			14-4572-0919	05-7885-4188
10		Aug	16	16:20	168.5	-38.26	-0.9884			12-5126-9673	21-3168-1490
11		Sep	14	16:10	234.5	27.72	0.7162			12-4490-6342	05-6140-1388
12		Oct	11	16:05	180.3	-26.55	-0.6859			10-6071-4883	06-9811-9527
13		Nov	1	15:20	214.4	7.555	0.1952			08-5051-1943	10-7508-3629
14		Dec	13	15:05	207.1	0.253	0.006536			13-6574-4295	15-2299-7241
15	2024	Jan	11	16:15	139.3	-67.54	-1.745			12-2714-7247	15-6117-3790
16		Feb	23	16:15	221.9	15.11	0.3904			04-1438-8638	01-9398-5662
17		Mar	7	16:15	233.6	26.82	0.6927			13-7999-6305	13-1030-9848
18		Apr	3	16:55	125.9	-80.93	-2.091	(-)		09-6518-5757	03-6272-3374
19		May	9	20:00	237.4	30.6	0.7904			13-3196-3934	19-6071-3777
20		Jun	5	17:10	162.9	-43.93	-1.135			10-6654-5789	01-1494-0415
21		Jul	3	15:20	225.4	18.59	0.4802			03-4361-4751	13-6922-9955

Freshwater Species

Fathead Minnow 96-h Acute Survival Test **Nautilus Environmental (CA)**

Test Type:	Survival (96h)	**Organism:**	Pimephales promelas	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-012 (2002)	**Endpoint:**	96h Survival Rate	**Source:**	Reference Toxicant-REF



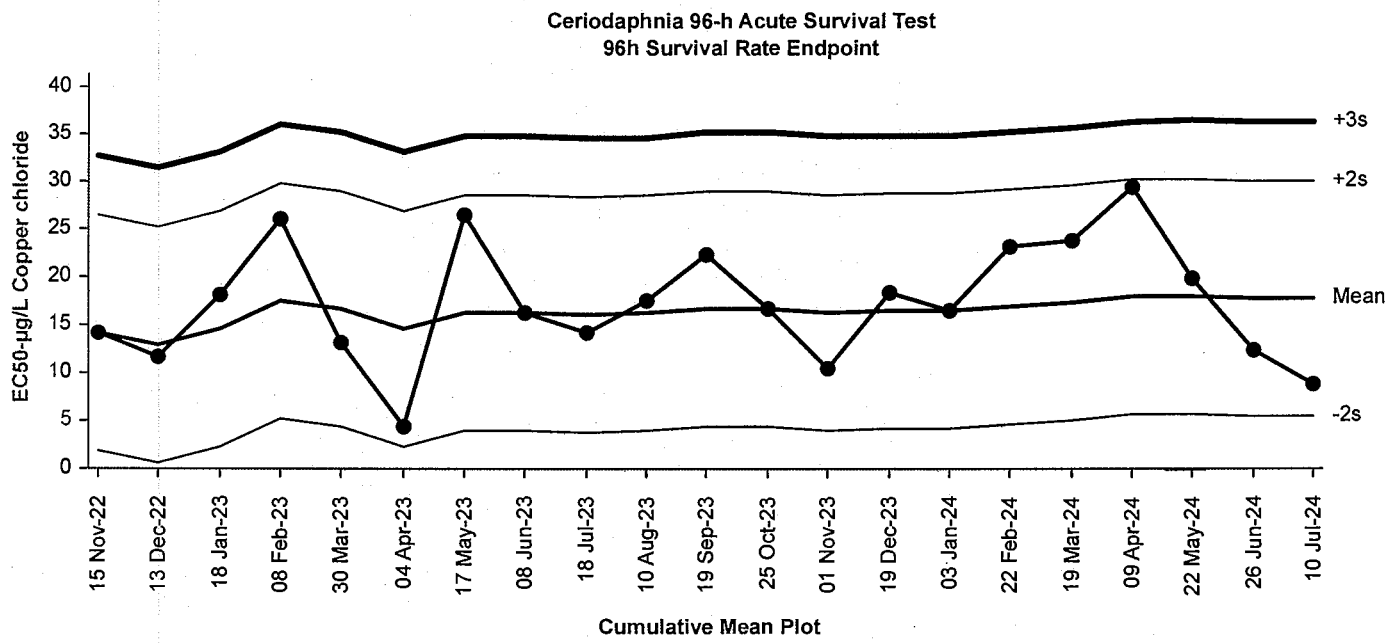
Mean:	69.93	**Count:**	20	**-2s Warning Limit:**	-3.79	**-3s Action Limit:**	-40.6
Sigma:	36.86	**CV:**	52.70%	**+2s Warning Limit:**	144	**+3s Action Limit:**	181

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2021	Jul	28	17:30	75.92	5.987	0.1624			04-8837-0734	00-2418-4039
2		Aug	3	15:30	133.2	63.25	1.716			01-5905-1678	06-9846-1307
3		Oct	27	17:55	41.65	-28.28	-0.7672			04-8454-9323	21-2291-3266
4		Nov	2	14:55	126.6	56.64	1.537			02-5381-8973	13-3748-9296
5	2022	Jan	19	14:00	56.14	-13.79	-0.374			20-2049-9334	07-9545-0483
6		Feb	24	16:10	32.6	-37.33	-1.013			17-0760-7068	11-1555-4113
7		Mar	10	15:55	54.03	-15.9	-0.4314			12-1339-4334	02-2933-1085
8		Apr	27	15:10	91.63	21.7	0.5886			04-5378-2545	07-8420-2882
9		May	18	16:55	35.22	-34.71	-0.9416			18-5661-4183	07-3447-2353
10		Jul	21	17:45	48.45	-21.48	-0.5829			07-1587-3363	06-2880-7627
11		Oct	25	15:50	52.4	-17.53	-0.4757			06-6314-9915	03-2187-1829
12	2023	Jan	25	18:01	67.41	-2.519	-0.06834			19-0784-2205	08-9150-6242
13		Feb	9	16:50	59.42	-10.51	-0.2851			06-2469-6093	00-8217-4012
14		Mar	3	16:35	118.4	48.5	1.316			05-5862-3435	03-5254-4793
15		Jun	21	14:55	40.38	-29.55	-0.8018			03-3580-9094	00-4894-4439
16			27	14:30	39.27	-30.66	-0.8317			11-9788-2598	16-4880-2585
17		Jul	19	16:55	19.16	-50.77	-1.377			12-1198-2690	17-1336-5643
18		Aug	23	14:10	149	79.09	2.146	(+)		16-5077-3459	12-7429-9907
19		Oct	31	16:30	89.22	19.29	0.5233			14-5248-4726	19-3257-9871
20	2024	Feb	22	15:15	68.56	-1.375	-0.03729			01-0897-6283	16-1209-7268
21		Jul	18	16:50	89.91	19.98	0.5419			17-5016-8139	09-1007-2327

Ceriodaphnia 96-h Acute Survival Test — **Nautilus Environmental (CA)**

Test Type:	Survival (96h)	**Organism:**	Ceriodaphnia dubia	**Material:**	Copper chloride
Protocol:	EPA/821/R-02-012 (2002)	**Endpoint:**	96h Survival Rate	**Source:**	Reference Toxicant-REF



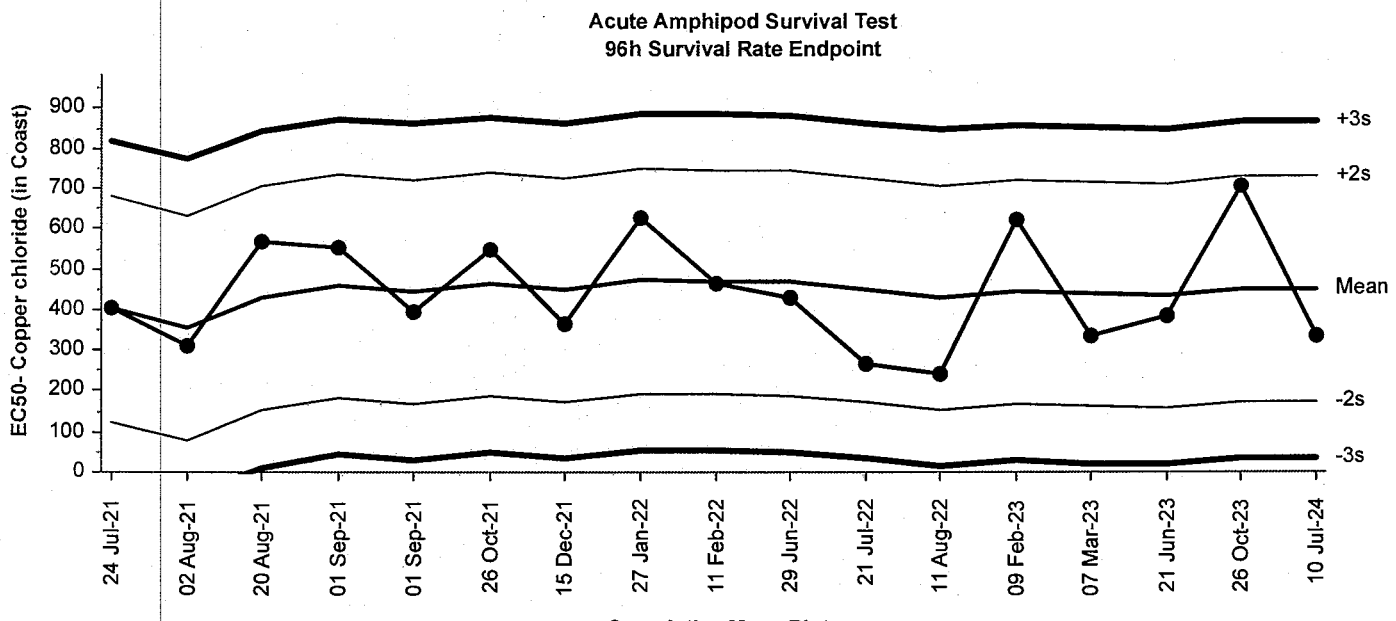
Mean:	17.66	**Count:**	20	**-2s Warning Limit:**	5.38	**-3s Action Limit:**	-0.759
Sigma:	6.14	**CV:**	34.80%	**+2s Warning Limit:**	29.9	**+3s Action Limit:**	36.1

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2022	Nov	15	15:05	14.14	-3.518	-0.5729			00-5461-1467	19-6868-6561
2		Dec	13	15:05	11.7	-5.958	-0.9704			12-0086-6428	08-7195-5995
3	2023	Jan	18	13:55	18.03	0.365	0.05945			09-7538-0685	07-8161-1407
4		Feb	8	15:20	25.96	8.298	1.351			17-7377-6097	02-7722-6792
5		Mar	30	14:50	13.2	-4.465	-0.7272			00-8046-0950	18-8859-9281
6		Apr	4	15:20	4.318	-13.34	-2.173	(-)		07-0540-7813	08-4239-9426
7		May	17	15:30	26.39	8.73	1.422			04-0322-0654	15-8704-5627
8		Jun	8	15:35	16.25	-1.415	-0.2304			04-4576-9053	18-8894-4384
9		Jul	18	15:55	14.14	-3.518	-0.5729			09-9837-6211	11-0291-4351
10		Aug	10	16:00	17.41	-0.249	-0.04055			10-9457-1593	13-6631-9515
11		Sep	19	15:20	22.19	4.531	0.738			05-7527-0059	21-3108-9916
12		Oct	25	15:30	16.53	-1.131	-0.1842			12-6281-0744	01-0251-4169
13		Nov	1	14:45	10.35	-7.307	-1.19			11-4473-5077	14-7590-4791
14		Dec	19	15:15	18.26	0.5966	0.09717			18-6862-1657	12-1996-9983
15	2024	Jan	3	14:30	16.32	-1.337	-0.2178			06-2149-8718	18-3000-4863
16		Feb	22	15:50	22.97	5.314	0.8655			01-3884-2391	04-2542-0939
17		Mar	19	15:10	23.78	6.124	0.9974			00-0740-9301	09-1193-6954
18		Apr	9	17:40	29.28	11.62	1.893			09-7844-4955	13-5203-1001
19		May	22	14:35	19.69	2.031	0.3308			18-6585-6518	08-0701-7695
20		Jun	26	18:20	12.31	-5.349	-0.8711			09-5737-7257	05-1487-6057
21		Jul	10	14:50	8.763	-8.897	-1.449			18-9205-3518	07-4906-0524

Acute Amphipod Survival Test **Nautilus Environmental (CA)**

Test Type: Survival (96h) **Organism:** Hyalella azteca **Material:** Copper chloride (in Coast)
Protocol: EPA/821/R-02-012 (2002) **Endpoint:** 96h Survival Rate **Source:** Reference Toxicant-REF



Mean:	450.8	**Count:**	16	**-2s Warning Limit:**	174	**-3s Action Limit:**	35.6
Sigma:	138.4	**CV:**	30.70%	**+2s Warning Limit:**	728	**+3s Action Limit:**	866

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2021	Jul	24	10:35	402.1	-48.74	-0.3522			01-9158-2894	04-9657-5582
2		Aug	2	18:10	311.1	-139.7	-1.009			12-1293-8948	18-5258-0274
3			20	16:45	568.8	118	0.8523			13-6419-6120	05-7250-0573
4		Sep	1	14:40	551	100.2	0.7242			16-9611-9317	12-1127-8026
5			1	16:00	393.8	-57.01	-0.4119			05-5529-3044	09-1102-6160
6		Oct	26	19:00	549.6	98.78	0.7137			18-1063-1366	05-2379-1035
7		Dec	15	18:25	366.8	-84	-0.6069			20-2781-7958	18-9516-9975
8	2022	Jan	27	17:30	625.4	174.6	1.261			18-9392-5843	01-5172-6206
9		Feb	11	17:35	463.8	13.04	0.09424			14-7873-5968	19-5575-1394
10		Jun	29	17:00	431	-19.75	-0.1427			03-3409-7356	15-5020-6688
11		Jul	21	16:27	264.5	-186.3	-1.346			05-1323-0021	05-5852-2990
12		Aug	11	18:55	240.4	-210.4	-1.52			20-9606-1183	03-0306-6180
13	2023	Feb	9	17:15	619.4	168.6	1.218			20-3293-9827	10-5332-3305
14		Mar	7	16:30	334.9	-115.9	-0.8373			20-0160-8722	08-8166-1553
15		Jun	21	15:20	384	-66.78	-0.4825			18-4411-2589	06-3764-0545
16		Oct	26	16:00	706.2	255.4	1.845			10-2636-7152	05-7689-5230
17	2024	Jul	10	16:45	335.6	-115.2	-0.8327			11-3450-9982	15-0106-0716