Appendix A

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

August 22, 2012

Mr. EJ Piliaris, General Manager
Hardel Mutual Plywood, Inc.
PO Box 540
Chehalis, WA 98532

RE: Satisfaction of Agreed Order No. DE 4108: Hardel Mutual Plywood, FS #75128579

This letter is to notify Hardel Mutual Plywood, Inc. that the above referenced Order has been satisfied under Chapter 173-340 WAC, the Model Toxics Control Act (MTCA), for the above site located at 1210 West Bay Drive NW, Olympia, WA.

As you are aware, the Washington State Department of Ecology (Ecology) has overseen the investigation, remedial activities, and groundwater monitoring that has taken place at the Hardel Mutual Plywood Site located at 1210 West Bay Drive in Olympia, WA. The remedial activities have taken place under an Agreed Order with Ecology (No. DE 4108), and in accordance with the tasks specified in the Cleanup Action Plan of 2012.

Under the Agreed Order, soil cleanup activities included:

- Removing and crushing concrete building foundations.
- Removing contaminated soil and filling the areas with clean soil and then one foot of clean recycled crushed concrete.
- Pumping and treating groundwater from areas where soil was removed.
- Removing free-floating contaminants.
- Sampling soil to make sure all contaminated soil was removed.

In addition, post-cleanup groundwater monitoring was performed for one year to confirm MTCA cleanup levels had been achieved.

Ecology issued a Fact Sheet dated March, 2012, stating preliminary approval of the remedial action for the site, subject to a 30-day public comment period regarding the completion of the site cleanup and removal from the Hazardous Sites List. Only one comment was received by Ecology during the comment period, which ended April 20, 2012.

This completes the remedial action requirements of Agreed Order #DE 4108, and therefore no additional remedial action is necessary at this site unless new or different information becomes known.

Ecology will update its database to reflect this determination. This site will not appear in future publications of the Hazardous Sites List. However, please note that because your actions were not conducted under a consent decree with Ecology, this letter is written pursuant to RCW 70.105D.030(1)(j) and does not constitute a settlement by the state under RCW 70.105D.040(4) and is not binding on Ecology.

Please call me at (360) 407-7115, or email Guy Barrett at Gbar461@ecy.wa.gov, if you have any questions.

Sincerely,

Rebecca S. Lawson

Rebecca S. Lawson, P.E., LHG
Regional Section Manager
Southwest Regional Office
Toxics Cleanup Program

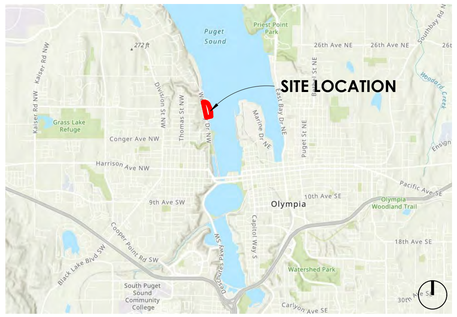
RSL/GB/ksc:Hardel AO Satisfaction

By certified mail: (7009 3410 0000 1273 0104)

cc: Suzanne Dudziak, Greylock Consulting, LLC
David J. Wild, Hardel Mutual Plywood, Inc.
Katherine Scott, Ecology

Appendix B

VICINITY MAP - SITE LOCATION



SITE LEGEND CONTEXT 100'

- PROPERTY LINE
- DASHED LINE INDICATES BUILDING ABOVE, TYPICAL.
- 100' CONTEXT
- FOOTPRINT OF PROJECT STRUCTURE
- EXISTING ADJACENT BUILDINGS
- NEW LANDSCAPE (PERVIOUS) - SEE LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION
- EXISTING LANDSCAPE
- NEW ASPHALT HARDSCAPE (IMPERVIOUS)
- NEW CONCRETE HARDSCAPE (IMPERVIOUS)
- EXISTING SIDEWALK & ROADS
- POOL
- 1 PHILIP KRATZ LAW OFFICE
- 2 SUNSET INSURANCE
- 3 PRIVATE RESIDENCE
- 4 ADJACENT ABANDONED STRUCTURES
- 5 CREDIT RESOURCES OF WASHINGTON & DWS INVESTMENTS

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

CONTEXT SITE PLAN

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | 06/01/21

1 SITE PLAN -CONTEXT 100'
1" = 80'-0"

A010

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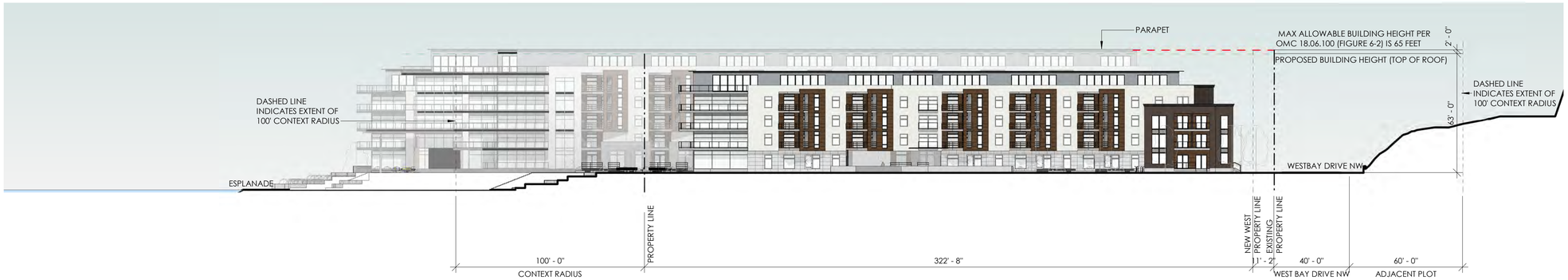
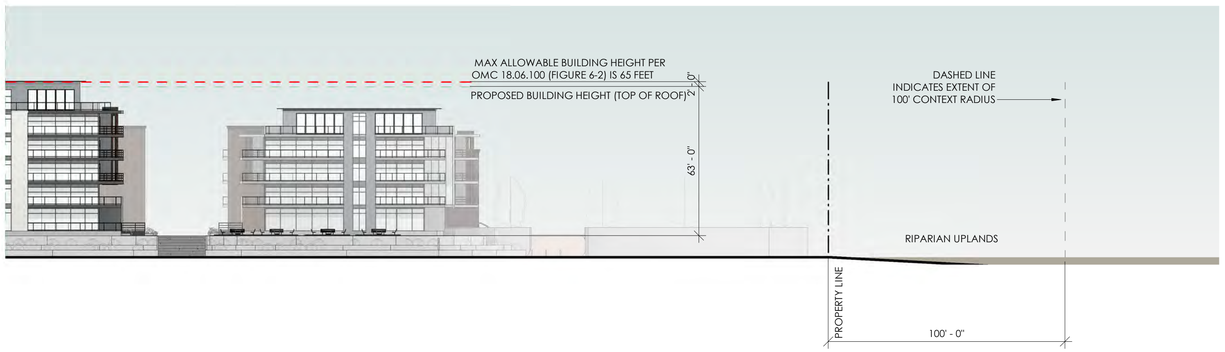


1 NORTH ELEVATION - 100' CONTEXT

1/32" = 1'-0"

2 EAST ELEVATION - 100' CONTEXT A

1/32" = 1'-0"



3 EAST ELEVATION - 100' CONTEXT B

1/32" = 1'-0"

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

CONTEXT ELEVATIONS

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | 06/01/21

A011

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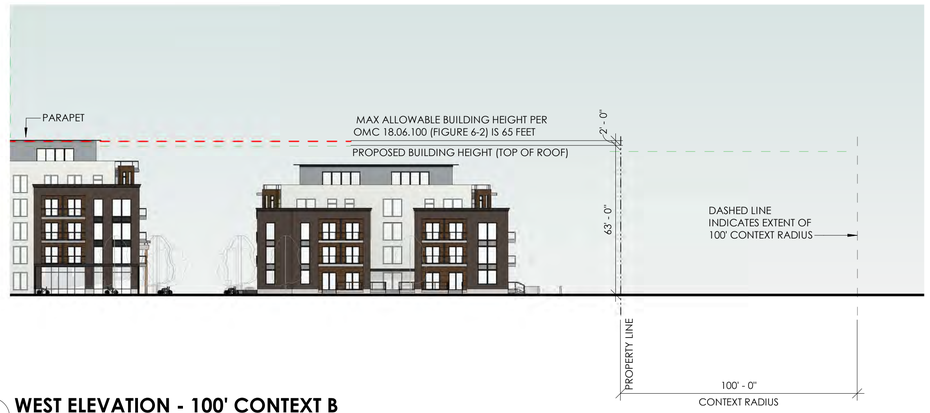
1 SOUTH ELEVATION - 100' CONTEXT

1/32" = 1'-0"

2 WEST ELEVATION - 100' CONTEXT A

1/32" = 1'-0"



3 WEST ELEVATION - 100' CONTEXT B

1/32" = 1'-0"

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

CONTEXT ELEVATIONS

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | 06/01/21

A012

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LOOKING NORTHEAST TOWARDS OLYMPIC MOUNTAINS

LOOKING EAST TOWARDS PORT OF OLYMPIA

LOOKING SOUTHEAST TOWARDS DOWNTOWN & CAPITOL DOME

LOOKING NORTHWEST TOWARDS EXISTING OFFICE BUILDING

LOOKING WEST TOWARDS EXISTING OFFICE BUILDINGS

LOOKING SOUTHWEST TOWARDS EXISTING RESIDENCE

EXISTING ADJACENT ABANDONED STRUCTURE LOCATED SOUTH OF SITE

EXISTING ADJACENT ABANDONED STRUCTURE LOCATED SOUTH OF SITE

VIEW FROM WOODARD AVE NW DRIVEWAY

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

CONTEXT IMAGES

WEST BAY DRIVE | OLYMPIA, WA
SCHEMATIC DESIGN | 06/01/21

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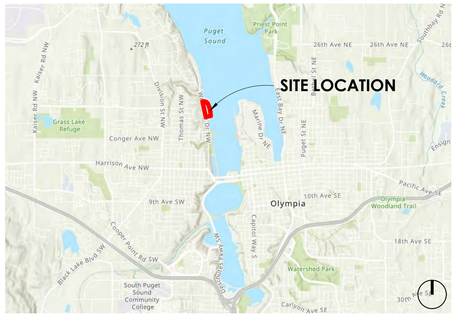
VICINITY MAP - SITE LOCATION



SITE INFORMATION

PARCEL NO. 72600200100 & 91013100000
ZONING: UW (URBAN WATERFRONT)
LOT AREA: 7.00 ACRES (355 SF)

SITE ADDRESS: 1210 WEST BAY DRIVE NW
OLYMPIA, WA 09502

ABBREVIATION LEGAL: SCHNEIDER LOT 1 BLK 2 LESS S 200F TGW PT HURD DLC DAF: COM SE COR DLC W 95F N18-14W 2.215 CH; E 20F; N16-53W 140.5 F; W 47.5F; N10-45W 120F; W 130F; N10--45W 60F; E 120F; N10-

EXISTING SITE:

TOTAL SITE AREA:	353,006 SF
TOTAL LANDSCAPE AREA:	0 SF
TOTAL HARD SURFACE COVERAGE:	353,006 SF

PROPOSED SITE:

PROPOSED BUILDING FOOTPRINT (IMPERVIOUS):	111,812 SF
PROPOSED PARKING AREA (PLAZA LEVEL, IMPERVIOUS):	62,087 SF
LANDSCAPE AREA (PERVIOUS):	179,107 SF

LOT OCCUPANCY:

BUILDING FOOTPRINT/LOT AREA < 60%
111,812 SF/421,144 SF = 32 % < 60% = OK

VIEW PROTECTION CORRIDOR

VIEW PROTECTION PER OMC 18.06.100.ciii
AND HEIGHT RESTRICTIONS

TOTAL HORIZONTAL DISTANCE ALONG WEST BAY DRIVE = **921'**

VIEW BLOCKAGE AND HEIGHT INCREASES
INCLUDED WATERFRONT TRAIL
INCLUDED WATERFRONT PARK

55% VIEW BLOCKAGE = **507'**
30% REQUIRED OPENNESS= **276'**
PROVIDED **310'**

ALLOWABLE HEIGHT INCREASE= **62' NO + 2 STORIES**

BUILDING INFORMATION

BUILDING	AREA	UNITS	COMMERCIAL
1	121,329 SF	88	0 SF
2	146,985 SF	91	8,970 SF
3	153,170 SF	94	2,255 SF
4	178,509 SF	125	0 SF
5	115,568 SF	80	0 SF
TOTAL	**715,561 SF**	**478**	**11,225 SF**

1 **SITE PLAN- CONCEPT**
1" = 50'-0"

0' 30' 60' 120'

PARKING SUMMARY

VEHICLE REQUIREMENTS PER OMC18.38.100

PHASE 1:

OFF STREET PARKING SPACES REQUIRED PER OMC TABLE 18.38.100

(11,225 SF)RESTAURANT/CAFE @ 10 PER 1,000 SF =	112 SPACES
(25) STUDIOS x 1 =	25 SPACES
(160) MULTIFAMILY DWELLING x 1.5 =	240 SPACES
TOTAL SPACES REQUIRED =	**377 SPACES**

VEHICLE PARKING PROPOSED

OFF STREET PARKING LOWER LEVEL =	265 SPACES
OFF STREET PARKING PLAZA LEVEL =	115 SPACES
TOTAL SPACES PROVIDED =	380 SPACES

30% OF ALL SPACES CAN BE COMPACT

REQUIRED (MAXIMUM) 805 x 0.30 =	113 SPACES
PROVIDED =	114 SPACES

ACCESSIBLE PARKING REQUIRED(OMC18.38.120)

REQUIRED (2% OF ALL SPACES PER 501-1,000)=	8 SPACES
PROVIDED =	10 SPACES

5% OF ALL SPACES SHALL BE ELECTRICAL VEHICLE SPACES=

REQUIRED =	19 SPACES
PROVIDED =	19 SPACES

LONG TERM BICYCLE STORAGE REQUIREMENTS (OMC 18.38.TABLE38.01)

(25) STUDIOS @ 0 STORAGE SPACE PER UNIT=	0 SPACES
(160) MULTIFAMILY DWELLING UNITS @ 1 STORAGE SPACE PER UNIT =	160 SPACES
TOTAL FOR ALL THE SPACES PROVIDED =	160 SPACES

SHORT TERM BICYCLE STORAGE REQUIREMENTS 2 MIN (OMC 18.38.TABLE38.01)

(25) STUDIOS @ 1/10 UNIT=	3 SPACES
(160) MULTIFAMILY DWELLING UNITS @ 1/10 UNIT =	16 SPACES
TOTAL FOR ALL THE SPACES PROVIDED =	19 SPACES

PHASE 2:

OFF STREET PARKING SPACES REQUIRED PER OMC TABLE 18.38.100

(32) STUDIOS x 1 =	32 SPACES
(173) MULTIFAMILY DWELLING x 1.5 =	260 SPACES
TOTAL SPACES REQUIRED =	**292 SPACES**

VEHICLE PARKING PROPOSED

OFF STREET PARKING LOWER LEVEL =	300 SPACES
OFF STREET PARKING PLAZA LEVEL =	0 SPACES
TOTAL SPACES PROVIDED =	300 SPACES

30% OF ALL SPACES CAN BE COMPACT

REQUIRED (MAXIMUM) 292 x 0.30 =	88 SPACES
PROVIDED =	90 SPACES

ACCESSIBLE PARKING REQUIRED(OMC18.38.120)

REQUIRED (2% OF ALL SPACES PER 501-1,000)=	6 SPACES
PROVIDED =	10 SPACES

5% OF ALL SPACES SHALL BE ELECTRICAL VEHICLE SPACES=

REQUIRED =	15 SPACES
PROVIDED =	15 SPACES

LONG TERM BICYCLE STORAGE REQUIREMENTS (OMC 18.38.TABLE38.01)

(32) STUDIOS @ 0 STORAGE SPACE PER UNIT=	0 SPACES
(173) MULTIFAMILY DWELLING UNITS @ 1 STORAGE SPACE PER UNIT =	173 SPACES
TOTAL FOR ALL THE SPACES PROVIDED =	173 SPACES

SHORT TERM BICYCLE STORAGE REQUIREMENTS 2 MIN (OMC 18.38.TABLE38.01)

(32) STUDIOS @ 1/10 UNIT=	3 SPACES
(173) MULTIFAMILY DWELLING UNITS @ 1/10 UNIT =	17 SPACES
TOTAL FOR ALL THE SPACES PROVIDED =	20 SPACES

PHASE 3:

OFF STREET PARKING SPACES REQUIRED PER OMC TABLE 18.38.100

(15) STUDIOS x 1 =	15 SPACES
(73) MULTIFAMILY DWELLING x 1.5 =	110 SPACES
TOTAL SPACES REQUIRED =	**125 SPACES**

VEHICLE PARKING PROPOSED

OFF STREET PARKING LOWER LEVEL =	125 SPACES
OFF STREET PARKING PLAZA LEVEL =	0 SPACES
TOTAL SPACES PROVIDED =	125 SPACES

30% OF ALL SPACES CAN BE COMPACT

REQUIRED (MAXIMUM) 125 x 0.30 =	38 SPACES
PROVIDED =	38 SPACES

ACCESSIBLE PARKING REQUIRED(OMC18.38.120)

REQUIRED (2% OF ALL SPACES PER 501-1,000)=	3 SPACES
PROVIDED =	8 SPACES

5% OF ALL SPACES SHALL BE ELECTRICAL VEHICLE SPACES=

REQUIRED =	6 SPACES
PROVIDED =	6 SPACES

LONG TERM BICYCLE STORAGE REQUIREMENTS (OMC 18.38.TABLE38.01)

(15) STUDIOS @ 0 STORAGE SPACE PER UNIT=	0 SPACES
(73) MULTIFAMILY DWELLING UNITS @ 1 STORAGE SPACE PER UNIT =	73 SPACES
TOTAL FOR ALL THE SPACES PROVIDED =	73 SPACES

SHORT TERM BICYCLE STORAGE REQUIREMENTS 2 MIN (OMC 18.38.TABLE38.01)

(15) STUDIOS @ 1/10 UNIT=	2 SPACES
(73) MULTIFAMILY DWELLING UNITS @ 1/10 UNIT =	7 SPACES
TOTAL FOR ALL THE SPACES PROVIDED =	9 SPACES

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

SITE PLAN

WEST BAY DRIVE | OLYMPIA, WA
SCHEMATIC DESIGN | 06/01/21

A100

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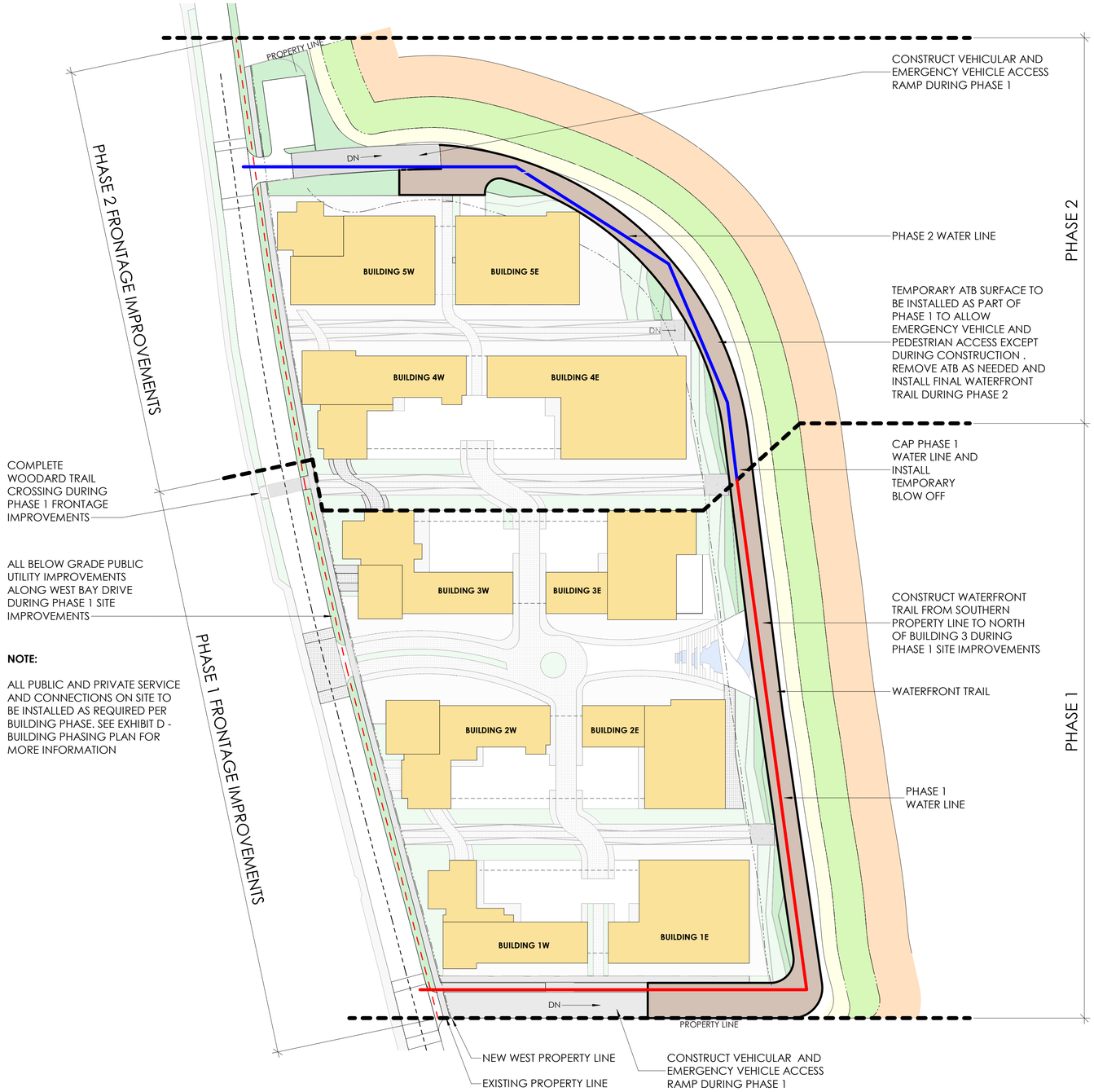

NOTE:

ALL PUBLIC AND PRIVATE SERVICE AND CONNECTIONS ON SITE TO BE INSTALLED AS REQUIRED PER BUILDING PHASE. SEE EXHIBIT D - BUILDING PHASING PLAN FOR MORE INFORMATION

PHASE 2 NARRATIVE

1. CONSTRUCTION OF REMAINING SHORELINE IMPROVEMENTS ALONG PROJECT BOUNDARY
2. CONSTRUCTION OF REMAINING FRONTAGE IMPROVEMENTS
3. **CONSTRUCTION OF REQUIRED PUBLIC UTILITY INFRASTRUCTURE RELATED TO IMPROVEMENTS FOR BUILDINGS 4 (4W AND 4E) AND 5 (5W AND 5E).**

SHORELINE PHASING

1. ENVIRONMENTAL PERMITS FOR SHORELINE RESTORATION WILL BE SUBMITTED FOR BOTH PHASE 1 AND PHASE 2 SIMULTANEOUSLY
2. NO CONSTRUCTION WILL OCCUR PRIOR TO APPROVAL OF ENVIRONMENTAL PERMITS FOR SHORELINE RESTORATION
3. SHORELINE RESTORATION WILL OCCUR IN TWO PHASES AS NOTED IN THE SITE PHASING DRAWING ON THIS SHEET
4. UPON APPROVAL OF ENVIRONMENTAL PERMITS FOR SHORELINE RESTORATION CONSTRUCTION OF SITE AND BUILDING IMPROVEMENTS FOR PHASE 1 WILL COMMENCE.
5. UPON COMPLETION OF PHASE 1 SHORELINE RESTORATION AND PHASE 1 SITE AND BUILDING IMPROVEMENTS PHASE 2 SHORELINE RESTORATION AND PHASE 2 SITE AND BUILDING **IMPROVEMENTS** WILL COMMENCE.

PHASE 1 NARRATIVE

1. **CONSTRUCTION OF FRONTAGE IMPROVEMENTS ALONG WEST BAY DRIVE SOUTHERN PROPERTY BOUNDARY TO THE NORTH OF THE WOODARD TRAIL PEDESTRIAN CROSSING.**
2. **CONSTRUCT BELOW GRADE UTILITY IMPROVEMENTS ALONG WEST BAY DRIVE ALONG THE ENTIRETY OF WESTERN PROPERTY BOUNDARY.**
3. CONSTRUCTION OF SHORELINE ENHANCEMENTS FROM SOUTHERN PROPERTY LINE TO NORTHERN EXTENT OF PHASE 1
4. CONSTRUCTION OF WATERFRONT TRAIL ALONG SOUTH, EAST, AND NORTHERN PROPERTY
5. CONSTRUCTION OF WATER LINE TO THE NORTHERN EXTENT OF PHASE 1
6. **CONSTRUCTION OF ASSOCIATED PUBLIC UTILITY INFRASTRUCTURE RELATED TO IMRPOVEMENTS FOR BUILDINGS 2 (2W AND 2E) AND 3 (3W AND 3E) AND FUTURE CONSTRUCTION OF BUILDING 1 (1W AND 1E).**

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

SITE PHASING PLAN

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | **10/30/20**

0' 30' 60' 120'

A103.1

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PHASE 2 NARRATIVE

1. CONSTRUCTION OF PLAZA LEVEL FROM NORTH OF BUILDING 3 (3W AND 3E)
2. CONSTRUCTION OF BUILDING 4 (4E AND 4W), BUILDING 5 (5E AND 5W)
3. CONSTRUCTION OF PARKING LEVEL BELOW BUILDING 4 (4E AND 4W) AND BUILDING 5 (5E AND 5W)
4. CONSTRUCTION OF ADJACENT SITE AND PLAZA LANDSCAPING, HARDSCAPING AND PEDESTRIAN AMENITIES

PHASE 1 NARRATIVE

1. CONSTRUCTION OF PLAZA LEVEL FROM SOUTH OF BUILDING 2 (2W AND 2E) TO THE NORTH OF BUILDING 3 (3W AND 3E)
2. CONSTRUCTION OF BUILDING 2 (2E AND 2W)AND BUILDING 3 (3E AND 3W)
3. CONSTRUCTION OF PARKING LEVEL BELOW BUILDING 2 (2W AND 2E) AND 3 (3W AND 3E)
4. CONSTRUCTION OF ADJACENT SITE AND PLAZA LANDSCAPING, HARDSCAPING AND PEDESTRIAN AMENITIES
5. CONSTRUCT SOLID WASTE FACILITIES ADJACENT TO NORTHERN VEHICULAR RAMP. INTERNAL SOLID WASTE MANAGEMENT BY OWNER.
6. EMERGENCY VEHICLE ACCESS CONSTRUCTED DURING PHASE 1 AND MAINTAINED THROUGHOUT CONSECUTIVE PHASES

PHASE 3 NARRATIVE

1. CONSTRUCTION OF PLAZA LEVEL FROM SOUTH OF BUILDING 2 (2W AND 2E) TO THE SOUTH PROPERTY LINE
2. CONSTRUCTION OF BUILDING 1(1W AND 1E)
3. CONSTRUCTION OF PARKING LEVEL BELOW BUILDING 1 (1W AND 1E)
4. CONSTRUCTION OF ADJACENT SITE AND PLAZA LANDSCAPING, HARDSCAPING AND PEDESTRIAN AMENITIES

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

BUILDING PHASING PLAN

WEST BAY DRIVE | OLYMPIA, WA
SCHEMATIC DESIGN | 10/12/20

0' 30' 60' 120'

A103.2

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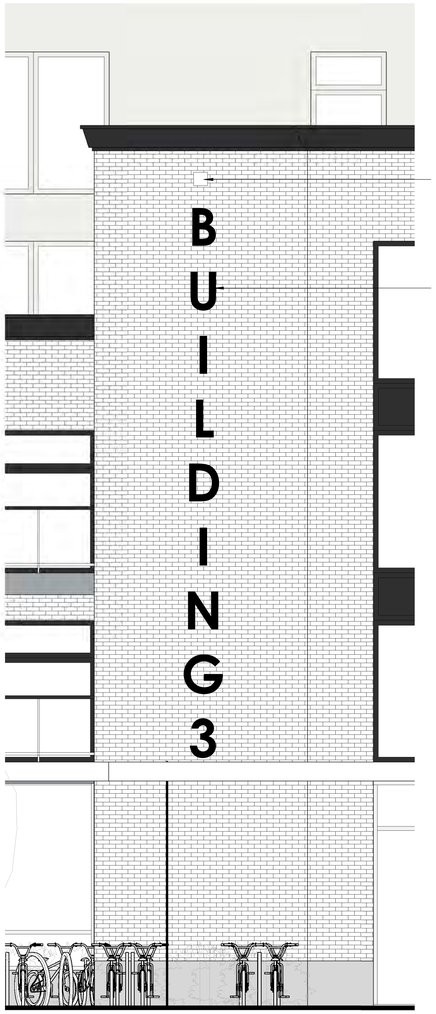
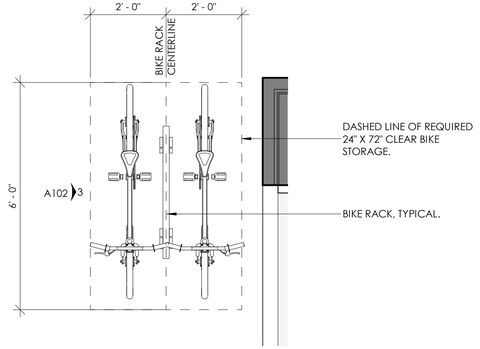
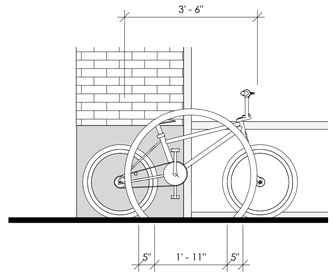


1 **BUILDING SIGNAGE**
1/4" = 1'-0"



2 **SHORT TERM BIKE STORAGE - PLAN**
1/2" = 1'-0"



3 **SHORT TERM BIKE STORAGE - SIDE ELEVATION**
1/2" = 1'-0"

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

SITE FEATURES

WEST BAY DRIVE | OLYMPIA, WA
SCHEMATIC DESIGN | 06/01/21

A102

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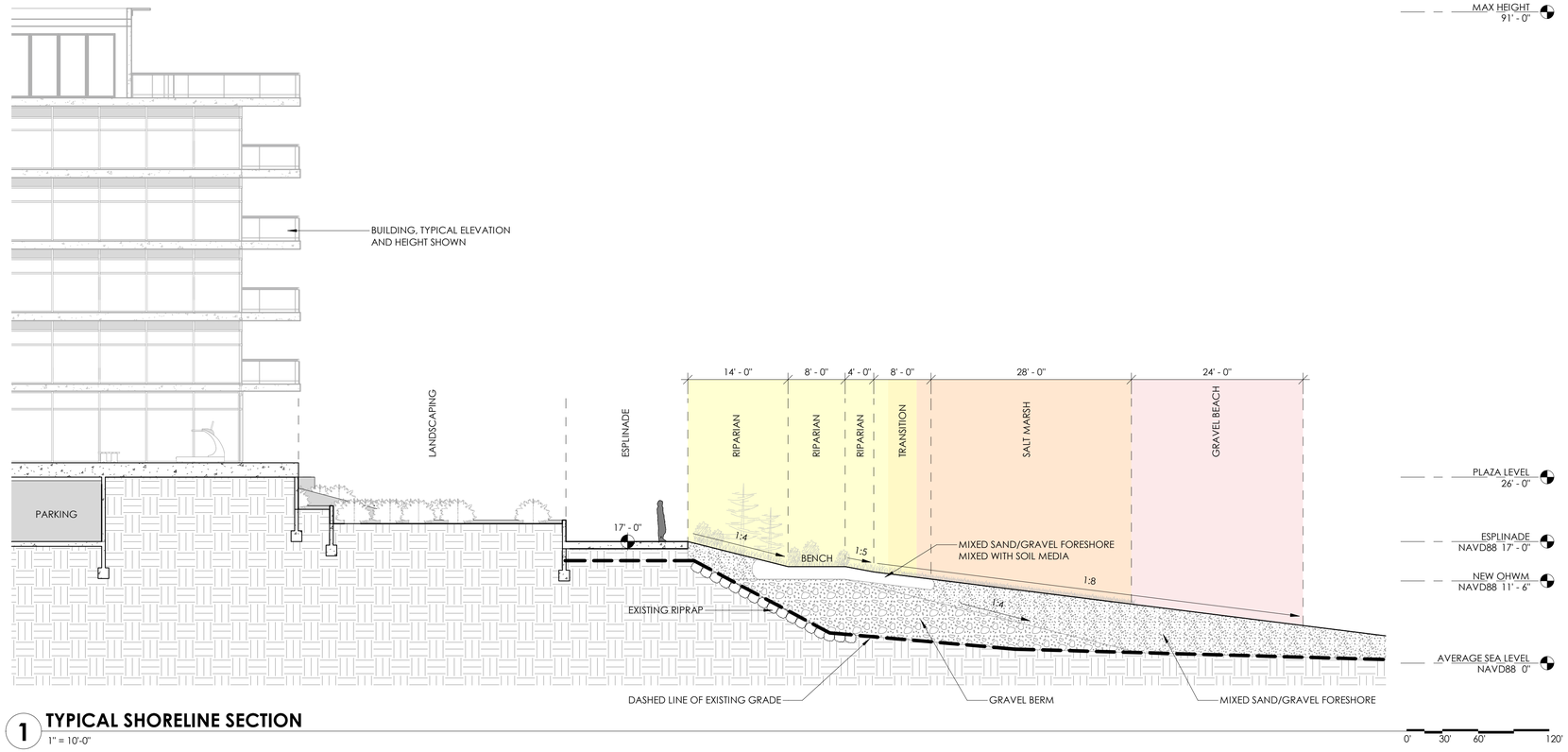

1 TYPICAL SHORELINE SECTION
1" = 10'-0"

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

SHORELINE SECTION

WEST BAY DRIVE | OLYMPIA, WA
SCHEMATIC DESIGN | 06/01/21

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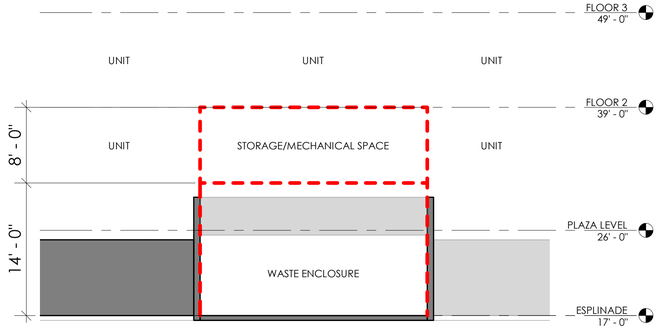
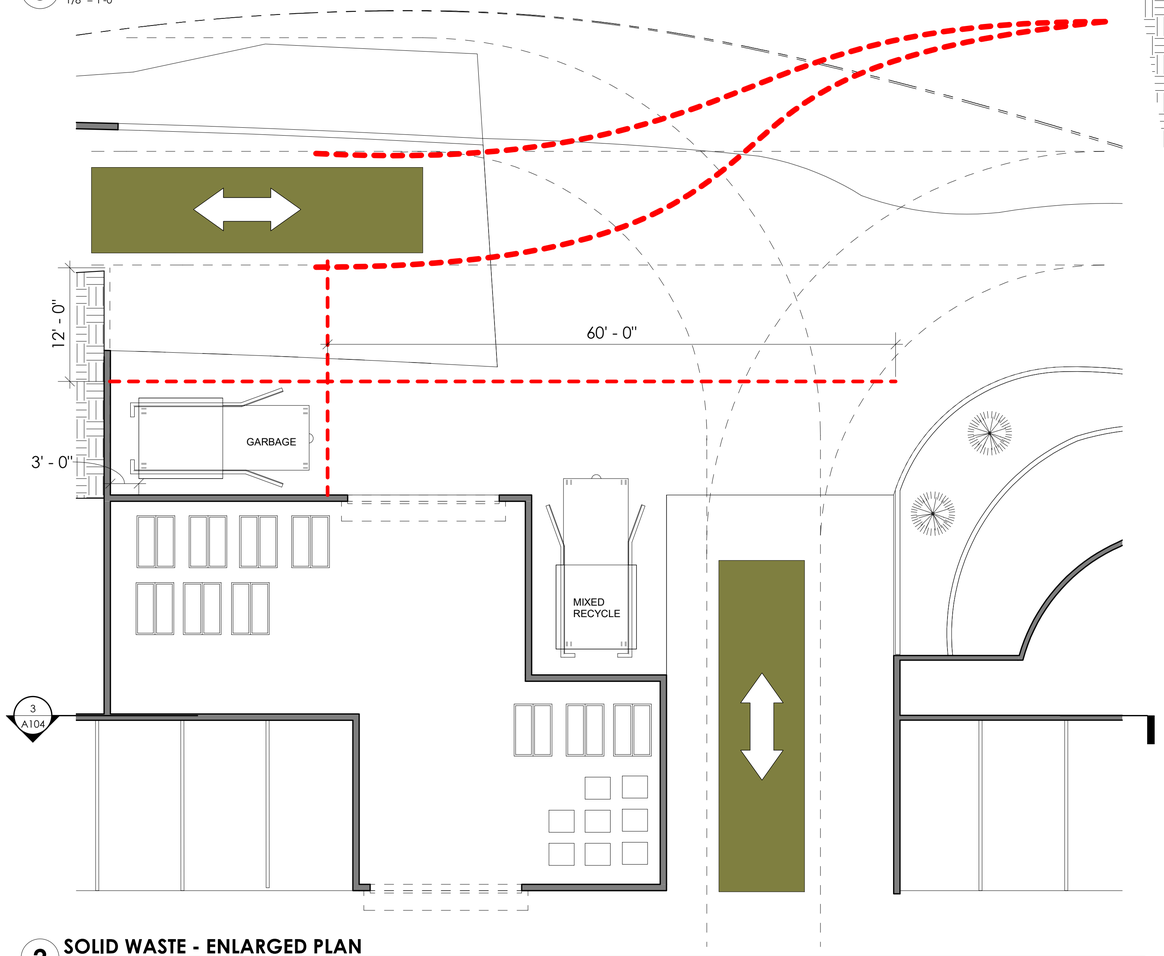


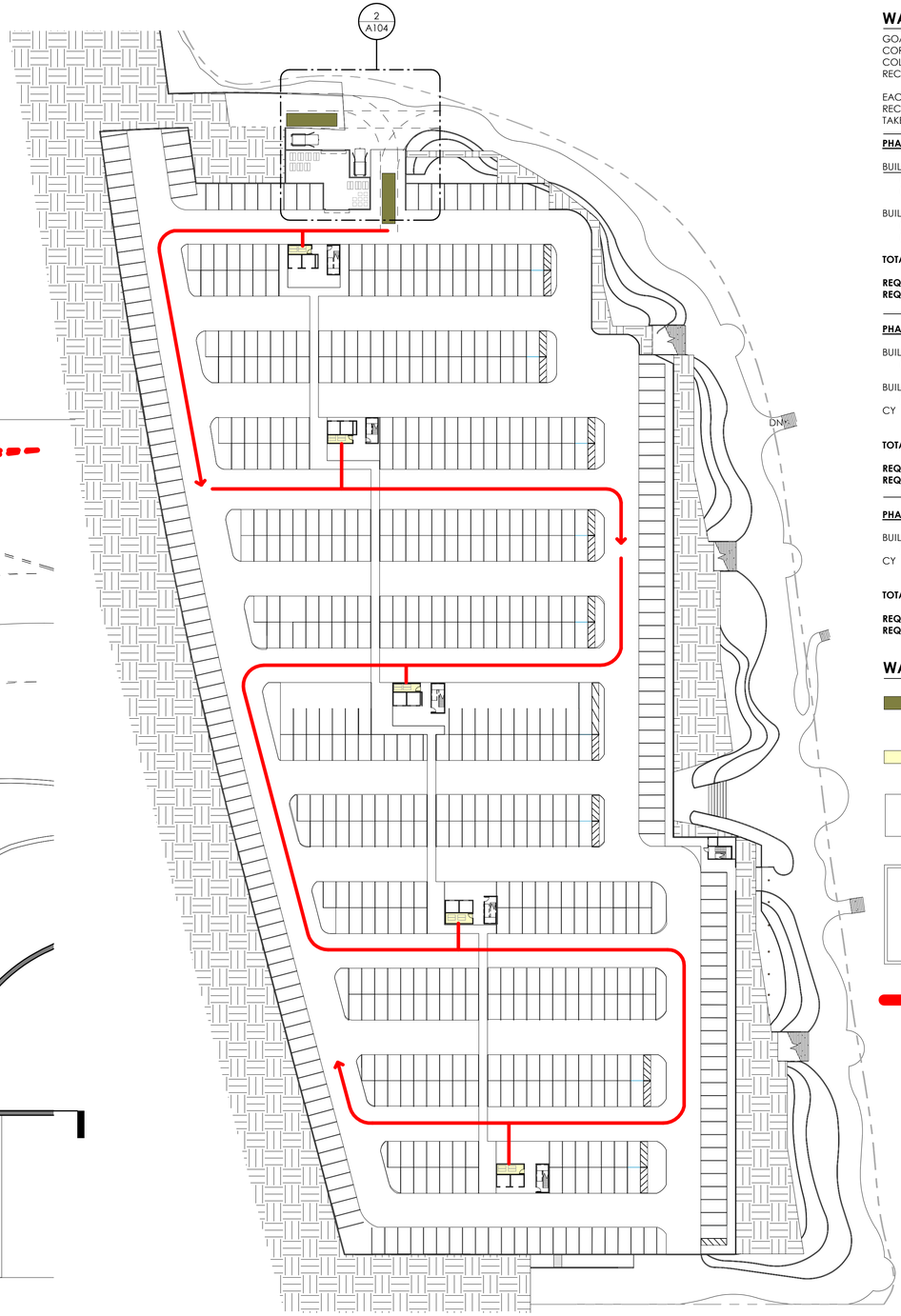
3 SOLID WASTE ENCLOSURE SECTION

1/8" = 1'-0"



2 SOLID WASTE - ENLARGED PLAN

1/8" = 1'-0"



1 SOLID WASTE CIRCULATION PLAN

1" = 50'-0"

WASTE RESOURCE SUMMARY

GOAL: TO COLLECT AND STORE WASTE IN FACILITY ACCESSED BY THE TRAIL OR CIRCULATION CORE ON THE LOWER LEVEL. PROVIDE GARBAGE SHOOTS IN INDIVIDUAL BUILDINGS FOR THE COLLECTION OF WASTE. CYCLE BASED WEEKLY AT 4.33 WEEKS PER MONTH. ALLOCATE 50% TO RECYCLING AND 50% TO GARBAGE.

EACH BUILDING CONTAINS TWO WASTE CHUTES ONE FOR GARBAGE AND ONE FOR MIXED RECYCLING. WASTE IS COLLECTED AT LOWER LEVEL IN 2 YARD TOW CARTS. TOW CARTS ARE TAKEN TO COMPACTORS BY BUILDING MANAGEMENT FOR MUNICIPAL PICKUP.

PHASE 1:

BUILDING 2	PER WEEK
(91) RESIDENTIAL UNITS @1.1 CY PER HOUSEHOLD/4.33 =	23.11 CY
(8,970 SF) REST/CAFE @1.0 CY/500 SF =	17.94 CY
BUILDING 3	
(94) RESIDENTIAL UNITS @1.1 CY PER HOUSEHOLD/4.33 =	23.88 CY
(2,255 SF) COMMERCIAL @ 1.0 CY/500 SF =	4.51 CY
TOTAL WASTE COLLECTED =	**69.44 CY**
REQUIRED WASTE ALLOCATED TO GARBAGE =	**34.7 CY**
REQUIRED WASTE ALLOCATED TO RECYCLE =	**34.7 CY**

PHASE 2:

BUILDING 4	
(125) RESIDENTIAL UNITS @1.1 CY PER HOUSEHOLD/4.33 =	31.75 CY
BUILDING 5	
(80) RESIDENTIAL UNITS @1.1 CY PER HOUSEHOLD/4.33 =	20.32 CY
TOTAL WASTE COLLECTED =	**52.07 CY**
REQUIRED WASTE ALLOCATED TO GARBAGE =	**26 CY**
REQUIRED WASTE ALLOCATED TO RECYCLE =	**26 CY**

PHASE 3:

BUILDING 1	
(88) RESIDENTIAL UNITS @1.1 CY PER HOUSEHOLD/4.33 =	22.35 CY
TOTAL WASTE COLLECTED =	**22.35 CY**
REQUIRED WASTE ALLOCATED TO GARBAGE =	**11.2 CY**
REQUIRED WASTE ALLOCATED TO RECYCLE =	**11.2 CY**

WASTE ENCLOSURE PLAN LEGEND

- WASTE TRUCK
- TRASH ENCLOSURE WITH TWO 2 YARD TOW CARTS
- 95 GALLON TRASH & RECYCLE
- 2 YARD TOW CART
- TAYLOR DUNN VEHICLE ROUTE

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

WEST BAY DRIVE | OLYMPIA, WA
SCHEMATIC DESIGN | 06/01/21

A104
SOLID WASTE

THOMAS
architecture studios

1 **SITE PLAN -VIEW CONTEXT**
1" = 80'-0"

VIEW A

VIEW C

VIEW B

VIEW D

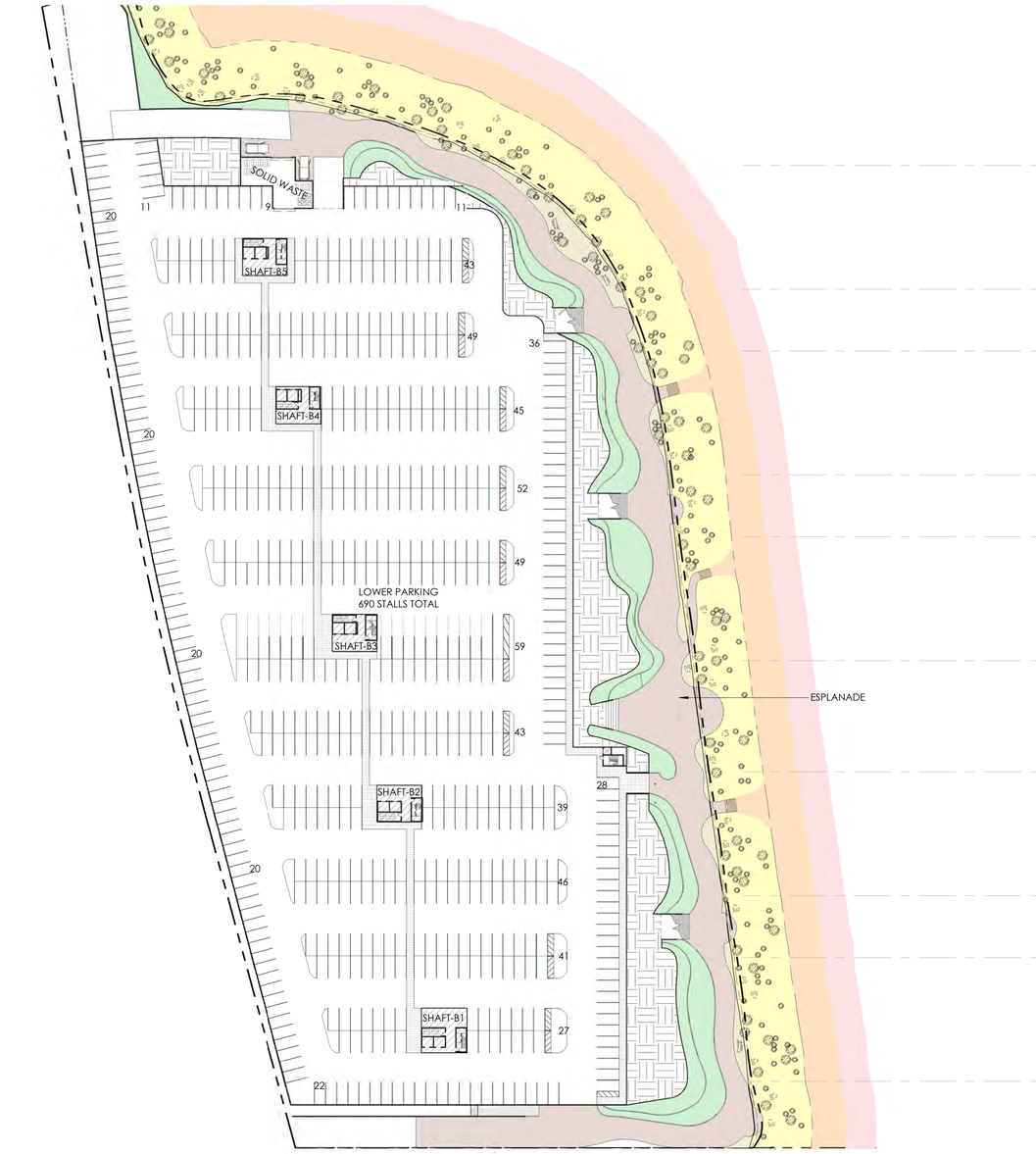
WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

VIEW STUDY

WEST BAY DRIVE | OLYMPIA, WA
SCHEMATIC DESIGN | 06/01/21

A105

THOMAS
architecture studios



1 **LOWER LEVEL / P1**
1" = 60'-0"

0' 30' 60' 120'

10 — 100'-0" — 9 — 50'-0" — 8 — 100'-0" — 7 — 50'-0" — 6 — 100'-0" — 5 — 90'-0" — 4 — 100'-0" — 3 — 50'-0" — 2 — 100'-0" — 1

2 **PLAZA LEVEL**
1" = 60'-0"

0' 30' 60' 120'

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

BUILDING PLAN

WEST BAY DRIVE | OLYMPIA, WA
SCHEMATIC DESIGN | 06/01/21

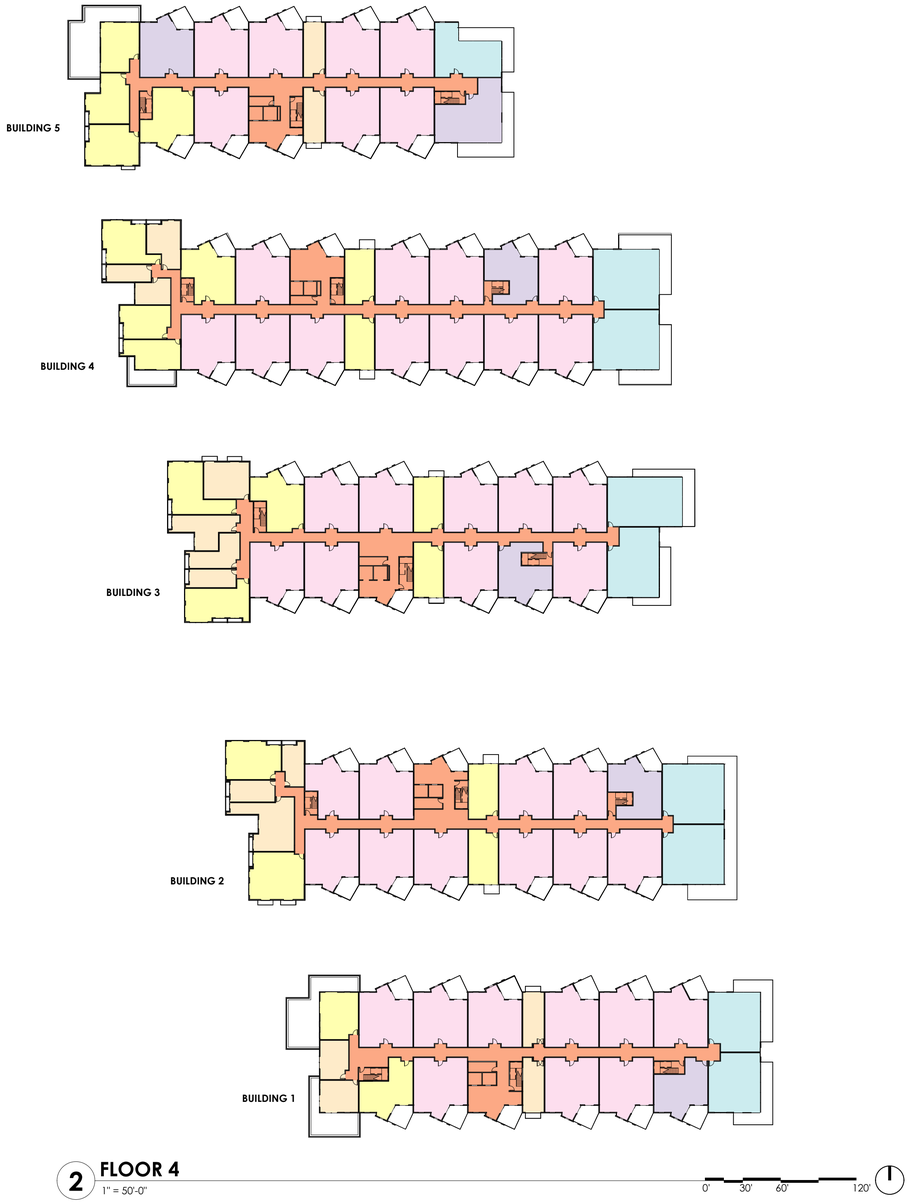
ROOM LEGEND

- 1x1
- 2X2 L
- 2x2 S
- 3x3
- COMMERCIAL
- COMMON
- GYM
- L/W
- LOBBY
- RESTAURANT
- STUDIO

A201

THOMAS
architecture studios

1 **FLOOR 2-3**
1" = 50'-0"
0' 30' 60' 120'



2 **FLOOR 4**
1" = 50'-0"
0' 30' 60' 120'

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

BUILDING PLAN

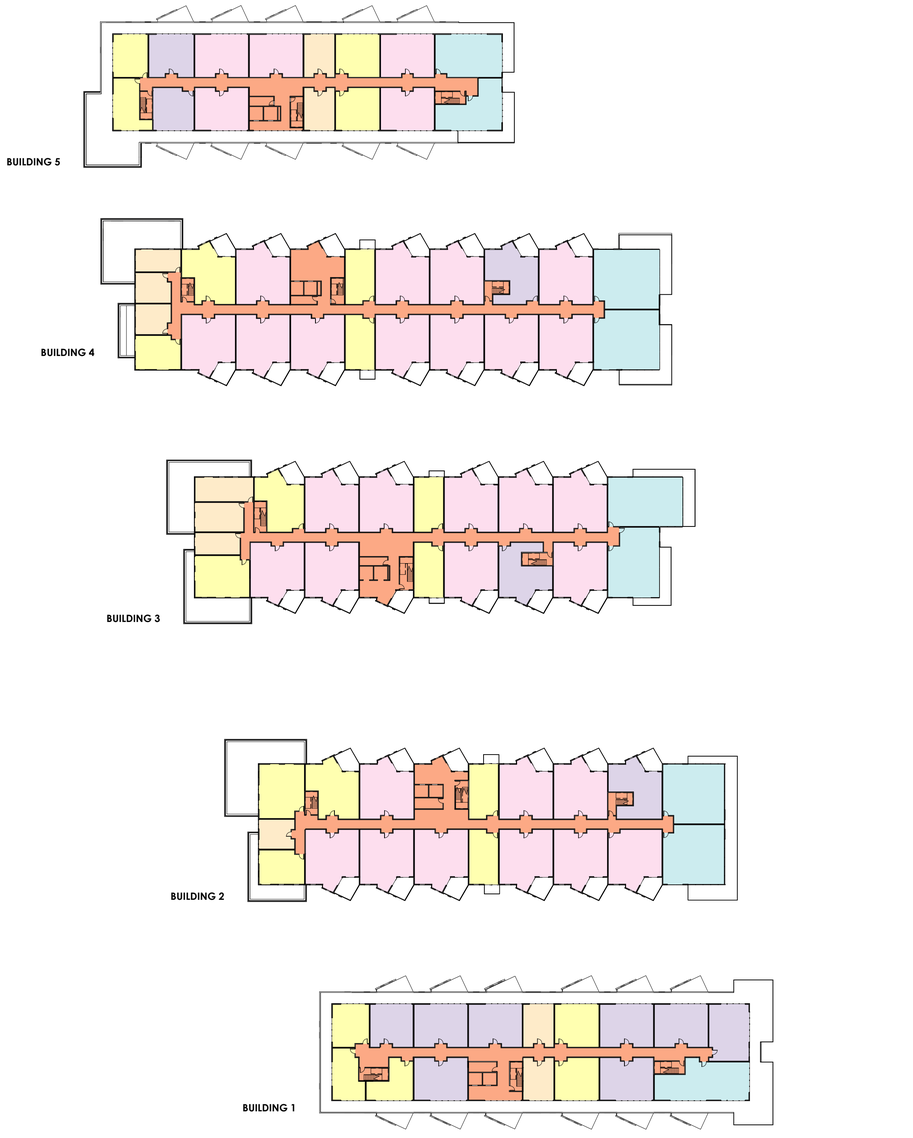
WEST BAY DRIVE | OLYMPIA, WA
SCHEMATIC DESIGN | 06/01/21

ROOM LEGEND

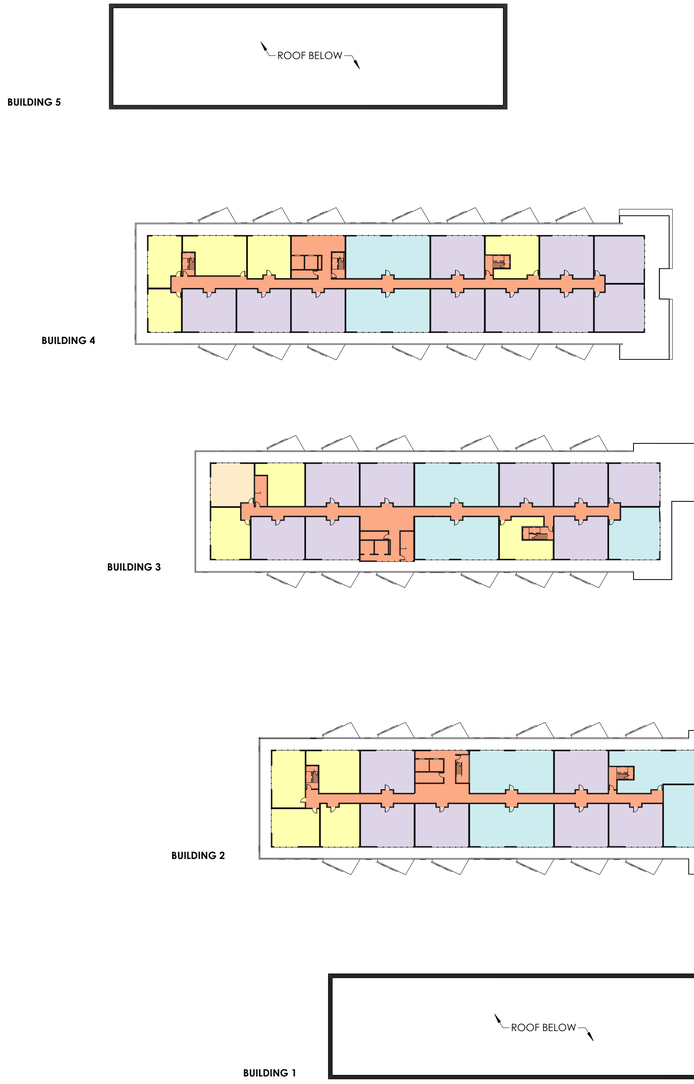
- 1x1
- 2X2 L
- 2x2 S
- 3x3
- COMMON
- COMMUNITY SPACE
- STUDIO

A202

THOMAS
architecture studios



1 FLOOR 5
1" = 50'-0"
0' 30' 60' 120'



2 FLOOR 6
1" = 50'-0"
0' 30' 60' 120'

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

BUILDING PLAN

WEST BAY DRIVE | OLYMPIA, WA
SCHEMATIC DESIGN | 06/01/21

ROOM LEGEND

- 1x1
- 2x2 S
- 3x3
- COMMON
- STUDIO

A203

THOMAS
architecture studios

1 NORTH ELEVATION - BUILDING 1

1/16" = 1'-0"

0' 8' 16' 32'

2 SOUTH ELEVATION - BUILDING 1

1/16" = 1'-0"

0' 8' 16' 32'

BUILDING MATERIALS

1 FIBER CEMENT PANELING, COLORS PER ELEVATIONS

2 WOOD CLADDING

3 BRICK VENEER

4 CONCRETE

5 CERAMIC TILE

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

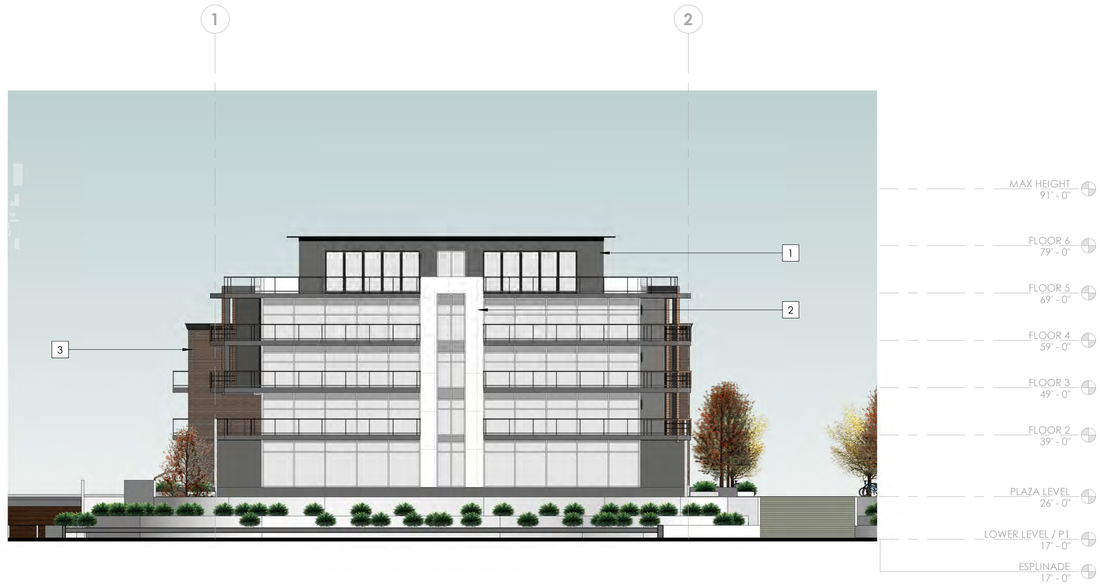
BUILDING ELEVATIONS - BUILDING 1

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | 06/01/21

A301

THOMAS
architecture studios



1 EAST ELEVATION - BUILDING 1

1/16" = 1'-0"

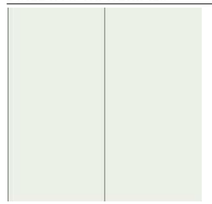
0' 8' 16' 32'

2 WEST ELEVATION - BUILDING 1

1/16" = 1'-0"

0' 8' 16' 32'

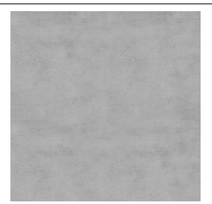
BUILDING MATERIALS



1 FIBER CEMENT PANELING, COLORS PER ELEVATIONS

2 WOOD CLADDING

3 BRICK VENEER



4 CONCRETE

5 CERAMIC TILE

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

BUILDING ELEVATIONS - BUILDING 1

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | 06/01/21

A302

THOMAS
architecture studios

1 SOUTH ELEVATION - BUILDING 2

1/16" = 1'-0"

0' 8' 16' 32'

2 NORTH ELEVATION - BUILDING 2

1/16" = 1'-0"

0' 8' 16' 32'

BUILDING MATERIALS

1 FIBER CEMENT PANELING, COLORS PER ELEVATIONS

2 WOOD CLADDING

3 BRICK VENEER

4 CONCRETE

5 CERAMIC TILE

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

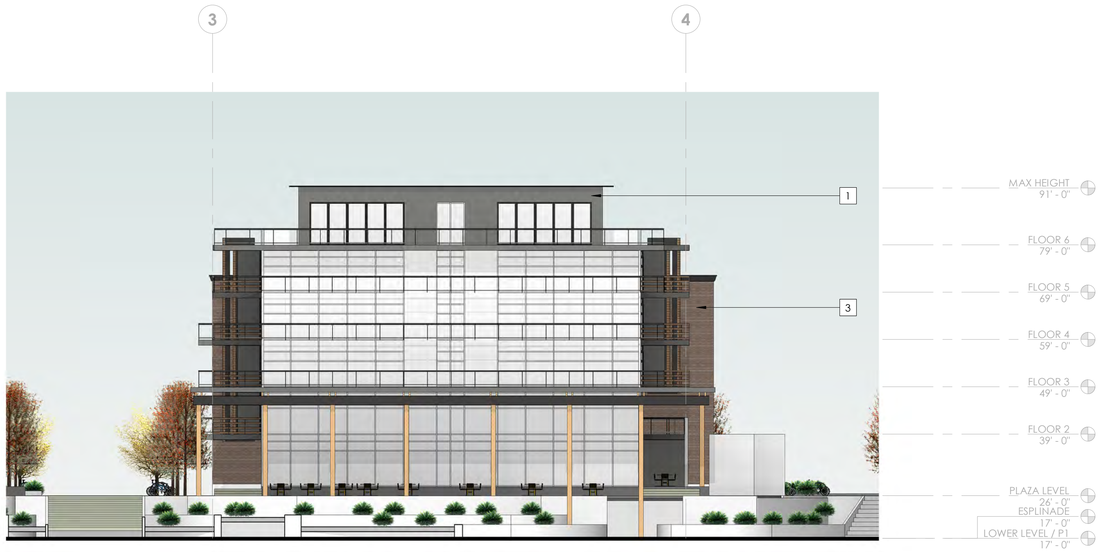
BUILDING ELEVATIONS - BUILDING 2

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | 06/01/21

A303

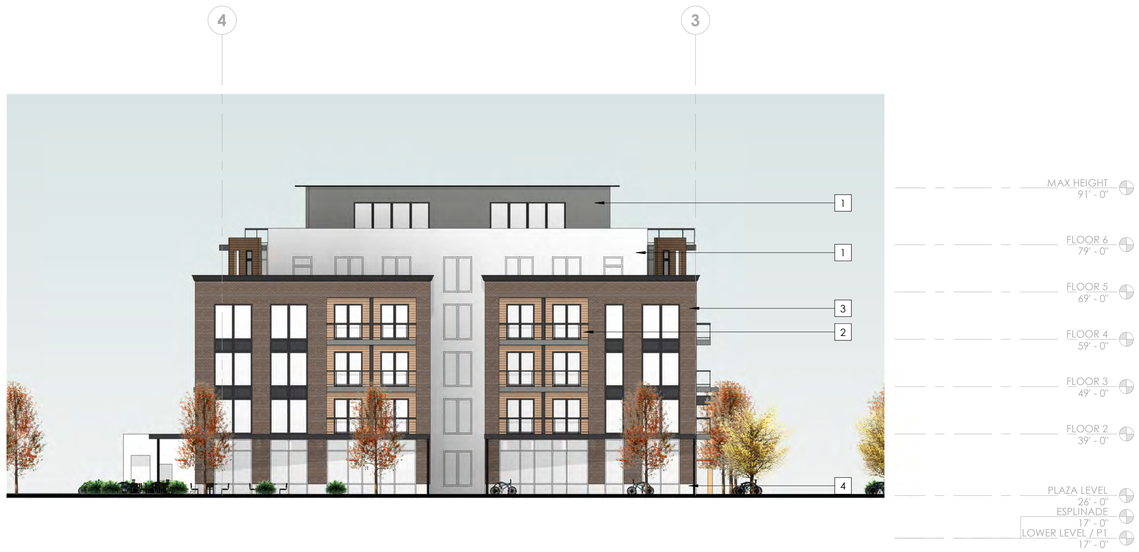
THOMAS
architecture studios



1 EAST ELEVATION - BUILDING 2

1/16" = 1'-0"

0' 8' 16' 32'

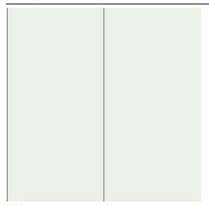


2 WEST ELEVATION - BUILDING 2

1/16" = 1'-0"

0' 8' 16' 32'

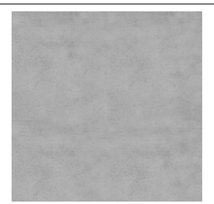
BUILDING MATERIALS



1 FIBER CEMENT PANELING, COLORS PER ELEVATIONS

2 WOOD CLADDING

3 BRICK VENEER



4 CONCRETE

5 CERAMIC TILE

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

BUILDING ELEVATIONS - BUILDING 2

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | 06/01/21

A304

THOMAS
architecture studios

1 SOUTH ELEVATION - BUILDING 3

1/16" = 1'-0"

0' 8' 16' 32'

2 NORTH ELEVATION - BUILDING 3

1/16" = 1'-0"

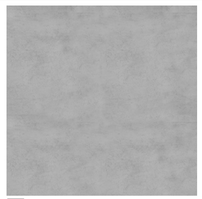
0' 8' 16' 32'

BUILDING MATERIALS

1 FIBER CEMENT PANELING, COLORS PER ELEVATIONS

2 WOOD CLADDING

3 BRICK VENEER



4 CONCRETE

5 CERAMIC TILE

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

BUILDING ELEVATIONS - BUILDING 3

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | 06/01/21

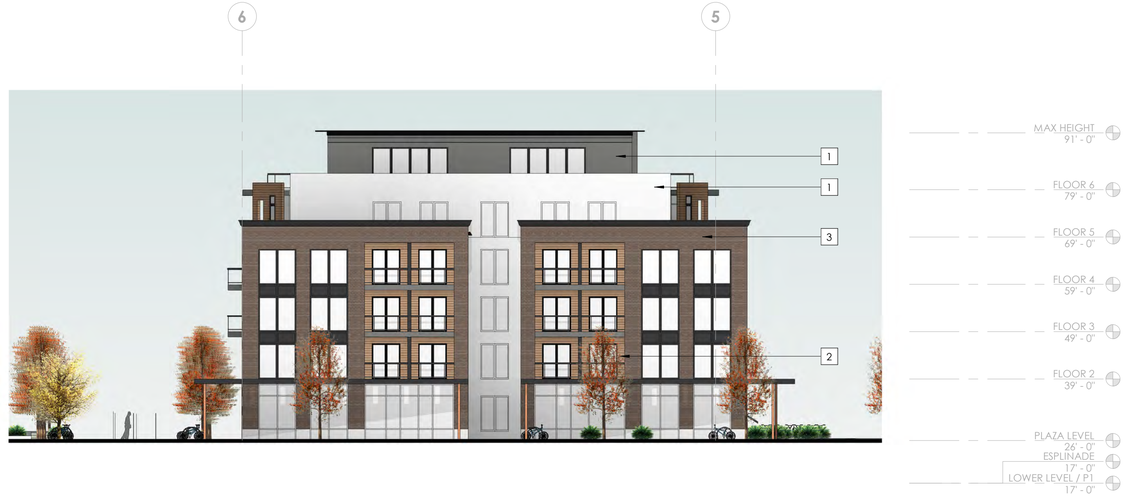
A305

THOMAS
architecture studios

1 EAST ELEVATION - BUILDING 3

1/16" = 1'-0"

0' 8' 16' 32'

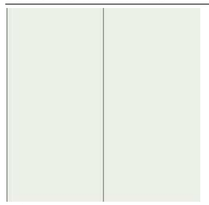


2 WEST ELEVATION - BUILDING 3

1/16" = 1'-0"

0' 8' 16' 32'

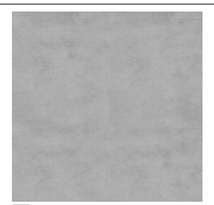
BUILDING MATERIALS



1 FIBER CEMENT PANELING, COLORS PER ELEVATIONS

2 WOOD CLADDING

3 BRICK VENEER



4 CONCRETE

5 CERAMIC TILE

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

BUILDING ELEVATIONS - BUILDING 3

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | 06/01/21

A306

THOMAS
architecture studios

1 NORTH ELEVATION - BUILDING 4

1/16" = 1'-0"

0' 8' 16' 32'

2 SOUTH ELEVATION - BUILDING 4

1/16" = 1'-0"

0' 8' 16' 32'

BUILDING MATERIALS

1 FIBER CEMENT PANELING, COLORS PER ELEVATIONS

2 WOOD CLADDING

3 BRICK VENEER

4 CONCRETE

5 CERAMIC TILE

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

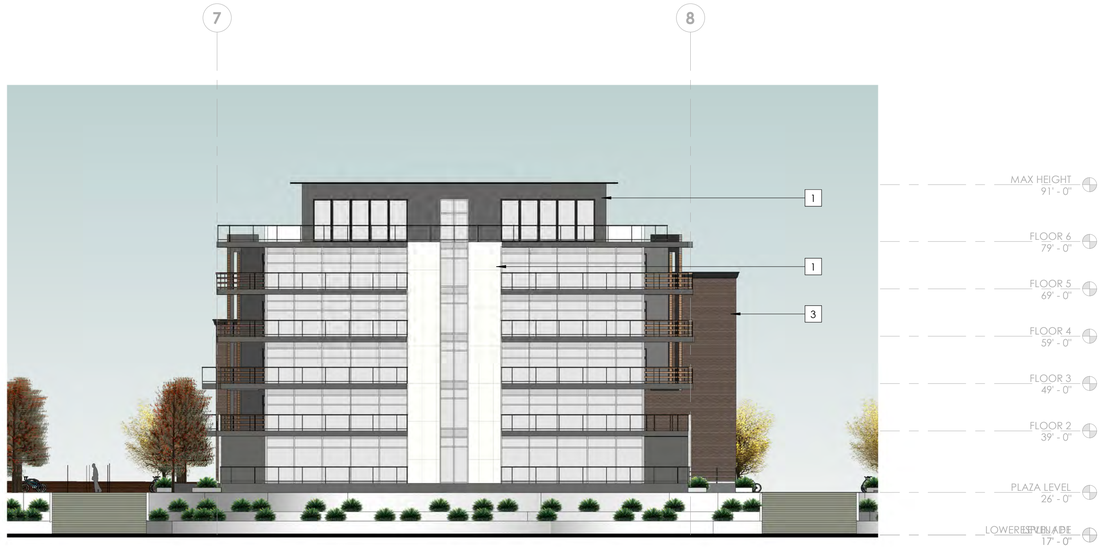
BUILDING ELEVATIONS - BUILDING 4

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | 06/01/21

A307

THOMAS
architecture studios



1 EAST ELEVATION - BUILDING 4

1/16" = 1'-0"

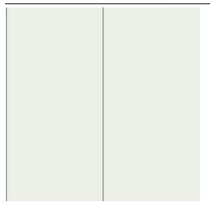
0' 8' 16' 32'

2 WEST ELEVATION - BUILDING 4

1/16" = 1'-0"

0' 8' 16' 32'

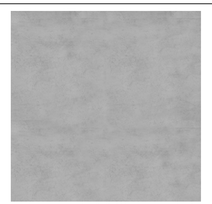
BUILDING MATERIALS



1 FIBER CEMENT PANELING, COLORS PER ELEVATIONS

2 WOOD CLADDING

3 BRICK VENEER



4 CONCRETE

5 CERAMIC TILE

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

BUILDING ELEVATIONS - BUILDING 4

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | 06/01/21

A308

THOMAS
architecture studios

1 NORTH ELEVATION - BUILDING 5

1/16" = 1'-0"

0' 8' 16' 32'

2 SOUTH ELEVATION - BUILDING 5

1/16" = 1'-0"

0' 8' 16' 32'

BUILDING MATERIALS

1 FIBER CEMENT PANELING, COLORS PER ELEVATIONS

2 WOOD CLADDING

3 BRICK VENEER

4 CONCRETE

5 CERAMIC TILE

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

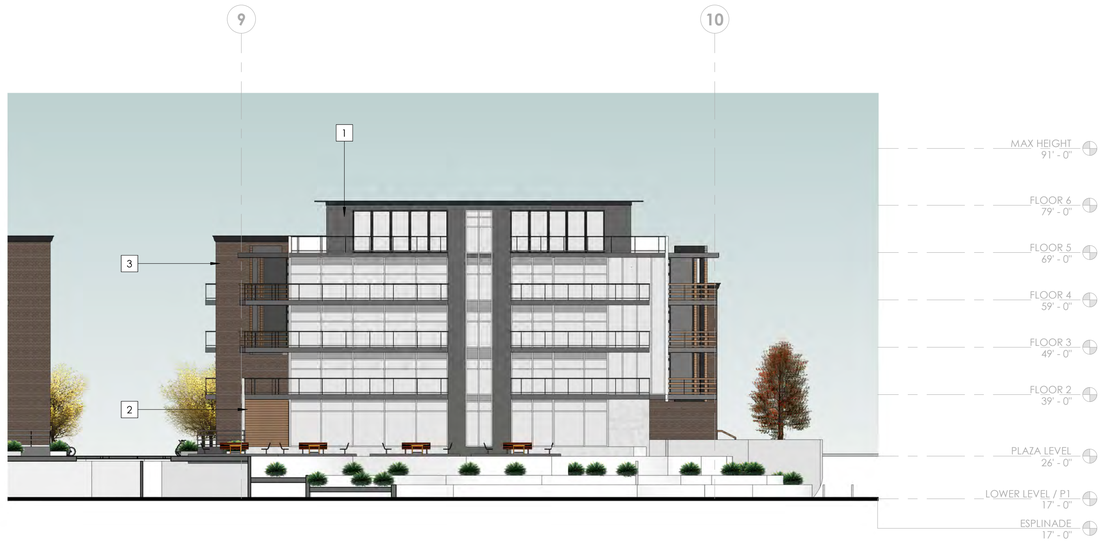
BUILDING ELEVATIONS - BUILDING 5

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | 06/01/21

A309

THOMAS
architecture studios



1 EAST ELEVATION - BUILDING 5

1/16" = 1'-0"

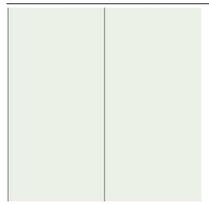
0' 8' 16' 32'

2 WEST ELEVATION - BUILDING 5

1/16" = 1'-0"

0' 8' 16' 32'

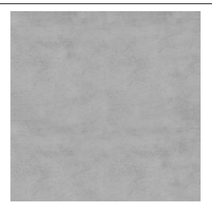
BUILDING MATERIALS



1 FIBER CEMENT PANELING, COLORS PER ELEVATIONS

2 WOOD CLADDING

3 BRICK VENEER



4 CONCRETE

5 CERAMIC TILE

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

BUILDING ELEVATIONS - BUILDING 5

WEST BAY DRIVE | OLYMPIA, WA

SCHEMATIC DESIGN | 06/01/21

A310

THOMAS
architecture studios

WEST BAY YARDS
LUXURY WATERFRONT LIVING
OLYMPIA

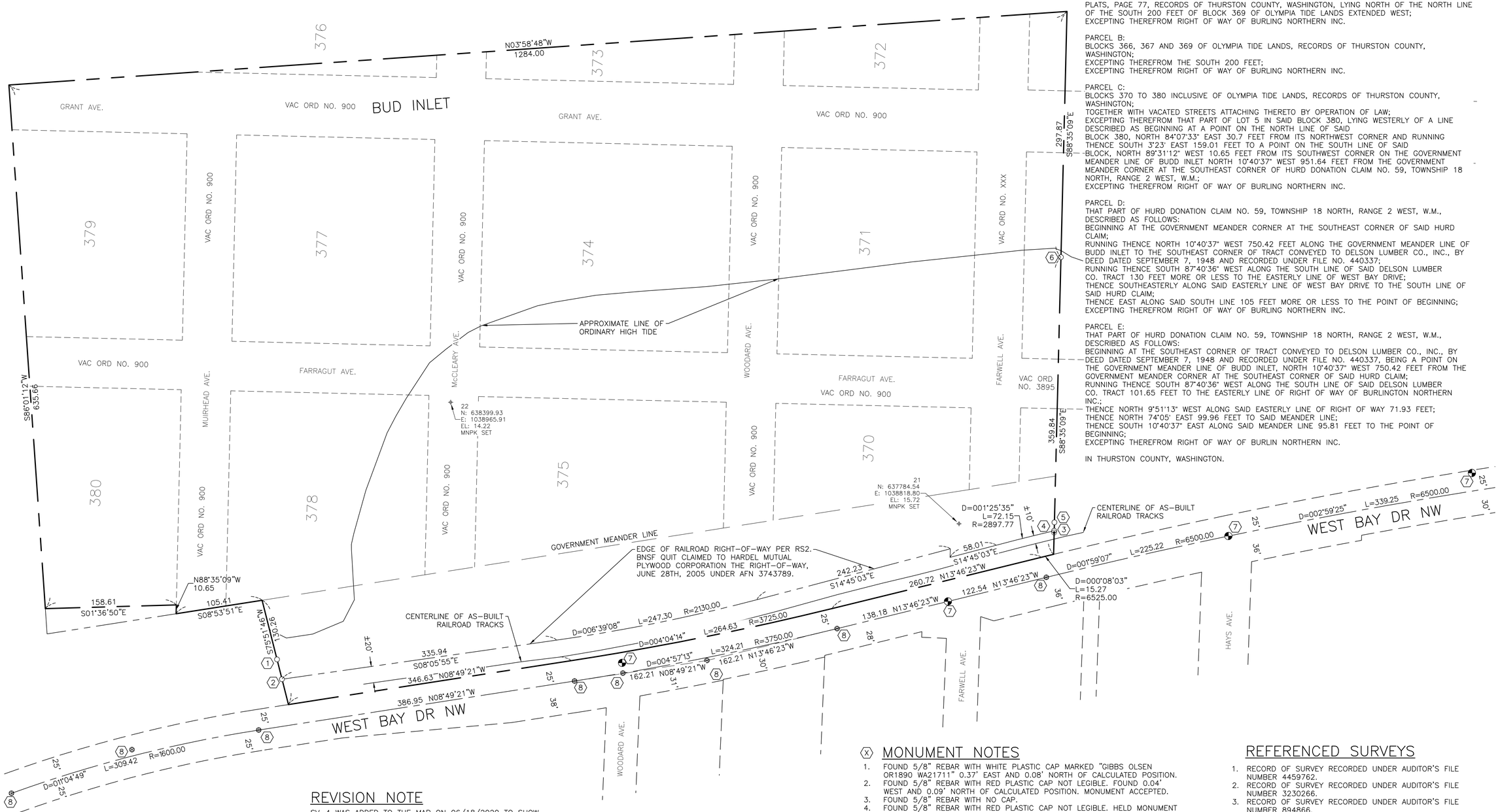
PERSPECTIVES

WEST BAY DRIVE | OLYMPIA, WA
SCHEMATIC DESIGN | 06/01/21

A901

THOMAS
architecture studios

Appendix C



LEGAL DESCRIPTION

PARCEL A:
THAT PART OF BLOCK2 OF SCHNEIDER'S SUBDIVISION, AS RECORDED IN VOLUME 6 OF PLATS, PAGE 77, RECORDS OF THURSTON COUNTY, WASHINGTON, LYING NORTH OF THE NORTH LINE OF THE SOUTH 200 FEET OF BLOCK 369 OF OLYMPIA TIDE LANDS EXTENDED WEST;
EXCEPTING THEREFROM RIGHT OF WAY OF BURLING NORTHERN INC.

PARCEL B:
BLOCKS 366, 367 AND 369 OF OLYMPIA TIDE LANDS, RECORDS OF THURSTON COUNTY, WASHINGTON;
EXCEPTING THEREFROM THE SOUTH 200 FEET;
EXCEPTING THEREFROM RIGHT OF WAY OF BURLING NORTHERN INC.

PARCEL C:
BLOCKS 370 TO 380 INCLUSIVE OF OLYMPIA TIDE LANDS, RECORDS OF THURSTON COUNTY, WASHINGTON;
TOGETHER WITH VACATED STREETS ATTACHING THERETO BY OPERATION OF LAW;
EXCEPTING THEREFROM THAT PART OF LOT 5 IN SAID BLOCK 380, LYING WESTERLY OF A LINE DESCRIBED AS BEGINNING AT A POINT ON THE NORTH LINE OF SAID BLOCK 380, NORTH 84°07'33" EAST 30.7 FEET FROM ITS NORTHWEST CORNER AND RUNNING THENCE SOUTH 3°23' EAST 159.01 FEET TO A POINT ON THE SOUTH LINE OF SAID BLOCK, NORTH 89°31'12" WEST 10.65 FEET FROM ITS SOUTHWEST CORNER ON THE GOVERNMENT MEANDER LINE OF BUDD INLET NORTH 10°40'37" WEST 951.64 FEET FROM THE GOVERNMENT MEANDER CORNER AT THE SOUTHEAST CORNER OF HURD DONATION CLAIM NO. 59, TOWNSHIP 18 NORTH, RANGE 2 WEST, W.M.;
EXCEPTING THEREFROM RIGHT OF WAY OF BURLING NORTHERN INC.

PARCEL D:
THAT PART OF HURD DONATION CLAIM NO. 59, TOWNSHIP 18 NORTH, RANGE 2 WEST, W.M., DESCRIBED AS FOLLOWS:
BEGINNING AT THE GOVERNMENT MEANDER CORNER AT THE SOUTHEAST CORNER OF SAID HURD CLAIM;
RUNNING THENCE NORTH 10°40'37" WEST 750.42 FEET ALONG THE GOVERNMENT MEANDER LINE OF BUDD INLET TO THE SOUTHEAST CORNER OF TRACT CONVEYED TO DELSON LUMBER CO., INC., BY DEED DATED SEPTEMBER 7, 1948 AND RECORDED UNDER FILE NO. 440337;
RUNNING THENCE SOUTH 87°40'36" WEST ALONG THE SOUTH LINE OF SAID DELSON LUMBER CO. TRACT 130 FEET MORE OR LESS TO THE EASTERLY LINE OF WEST BAY DRIVE;
THENCE SOUTHEASTERLY ALONG SAID EASTERLY LINE OF WEST BAY DRIVE TO THE SOUTH LINE OF SAID HURD CLAIM;
THENCE EAST ALONG SAID SOUTH LINE 105 FEET MORE OR LESS TO THE POINT OF BEGINNING;
EXCEPTING THEREFROM RIGHT OF WAY OF BURLING NORTHERN INC.

PARCEL E:
THAT PART OF HURD DONATION CLAIM NO. 59, TOWNSHIP 18 NORTH, RANGE 2 WEST, W.M., DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEAST CORNER OF TRACT CONVEYED TO DELSON LUMBER CO., INC., BY DEED DATED SEPTEMBER 7, 1948 AND RECORDED UNDER FILE NO. 440337, BEING A POINT ON THE GOVERNMENT MEANDER LINE OF BUDD INLET, NORTH 10°40'37" WEST 750.42 FEET FROM THE GOVERNMENT MEANDER CORNER AT THE SOUTHEAST CORNER OF SAID HURD CLAIM;
RUNNING THENCE SOUTH 87°40'36" WEST ALONG THE SOUTH LINE OF SAID DELSON LUMBER CO. TRACT 101.65 FEET TO THE EASTERLY LINE OF RIGHT OF WAY OF BURLINGTON NORTHERN INC.;
THENCE NORTH 9°51'13" WEST ALONG SAID EASTERLY LINE OF RIGHT OF WAY 71.93 FEET;
THENCE NORTH 74°05' EAST 99.96 FEET TO SAID MEANDER LINE;
THENCE SOUTH 10°40'37" EAST ALONG SAID MEANDER LINE 95.81 FEET TO THE POINT OF BEGINNING;
EXCEPTING THEREFROM RIGHT OF WAY OF BURLIN NORTHERN INC.

IN THURSTON COUNTY, WASHINGTON.

REVISION NOTE

SV-4 WAS ADDED TO THE MAP ON 06/18/2020 TO SHOW THE ADDITIONAL TIDAL MAPPING COMPLETED BY M2C ON 06/08/2020.

DATUM

HORIZONTAL – WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 83/2011 BASED ON GPS TIES TO MONUMENTS USING THE WASHINGTON STATE REFERENCE NETWORK.
VERTICAL – NAVD 88 BASED ON GPS TIES TO MONUMENTS USING THE WASHINGTON STATE REFERENCE NETWORK.

CONVERSION FROM NAVD 88 TO MLLW: SUBTRACT 4.03 FEET.

M2C

0' 60' 120'

SCALE 1" = 60'

SHEET INDEX

MONUMENT NOTES

1. FOUND 5/8" REBAR WITH WHITE PLASTIC CAP MARKED "GIBBS OLSEN OR1890 WA21711" 0.37' EAST AND 0.08' NORTH OF CALCULATED POSITION.
2. FOUND 5/8" REBAR WITH RED PLASTIC CAP NOT LEGIBLE. FOUND 0.04' WEST AND 0.09' NORTH OF CALCULATED POSITION. MONUMENT ACCEPTED.
3. FOUND 5/8" REBAR WITH NO CAP.
4. FOUND 5/8" REBAR WITH RED PLASTIC CAP NOT LEGIBLE. HELD MONUMENT FOR THE SOUTHWEST CORNER OF BOUNDARY PER RS2.
5. FOUND 5/8" REBAR WITH RED PLASTIC CAP NOT LEGIBLE. MONUMENT FOUND ON SOUTH PROPERTY LINE.
6. FOUND 5/8" REBAR WITH WHITE PLASTIC CAP MARKED "GIBBS OLSEN OR1890 WA21711" 0.18' EAST AND 0.03' SOUTH OF CALCULATED POSITION.
7. FOUND 2 1/2" BRASS DISC IN CONCRETE.
8. FOUND 2 1/2" BRASS DISC IN MONUMENT CASE.

REFERENCED SURVEYS

1. RECORD OF SURVEY RECORDED UNDER AUDITOR'S FILE NUMBER 4459762.
2. RECORD OF SURVEY RECORDED UNDER AUDITOR'S FILE NUMBER 3230266.
3. RECORD OF SURVEY RECORDED UNDER AUDITOR'S FILE NUMBER 894866.
4. BOUNDARY LINE ADJUSTMENT RECORDED UNDER AUDITOR'S FILE NUMBER 4112302.
5. RAILROAD/STATION MAP, LAND TRACKS AND STRUCTURES, NORTHERN PACIFIC, TACOMA DIVISION, OLYMPIA, THURSTON COUNTY, WASHINGTON. SECTION 10 AND 15, TOWNSHIP 18N, RANGE 2W, W.M., STA 510+00 TO END, DATED JUNE 13, 1916.

06/18/2020

DATE	06/18/2020
SCALE	1" = 60'
M2C PROJECT NO.:	19-120
DRAWN	PBJ
CHECKED	SEP
APPROVED	BEP

BLAIR E. PRIGGE
STATE OF WASHINGTON
29278
REGISTERED
PROFESSIONAL LAND SURVEYOR

MTN 2 COAST LLC
PROFESSIONAL LAND SURVEYORS
2320 MOTTMAN RD SW, STE 106
TUMWATER, WA 98512
360.688.1949

PROJECT NAME:
WEST BAY LANDING
TOPOGRAPHIC SURVEY

CLIENT NAME:
THE MILESTONE COMPANY

SHEET NAME:
SV-1

SHEET NO.
1 OF 4

MATCHLINE SEE SV-4

MATCHLINE SEE SV-3

BUD INLET

18" CMP CULVERT
IE = 5.59

18" CMP CULVERT
IE = 1.64

ADDITIONAL TIDAL
MAPPING COMPLETED
06/08/2020

CONCRETE
STRUCTURE

CULVERT 8" CPP
IE = 10.29

STORM
DRAIN
SWALE

GRAVEL IN
THIS AREA

ADDITIONAL TIDAL
MAPPING COMPLETED
06/08/2020

BURIED UTILITIES ON SITE MAY
HAVE BEEN REMOVED OR
ABANDONED DURING DEMOLITION.

21
N: 637784.54
E: 1038818.80
EL: 15.72
MNPK SET

CENTERLINE
RAILROAD TRACKS

ROCK
RETAINING
WALL

CONCRETE
RETAINING WALL

NO PARKING

WEST BAY DR. NW

SIDEWALK

OLD BROKEN CONCRETE
FROM TRAIN DOCK

OLD RAILROAD TRACKS
THROUGH THIS AREA

DENSE VEGETATION

DOUBLE YELLOW
LANE LINE

WHITE LANE LINE

CONCRETE
RETAINING WALL

FRENCH
DRAIN

LEGEND (UTILITIES)

- CABLE MARKER POST
- CABLE RISER/ PEDESTAL
- CABLE VAULT/MANHOLE
- CULVERT
- LUMINAIRE WITH LONG ARM
- LUMINAIRE WITH SHORT ARM
- LUMINAIRE
- LANDSCAPE/YARD LIGHT
- NATURAL GAS MARKER POST
- NATURAL GAS METER
- PROPANE TANK
- NATURAL GAS VALVE
- POWER CONDUIT
- GUY ANCHOR
- GUY POLE
- POWER JUNCTION BOX
- POWER MARKER POST
- POWER METER
- POWER POLE
- PP WITH DROP LINE
- PP WITH DROP AND LIGHT
- PP WITH DROP, LIGHT AND TRANSFORMER
- PP WITH DROP AND TRANSFORMER
- PP WITH LIGHT AND TRANSFORMER
- PP WITH LIGHT
- PP WITH TRANSFORMER
- POWER TRANSFORMER
- POWER VAULT/ MANHOLE
- SIGNAL POLE ARM
- SS CLEANOUT
- SS MANHOLE
- SS MARKER POST
- SEPTIC TANK
- STORM CATCH BASIN
- STORM MANHOLE
- STORM CLEANOUT
- STORM ROOF DRAIN
- STORM YARD DRAIN
- STORM MARKER POST
- TELEPHONE CABINET
- TELEPHONE JUNCTION BOX
- TELEPHONE RISER
- TELEPHONE MARKER POST
- TELEPHONE POLE
- TELEPHONE VAULT/MANHOLE
- WATER AIR RELEASE VALVE
- WATER BLOW OFF
- FIRE DEPARTMENT CONNECTION
- HOSE BIB
- IRRIGATION CONTROL VALVE
- WATER MARKER POST
- WATER METER
- WATER POST INDICATOR VALVE
- SPRINKLER HEAD
- WATER VALVE
- WATER FIRE HYDRANT
- WATER VAULT/MANHOLE
- WELL

LEGEND (SURFACE FEATURES)

- DECIDUOUS TREE
- CONIFER TREE
- BIKE RACK
- MAIL BOX
- WHEEL STOP
- STREET SIGN (AS DESCRIBED)
- ALUMINUM CAP
- BRASS CAP
- MONUMENT IN CASE
- IRON PIPE
- REBAR WITHOUT CAP
- REBAR AND CAP
- PK NAIL
- REBAR AND CONTROL CAP

HATCHING

- BROKEN CONCRETE AND ROCK
- ASPHALT
- CONCRETE

LINE TYPES

- WOOD FENCE
- CHAIN LINK FENCE
- WIRE FENCE
- GUARDRAIL
- GROUND TOE
- GROUND TOP
- PROPERTY LINE
- LOTS LINE
- RIGHT-OF-WAY
- MONUMENT LINE
- STORM LINE
- SANITARY SEWER LINE
- BURIED TELEPHONE
- OVERHEAD TELEPHONE
- BURIED POWER
- OVERHEAD POWER
- WATER LINE
- IRRIGATION LINE
- RECLAIMED WATER
- NATURAL GAS LINE
- BURIED CABLE TV LINE
- BURIED FIBER OPTIC LINE
- SANITARY FORCED MAIN
- DITCH LINE
- MAJOR CONTOUR
- MINOR CONTOUR

TIDAL NOTES

1. CONCRETE DEBRIS
2. METAL IRON BEAMS
3. WOOD LOGS
4. AREA OF OLD WOOD PILINGS
5. WOOD RETAINING WALL
6. OUTLINE OF OLD DILAPIDATED DOCK
7. OLD CONCRETE STRUCTURE
8. CONCRETE PILINGS
9. SWALE DUE TO STORM WATER RUNOFF OUT OF CULVERT
10. TOE LINE IS BOTTOM OF ROCK SLOPE
11. WASHED OUT ROCK FROM WALL
12. RAISED AREA IN BAY
13. MONITORING WELL
14. 1.5" IRON PIPE

DATUM

HORIZONTAL – WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 83/2011 BASED ON GPS TIES TO MONUMENTS USING THE WASHINGTON STATE REFERENCE NETWORK.
VERTICAL – NAVD 88 BASED ON GPS TIES TO MONUMENTS USING THE WASHINGTON STATE REFERENCE NETWORK.

CONVERSION FROM NAVD 88 TO MLLW: SUBTRACT 4.03 FEET.

UTILITY NOTE

UTILITIES SHOWN HEREON ARE FROM MAPPING VISIBLE SURFACE APPURTENANCES, REFERRING TO AS-BUILT RECORDS AND MAPPING UTILITY PAINT MARKS FROM A UTILITY LOCATING SERVICE. BURIED UTILITIES ARE ONLY SHOWN AS APPROXIMATE AND SHOULD BE VERIFIED BEFORE CONSTRUCTION.

UNDERGROUND WATER, POWER, AND SANITARY FORCE MAIN LINES ARE SHOWN PER CITY OF OLYMPIA UTILITY AS-BUILTS. BURIED UTILITIES ON SITE MAY HAVE BEEN REMOVED OR ABANDONED DURING DEMOLITION.

SURVEY NOTES

1. INSTRUMENT USED: SOKKIA SRX 3 TOTAL STATION AND TOPCON GR5 GPS.
2. SURVEY COMPLETED 01/24/2020.
3. ALL MONUMENTS SHOWN AS FOUND VISITED 01/2020.
4. THE PURPOSE OF THE TOPOGRAPHICAL MAPPING IS FOR FUTURE DEVELOPMENT OF THE SITE.
5. CONTOURS WERE ESTABLISHED BY FIELD MAPPING USING A SOKKIA SRX 3 TOTAL STATION.
6. THE RIGHT-OF-WAY WAS CALCULATED PER RECORD OF SURVEY RECORDED UNDER AUDITOR'S FILE NUMBER 4459762.
7. THE BOUNDARY WAS CALCULATED PER RECORD OF SURVEY RECORDED UNDER AUDITOR'S FILE NUMBER 3230266.

M2C

0' 30' 60'

SCALE 1" = 30'

06/18/2020

DATE	06/18/2020
SCALE	1" = 30'
M2C PROJECT NO.:	19-120
DRAWN	PBJ
CHECKED	SEP
APPROVED	BEP

BLAIR E. PRIGGE
STATE OF WASHINGTON
29278
REGISTERED
PROFESSIONAL LAND SURVEYOR

MTN 2 COAST LLC
PROFESSIONAL LAND SURVEYORS
2320 MOTTMAN RD SW, STE 106
TUMWATER, WA 98512
360.688.1949

PROJECT NAME:
WEST BAY LANDING
TOPOGRAPHIC SURVEY

CLIENT NAME:
THE MILESTONE COMPANY

SHEET NAME:
SV-2

SHEET NO.
2 OF 4

STRUCTURE INFORMATION

Point Number	Description	Elevation
1020	SDCB TYPE 1 RIM	22.36
	IE 12" DI W	18.36
	IE 8" RCP E	18.26
1041	SDCB TYPE 1 RIM	22.39
	IE 12" DI W	20.39
	IE 12" PVC N	20.49
	IE 12" DI E	20.24
1042	SDCB TYPE 1 RIM	22.63
	IE 8" PVC W	20.83
	IE 12" DI E	20.43
1069	SDCB TYPE 1 RIM	25.59
	IE 12" DI SW	21.74
	IE 8" PVC SW	21.79
	IE 12" DI S	21.29
	IE 6" PVC E	21.79
1076	SDCB TYPE 1 RIM	24.12
	IE 12" DI N	21.87
	IE 6" PVC SE	21.97
1077	SDCB TYPE 1 RIM	26.23
	IE 6" PVC N (W)	23.83
	IE 6" PVC N (E)	24.63
	IE 12" DI E	21.73
	IE 12" DI S	22.03
1078	SDCB TYPE 2 RIM	23.68
	IE 12" DI W	20.88
	IE 12" PVC NW	20.88
	IE 12" DI E	20.78
1088	SDCB TYPE 1 RIM	23.26
	IE 12" DI W	19.76
	IE 12" PVC E	16.51
1091	SSMH RIM	23.76
	IE 12" RCP N	17.76
	IE 12" RCP S	17.86
1123	SDCB TYPE 1 RIM	24.25
	IE 6" RCP N	22.25
	IE 6" RCP W	22.45
1124	SDCB TYPE 1 RIM	24.27
	IE 6" RCP S	22.92
1146	SDCB TYPE 1 RIM	17.17
	IE 8" PVC W	15.37
	IE 8" PVC E	15.32
1249	SDCB TYPE 2 RIM	25.7
	IE 10" PVC W	21.6
	IE 6" PVC NW	22
	IE 12" DI N	21.85
	IE 12" PVC E	21.1
1254	SSMH RIM	25.9
	IE 12" RCP N	15.6
	IE 12" RCP S	15.7
	IE 8" RCP SW	16.9
1256	SDCB TYPE 1 RIM	25.98
	IE 6" RCP E	24.08
1262	SDVT RIM	26.55
	IE 4" PVC N	23.4
	IE 12" PVC SE	23.3
1314	SDCB TYPE 1 RIM	27.32
	IE 8" CPP N	25.12
	IE 12" DI W	25.02
	IE 12" DI S	24.97

Point Number	Description	Elevation
1323	SDCB TYPE 1 RIM	27.62
	IE 6" PVC N	25.92
	IE 8" PVC W	25.62
	IE 4" PVC S	26.12
	IE 12" DI E	25.52
1331	SDVT RIM	27.89
	IE 10" PVC SE	24.99
	IE 4" PVC N	24.84
1339	SSMH RIM	27.79
	IE 12" RCP N	14.89
	IE 12" RCP S	14.99
1361	SSMH FORCE MAIN RIM	28.16
	AIR RELEASE VALVE	NA
1391	SSMH RIM	28.66
	IE 12" RCP N	14.36
	IE 12" RCP S	14.46
	IE 10" RCP W	16.26
1392	SDMH TYPE 2 RIM	28.51
	IE 12" DI N	18.51
	IE 8" DI W	19.31
	IE 12" DI S	18.61
1398	SDCB TYPE 1 RIM	28.14
	IE 6" RCP N	23.94
	IE 6" RCP W	24.49
1402	SDCB TYPE 1 RIM	28.31
	IE 8" DI N	25.71
	IE 8" PVC E	24.01
1403	SSMH RIM	28.36
	IE 8" PVC W	20.46
	IE 8" PVC E	20.26
1428	SSMH FORCE MAIN RIM	28.39
	AIR RELEASE VALVE	NA
1432	SDCB TYPE 1 RIM	28.13
	IE 8" PVC S	26.58
1451	SDVT RIM	28.74
	IE 12" PVC NE	27.09
	IE 4" PVC S	27.29
1457	SDCB TYPE 1 RIM	28.02
	IE 6" PVC N	26.02
	IE 12" PVC SW	25.72
	IE 12" DI E	25.32
1458	SDCB TYPE 1 RIM	28.36
	IE 12" DI W	23.26
	IE 6" RCP N	23.16
	IE 8" RCP E	22.96
1489	SDCB TYPE 1 RIM	27.39
	IE 12" DI N	20.69
	IE 12" DI W	22.79
	IE 12" DI E	20.64
	IE 12" PVC S	23.09
1490	SDMH TYPE 2 RIM	27.43
	IE 12" DI W	19.93
	IE 8" RCP NW	21.08
	IE 12" CMP E	17.43
	IE 12" CMP S	17.53
1515	SDVT RIM	27.97
	IE 12" PVC NE	23.72
	IE 4" PVC S	23.92

Point Number	Description	Elevation
1520	SDCB TYPE 1 RIM	30.9
	IE 6" PVC N	25.9
	IE 12" DI S	28
	IE 6" PVC S	25.7
	IE 12" DI E	25.6
1528	SSMH RIM	26.26
	IE 12" RCP N	12.96
	IE 12" RCP S	13.06
1539	SDVT RIM	26.65
	IE 8" PVC NE	22.45
	IE 4" PVC S	22.55
1548	SDCB TYPE 1 RIM	25.14
	IE 6" PVC W	23.34
1553	SDMH RIM	25.59
	IE 12" DI W	21.74
	IE 8" PVC SW	21.79
	IE 12" DI S	21.29
	IE 6" PVC E	21.79
1561	SDCB TYPE 1 RIM	25.77
	IE 12" DI N	22.77
1562	SDCB TYPE 1 RIM	25.84
	IE 12" DI NE	22.89
	IE 12" DI S	22.94
1635	SSMH RIM	20.18
	IE 12" RCP N	12.38
	IE 12" RCP S	12.48
1664	SDCB TYPE 2 RIM	18.33
	IE VERTICAL 48"CMP	8.93
	BOTTOM OF STRUCTURE	5.93
3076	SDCB TYPE 2 RIM	16.55
	IE 12" CMP W	10.55
	IE 12" CMP NE	10.45
3502	SDCB TYPE 2 RIM	16.74
	IE 6" RCP NW	14.44
	IE 6" RCP S	14.24
	SD CULVERT IE 12" PVC W	16.74
3581	SDCB TYPE 2 RIM	13.8
	IE 6" DI N	9.4
	IE 8" CPP S	10.9
3617	SDCB TYPE 1 RIM	13.13
	IE 6" DI N	10.83
	IE 6" DI S	10.78
3624	SDCB TYPE 1 RIM	12.49
	IE 6" DI	10.69
3625	SDCB TYPE 1 RIM	13.43
	IE 8" CPP N	11.83
	IE 6" PVC W	12.23
	IE 6" CPP E	12.13
3626	SDVT RIM	24.58
	IE 12" PVC SE	N/A
3627	SDVT RIM	23
	IE 4" PVC N	21.15
	IE 12" PVC SE	20.85

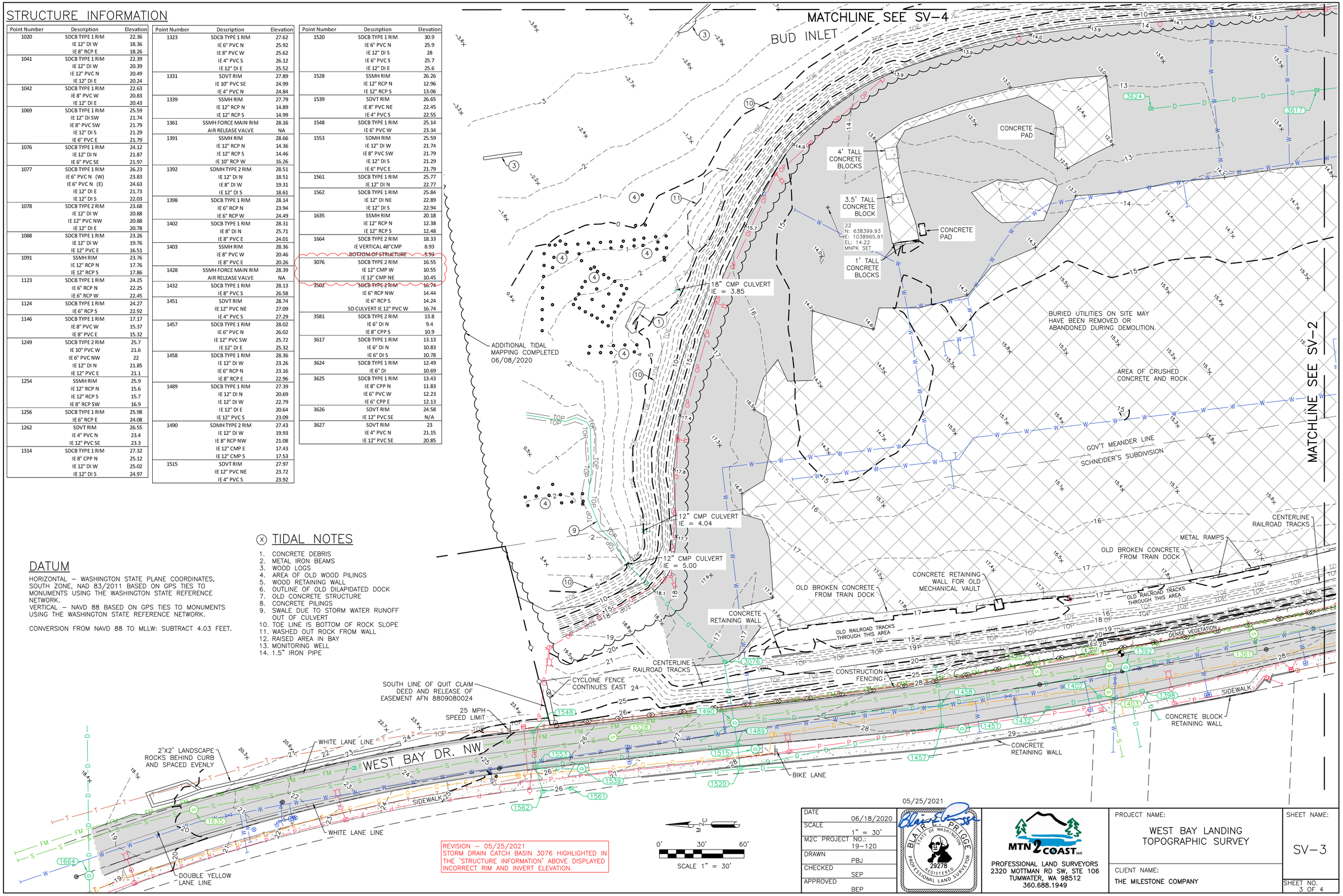
DATUM

HORIZONTAL – WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 83/2011 BASED ON GPS TIES TO MONUMENTS USING THE WASHINGTON STATE REFERENCE NETWORK.
VERTICAL – NAVD 88 BASED ON GPS TIES TO MONUMENTS USING THE WASHINGTON STATE REFERENCE NETWORK.

CONVERSION FROM NAVD 88 TO MLLW: SUBTRACT 4.03 FEET.

(X) TIDAL NOTES

1. CONCRETE DEBRIS
2. METAL IRON BEAMS
3. WOOD LOGS
4. AREA OF OLD WOOD PILINGS
5. WOOD RETAINING WALL
6. OUTLINE OF OLD DILAPIDATED DOCK
7. OLD CONCRETE STRUCTURE
8. CONCRETE PILINGS
9. SWALE DUE TO STORM WATER RUNOFF OUT OF CULVERT
10. TOE LINE IS BOTTOM OF ROCK SLOPE
11. WASHED OUT ROCK FROM WALL
12. RAISED AREA IN BAY
13. MONITORING WELL
14. 1.5" IRON PIPE



REVISION – 05/25/2021
STORM DRAIN CATCH BASIN 3076 HIGHLIGHTED IN THE 'STRUCTURE INFORMATION' ABOVE DISPLAYED INCORRECT RIM AND INVERT ELEVATION.

0' 30' 60'
SCALE 1" = 30'

DATE	06/18/2020
SCALE	1" = 30'
M2C PROJECT NO.:	19-120
DRAWN	PBJ
CHECKED	SEP
APPROVED	BEP

05/25/2021
BLAIR E. PRIGGE
STATE OF WASHINGTON
29278
REGISTERED
PROFESSIONAL LAND SURVEYOR

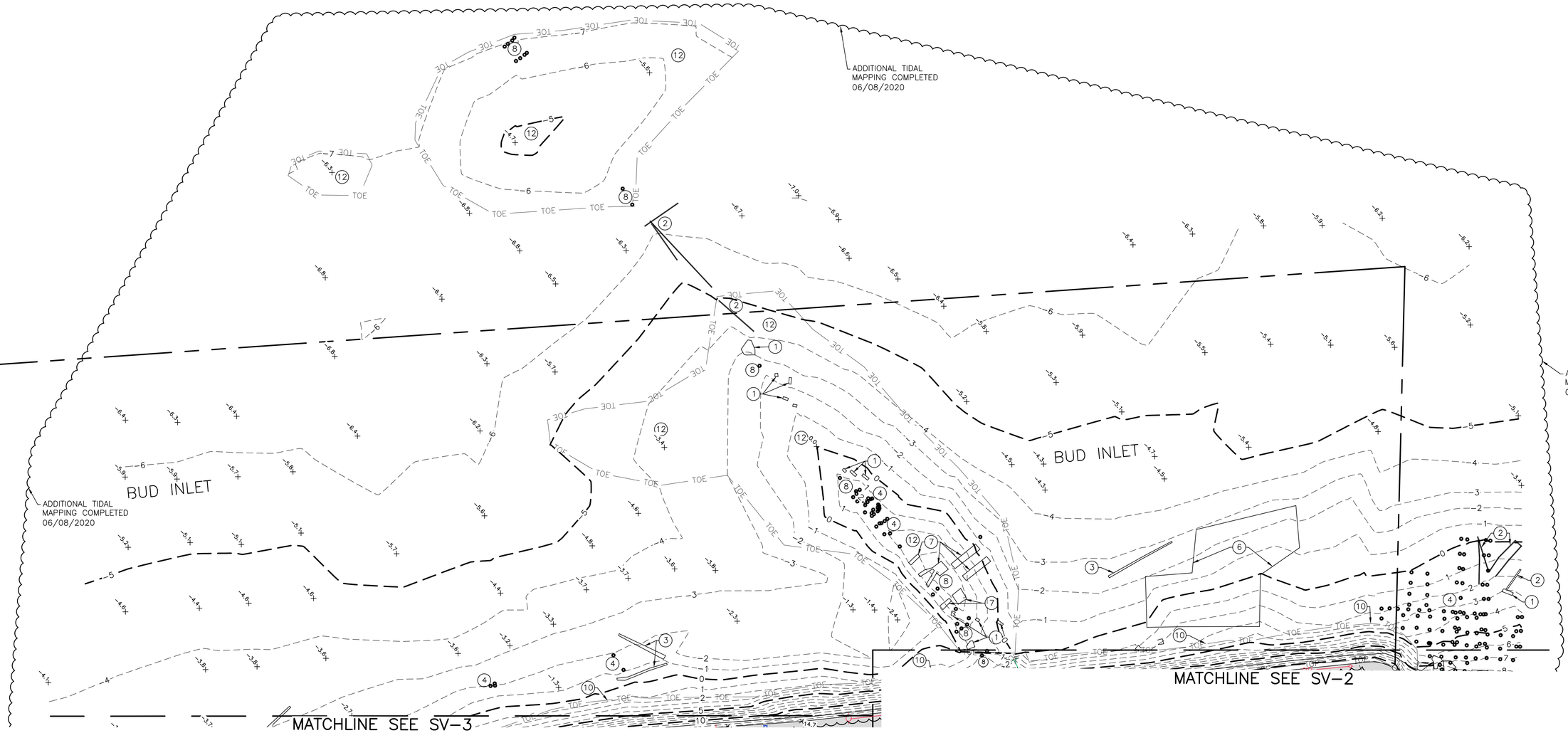
MTN 2 COAST LLC
PROFESSIONAL LAND SURVEYORS
2320 MOTTMAN RD SW, STE 106
TUMWATER, WA 98512
360.688.1949

PROJECT NAME:
WEST BAY LANDING
TOPOGRAPHIC SURVEY

CLIENT NAME:
THE MILESTONE COMPANY

SHEET NAME:
SV-3

SHEET NO.
3 OF 4



ⓧ TIDAL NOTES

1. CONCRETE DEBRIS
2. METAL IRON BEAMS
3. WOOD LOGS
4. AREA OF OLD WOOD PILINGS
5. WOOD RETAINING WALL
6. OUTLINE OF OLD DILAPIDATED DOCK
7. OLD CONCRETE STRUCTURE
8. CONCRETE PILINGS
9. SWALE DUE TO STORM WATER RUNOFF OUT OF CULVERT
10. TOE LINE IS BOTTOM OF ROCK SLOPE
11. WASHED OUT ROCK FROM WALL
12. RAISED AREA IN BAY
13. MONITORING WELL
14. 1.5" IRON PIPE

DATUM

HORIZONTAL – WASHINGTON STATE PLANE COORDINATES, SOUTH ZONE, NAD 83/2011 BASED ON GPS TIES TO MONUMENTS USING THE WASHINGTON STATE REFERENCE NETWORK.
VERTICAL – NAVD 88 BASED ON GPS TIES TO MONUMENTS USING THE WASHINGTON STATE REFERENCE NETWORK.

CONVERSION FROM NAVD 88 TO MLLW: SUBTRACT 4.03 FEET.

M2C

0' 40' 80'

SCALE 1" = 40'

06/18/2020

DATE	06/18/2020
SCALE	1" = 40'
M2C PROJECT NO.:	19-120
DRAWN	PBJ
CHECKED	SEP
APPROVED	BEP

BLAIR E. PRIGGE
STATE OF WASHINGTON
29278
REGISTERED PROFESSIONAL LAND SURVEYOR

MTN 2 COAST LLC
PROFESSIONAL LAND SURVEYORS
2320 MOTTMAN RD SW, STE 106
TUMWATER, WA 98512
360.688.1949

PROJECT NAME:
WEST BAY LANDING
TOPOGRAPHIC SURVEY

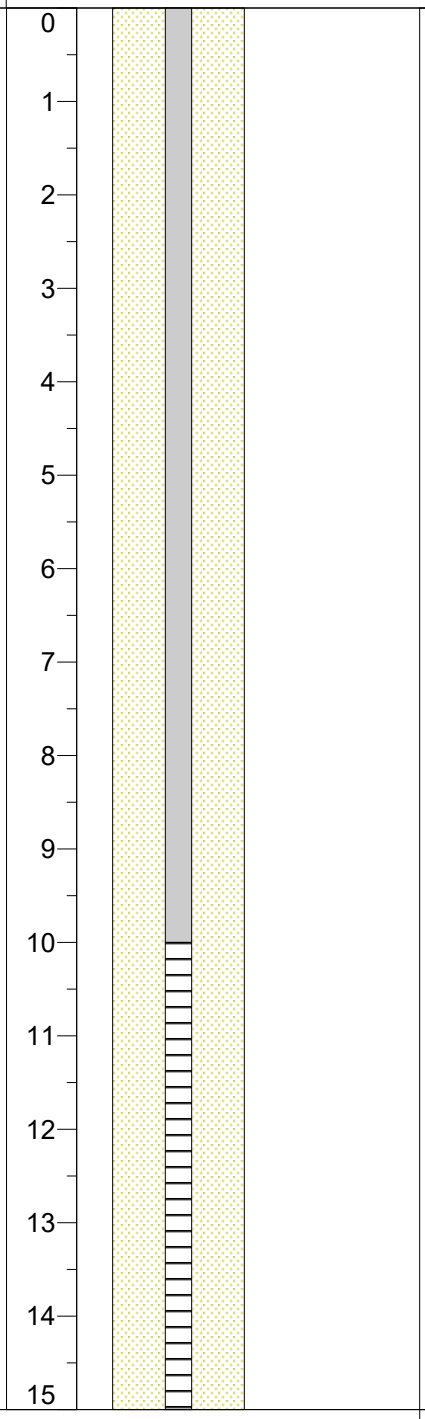
CLIENT NAME:
THE MILESTONE COMPANY

SHEET NAME:
SV-4

Appendix D

PROJECT: Hardel, Olympia, WA			**Log of B1**
BORING LOCATION: B1		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 6/3/20	DATE FINISHED: 6/3/20
DRILLING METHOD: Geoprobe		TOTAL DEPTH (ft.): 15	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Truck-mount		DEPTH TO WATER: DURING: 11.94	AFTER: --
LOGGED BY: Joel Hecker/Melisa Kegans		SCREEN INTERVAL: 10-15'	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0–4	SO-B1-4-5-060320			0.0	FILL - Fine to Coarse SAND with gravel, light brown, moist	
3–4				0.0	FILL - GRAVEL with sand, gray, moist	
4–11				1.7 / 0.0 / 0.0 / 0.0	FILL - SILTY SAND with gravel, dark gray, moist.	Decreasing gravel with depth, increasing moisture with depth
11–15				0.0 / 0.0	FILL - SILTY GRAVEL with sand, gray, moist-to-wet	No odors or staining noted in soil column

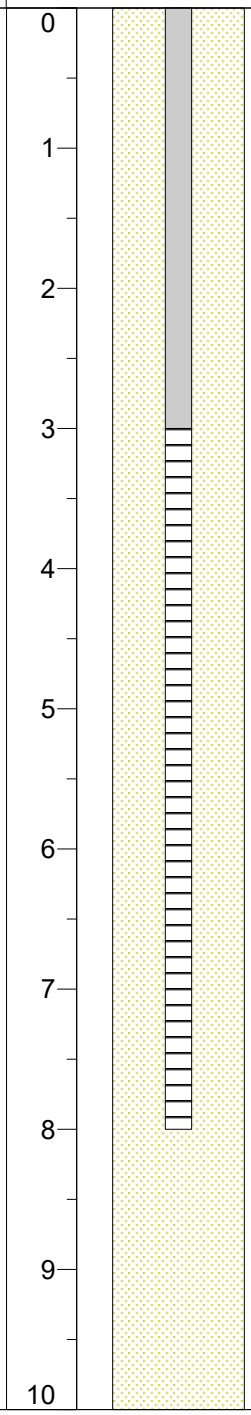


Casing: 1-inch diameter schedule 40 PVC casing

Screen: 1-inch diameter schedule 40, 0.010 slot size, PVC screen

PROJECT: Hardel, Olympia, WA			**Log of B2**
BORING LOCATION: B2		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 6/3/20	DATE FINISHED: 6/3/20
DRILLING METHOD: Geoprobe		TOTAL DEPTH (ft.): 10	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Truck-mount		DEPTH TO WATER: DURING: 3.73	AFTER: --
LOGGED BY: Joel Hecker/Melisa Kegans		SCREEN INTERVAL: 3-8'	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0–1	SO-B2-2-4-060320			0.8	FILL - Fine to Coarse SAND with gravel, gray, moist	
1–3				13.2	FILL - CLAYEY SAND with trace wood, trace brick, gray-brown, moist	Hydrocarbon odor at 2-4'
3–5				0.0	FILL - SILTY GRAVEL with sand, gray-light brown, moist-to-wet	
5–7				0.0	FILL - WOOD	No staining noted in soil column
7–9				0.0	SILT with sand and clay, dark brown, wet	
9–10						

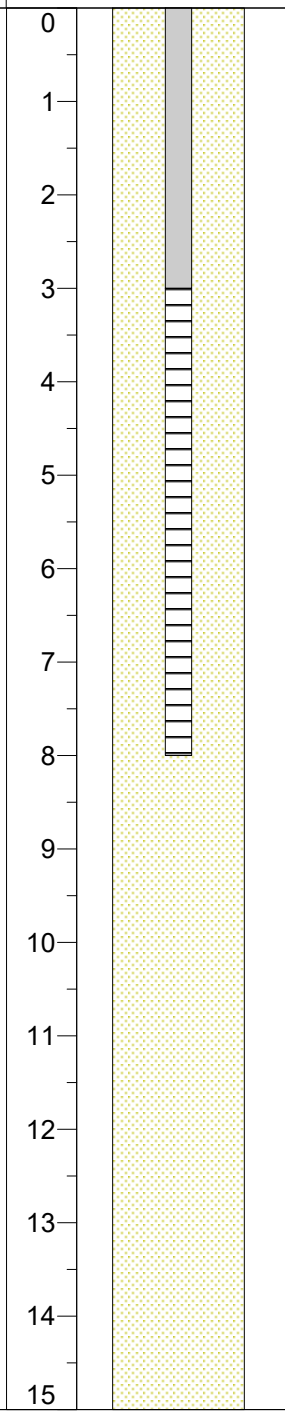


Casing: 1-inch diameter schedule 40 PVC casing

Screen: 1-inch diameter schedule 40, 0.010 slot size, PVC screen

PROJECT: Hardel, Olympia, WA	**Log of B3**
BORING LOCATION: B3	GROUND SURFACE ELEVATION AND DATUM: --
DRILLING CONTRACTOR: ESN	DATE STARTED: 6/3/20 / DATE FINISHED: 6/3/20
DRILLING METHOD: Geoprobe	TOTAL DEPTH (ft.): 15 / MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Truck-mount	DEPTH TO WATER: DURING: 3.25 / AFTER: --
LOGGED BY: Joel Hecker/Melisa Kegans	SCREEN INTERVAL: 3-8' / BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0	SO-B3-2-3-060320				CRUSHED CONCRETE	
1				0.0	FILL - Fine to Coarse SAND with gravel, trace brick, trace concrete, light brown, moist-to-wet	
2						
3				0.0		
4						
5				0.0		
6						
7				0.0	FILL - SILT, trace wood, gray, wet	No odors or staining noted in soil column
8						
9				0.0		
10						
11				0.0		
12						
13				0.0	WOOD	
14						
15				0.0		



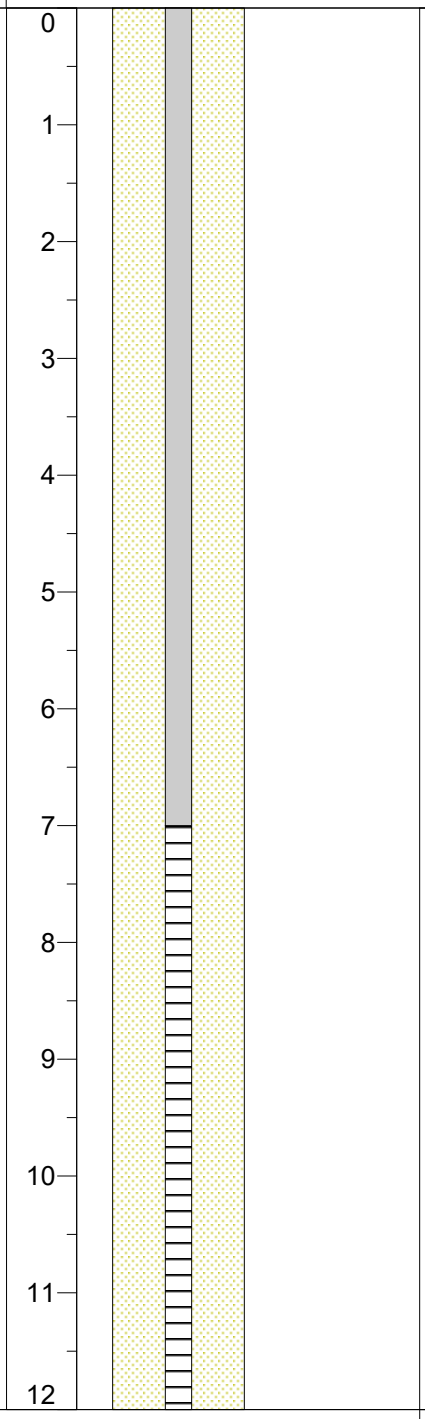
WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

Casing: 1-inch diameter schedule 40 PVC casing

Screen: 1-inch diameter schedule 40, 0.010 slot size, PVC screen

PROJECT: Hardel, Olympia, WA	**Log of B4**
BORING LOCATION: B4	GROUND SURFACE ELEVATION AND DATUM: --
DRILLING CONTRACTOR: ESN	DATE STARTED: 6/3/20 / DATE FINISHED: 6/3/20
DRILLING METHOD: Geoprobe	TOTAL DEPTH (ft.): 12 / MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Truck-mount	DEPTH TO WATER: DURING: ~10 / AFTER: 6.2
LOGGED BY: Joel Hecker/Melisa Kegans	SCREEN INTERVAL: 7-12' / BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0					GRAVEL	
1	SO-B4-1-3-060320			0.0	FILL - Fine to Coarse SAND with gravel, light brown, moist	No odors noted in soil column
2						
3				0.0	FILL - CLAYEY SILT, trace wood, brown-gray	
4						
5				0.0		
6						Increasing wood with depth
7				0.0		
8					POSSIBLE FILL - SILT, trace wood, gray, wet	
9				0.0		
10						Refusal at 12' in concrete
11	B4-11-12-060320			0.0		
12						



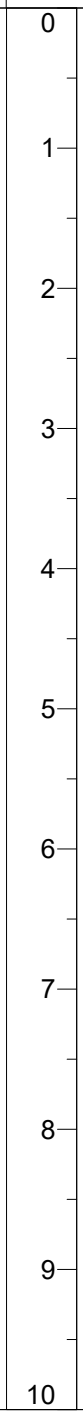
WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

Casing: 1-inch diameter schedule 40 PVC casing

Screen: 1-inch diameter schedule 40, 0.010 slot size, PVC screen

PROJECT: Hardel, Olympia, WA			**Log of B5**
BORING LOCATION: B5		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 6/3/20	DATE FINISHED: 6/3/20
DRILLING METHOD: Geoprobe		TOTAL DEPTH (ft.): 10	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Truck-mount		DEPTH TO WATER: DURING: 4.7	AFTER: --
LOGGED BY: Joel Hecker/Melisa Kegans		SCREEN INTERVAL: 3-8'	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0					ASPHALT	
1				0.0	FILL - Fine to Coarse SAND with gravel, gray, moist	
2						
3	SO-B5-3-4-060320			0.0	FILL - Fine to Coarse SAND with gravel, trace brick, gray and brown, moist	
4						
5				0.0		
6					Fine SILTY SAND, trace shells, gray, wet	No odors or staining noted in soil column
7				0.0		
8						
9				0.0	SILT, gray, wet	
10						



WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

Casing: 1-inch diameter schedule 40 PVC casing

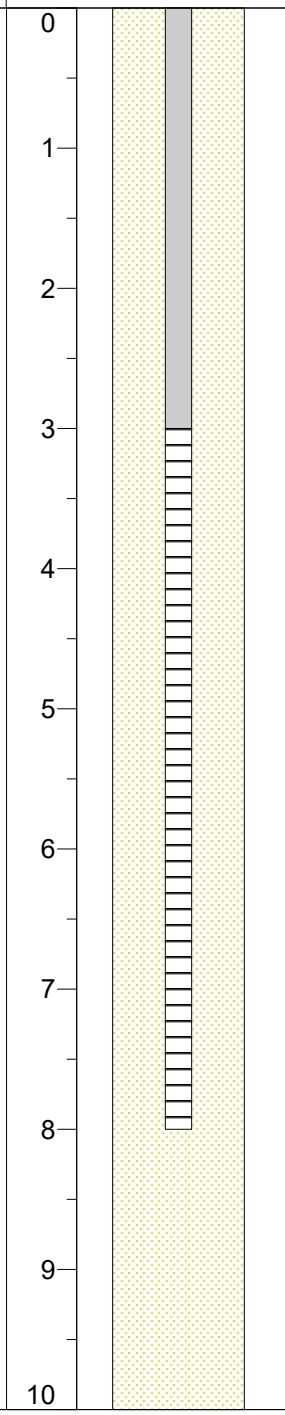
Screen: 1-inch diameter schedule 40, 0.010 slot size, PVC screen

PROJECT: Hardel, Olympia, WA

Log of B6

BORING LOCATION: B6	GROUND SURFACE ELEVATION AND DATUM: --
DRILLING CONTRACTOR: ESN	DATE STARTED: 6/3/20 / DATE FINISHED: 6/3/20
DRILLING METHOD: Geoprobe	TOTAL DEPTH (ft.): 10 / MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Truck-mount	DEPTH TO WATER: DURING: 4.3 / AFTER: --
LOGGED BY: Joel Hecker/Melisa Kegans	SCREEN INTERVAL: 3-8' / BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0	SO-B6-3-4-060320				ASPHALT	
1				0.0	FILL - Fine to Coarse SAND with gravel, light brown, moist	
2						
3				0.0	FILL - CLAY with wood, brown	
4						
5				0.0		
6						
7				0.0	Fine SILTY SAND, trace shells, gray, wet	No odors or staining noted in soil column
8						
9				0.0		
10						



WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

Casing: 1-inch diameter schedule 40 PVC casing

Screen: 1-inch diameter schedule 40, 0.010 slot size, PVC screen

PROJECT: Hardel, Olympia, WA

Log of B7

BORING LOCATION: B7	GROUND SURFACE ELEVATION AND DATUM: --
DRILLING CONTRACTOR: ESN	DATE STARTED: 6/3/20 / DATE FINISHED: 6/3/20
DRILLING METHOD: Geoprobe	TOTAL DEPTH (ft.): 10 / MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Truck-mount	DEPTH TO WATER: DURING: 6 / AFTER: --
LOGGED BY: Joel Hecker/Melisa Kegans	SCREEN INTERVAL: -- / BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0–3	SO-B7-3-5-060320			0.0	FILL - SAND with gravel, light brown, moist	
3–5				0.0	FILL - CLAYEY SAND with wood, trace brick, brown, moist	
5–10				0.0	FILL - SILTY SAND, dark brown, moist	No odors or staining noted in soil column

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

No temporary well installed

PROJECT: Hardel, Olympia, WA			**Log of B8**
BORING LOCATION: B8		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 6/3/20	DATE FINISHED: 6/3/20
DRILLING METHOD: Geoprobe		TOTAL DEPTH (ft.): 10	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Truck-mount		DEPTH TO WATER: DURING: 4	AFTER: --
LOGGED BY: Joel Hecker/Melisa Kegans		SCREEN INTERVAL: --	BOREHOLE BACKFILL: Bentonite

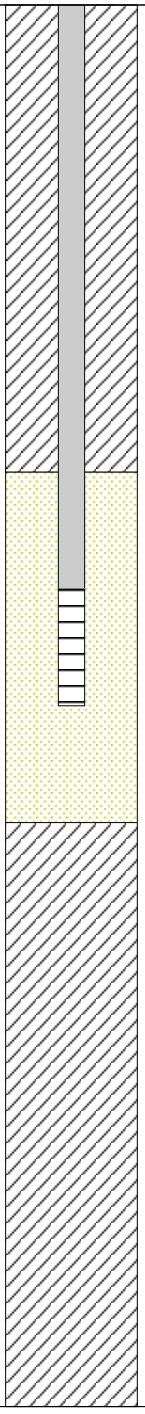
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	SO-B8-4-5-060320			0.0	FILL - Fine to Coarse SAND with increasing gravel at depth, brown, moist-to-wet	No odors or staining noted in soil column	**No temporary well installed**
1				0.0			
2				0.0			
3				0.0			
4				0.0			
5				0.0			
6				0.0			
7				0.0	FILL - SILTY CLAY, gray-brown		
8				0.0	FILL - WOOD with silty clay, brown		
9				0.0			
10				0.0	FILL - SANDY CLAY with wood, brown		

PROJECT: Hardel, Olympia, WA			**Log of B9**
BORING LOCATION: B9		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 6/3/20	DATE FINISHED: 6/3/20
DRILLING METHOD: Geoprobe		TOTAL DEPTH (ft.): 10	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Truck-mount		DEPTH TO WATER: DURING: 3	AFTER: --
LOGGED BY: Joel Hecker/Melisa Kegans		SCREEN INTERVAL: --	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					GRAVEL		
1				0.0	FILL - Fine to Coarse SAND, brown, moist		
2							
3				0.0			
4							
5				0.0			**No temporary well installed**
6	SO-B9-6-7-060320				POSSIBLE FILL - SILTY SAND with gravel, brown-gray, wet	No odors or staining noted in soil column	
7				0.0			
8							
9				0.0			
10							

PROJECT: Hardel, Olympia, WA	**Log of B10**
BORING LOCATION: B10	GROUND SURFACE ELEVATION AND DATUM: --
DRILLING CONTRACTOR: ESN	DATE STARTED: 6/3/20 / DATE FINISHED: 6/3/20
DRILLING METHOD: Geoprobe	TOTAL DEPTH (ft.): 6 / MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Truck-mount	DEPTH TO WATER: DURING: 4.5 / AFTER: --
LOGGED BY: Joel Hecker/Melisa Kegans	SCREEN INTERVAL: 2.5-3' / BOREHOLE BACKFILL: See SVP Construction

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0	No sample collected			0.1	FILL - SILTY SAND with gravel, trace wood, brown, moist	No odors or staining noted in soil column
1						
2				0.6	FILL - CLAYEY SAND with gravel, gray moist	
3						
4				0.0	SILTY SAND with gravel, gray, moist-to-wet	
5						
6						



WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

Soil Vapor Probe Construction: 0.25-inch diameter nylon tubing from 0-2.5'

Screen: 1-inch diameter schedule 40, 0.010 slot size, PVC screen from 2.5-3'

Backfill: Hydrated bentonite chips from 0-2'; Well sand from 2-3.5'; Bentonite chips from 3.5-6'

PROJECT: Hardel, Olympia, WA			**Log of B11**
BORING LOCATION: B11		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 6/3/20	DATE FINISHED: 6/3/20
DRILLING METHOD: Geoprobe		TOTAL DEPTH (ft.): 6	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Truck-mount		DEPTH TO WATER: DURING: 3.5	AFTER: --
LOGGED BY: Joel Hecker/Melisa Kegans		SCREEN INTERVAL: 2-2.5'	BOREHOLE BACKFILL: See SVP Construction

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	No sample collected			0.0	FILL - SAND with gravel, brown, moist	No odors or staining noted in soil column	**Soil Vapor Probe Construction: 0.25-inch diameter nylon tubing from 0-2'** **Screen: 1-inch diameter schedule 40, 0.010 slot size, PVC screen from 2-2.5'** **Backfill: Hydrated bentonite chips from 0-1.5'; Well sand from 1.5-3'; Bentonite chips from 3-6'**
1				0.0			
2							
3				0.0			
4							
5				0.1			
6							

PROJECT: Hardel, Olympia, WA		**Log of B12**	
BORING LOCATION: B12		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 6/3/20	DATE FINISHED: 6/3/20
DRILLING METHOD: Geoprobe		TOTAL DEPTH (ft.): 6	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Truck-mount		DEPTH TO WATER: DURING: 3.22	AFTER: --
LOGGED BY: Joel Hecker/Melisa Kegans		SCREEN INTERVAL: --	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	No sample collected				CRUSHED CONCRETE	No odors or staining noted in soil column	**No temporary well installed**
1				0.0	FILL - Fine to Coarse SAND with gravel, gray, moist		
2							
3				0.0	FILL - CLAY with wood debris, brown		
4							**No SVP set due to shallow groundwater level**
5				0.0	Fine SILTY SAND, gray, wet		
6							

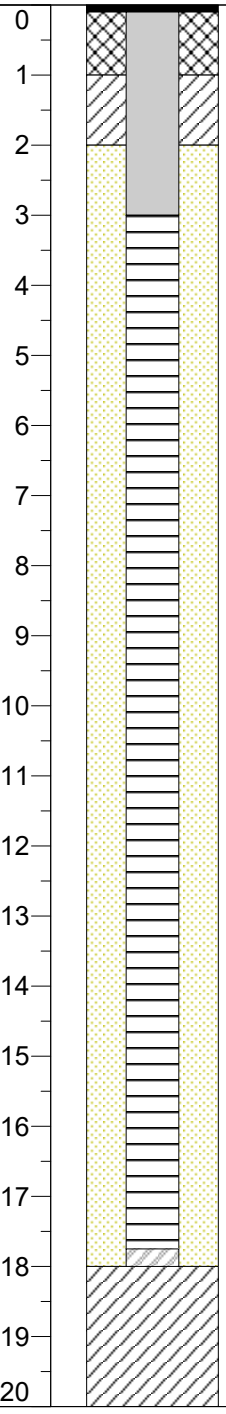
PROJECT: **Hardel Supplemental Phase II ESA**
Olympia, WA

Log of B101/MW101

BORING LOCATION: B101/MW101		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 8/20/2020	DATE FINISHED: 8/20/2020
DRILLING METHOD: Direct Push/Hollow-Stem Augers for Monitoring Well		TOTAL DEPTH (ft.): 20	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: DT7800 Combo Rig		DEPTH TO WATER: DURING: 15.2	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: 3.0-18.0	BOREHOLE BACKFILL: See Below

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0	SO-B101-0.5-3-082020				FILL - GRAVEL AND ASPHALT	No odors or staining noted in soil column
1				0.0	FILL - Fine to Coarse SAND with gravel, brown, moist	
2						
3				0.0	CONCRETE	
4						
5				0.0	CLAYEY SILT, trace wood, gray	
6						
7				0.0		
8						
9				0.0	Fine to Coarse GRAVEL with sand, gray, moist	
10						
11				0.0	WOOD and CLAYEY SAND, brown	
12						
13				0.0		
14						
15				0.0	WOOD, wet	
16						
17				0.0		
18						
19				0.0	CLAYEY SILT, gray	
20						

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



Cover
Cement
Bentonite
Casing
Screen
Sand
End Cap

Cover: 8-inch diameter, flush-mount steel well cover
Cement: Portland cement concrete
Bentonite: Hydrated granular bentonite (beneath cement); Hydrated bentonite pellets (beneath sand backfill)
Casing: 2-inch diameter schedule 40 PVC casing
Screen: 2-inch diameter schedule 40, 0.010 slot size, PVC screen

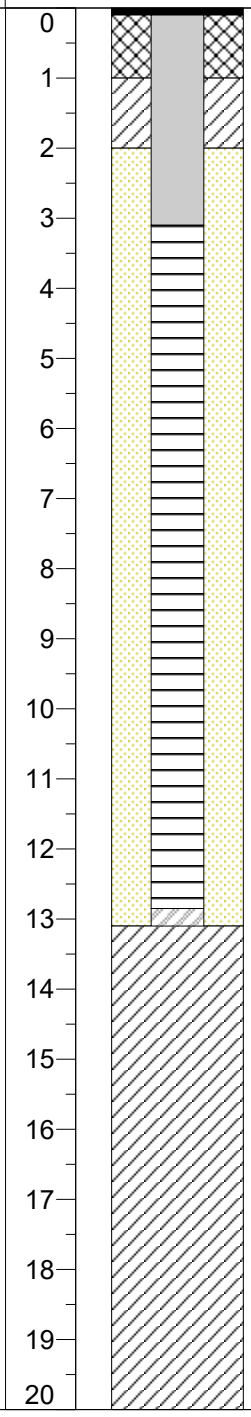
PROJECT: **Hardel Supplemental Phase II ESA**
Olympia, WA

Log of B102/MW102

BORING LOCATION: B102/MW102		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 8/20/2020	DATE FINISHED: 8/20/2020
DRILLING METHOD: Direct Push/Hollow-Stem Augers for Monitoring Well		TOTAL DEPTH (ft.): 20	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: DT7800 Combo Rig		DEPTH TO WATER: DURING: 4.52	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: 3.1-13.1	BOREHOLE BACKFILL: See Below

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0	SO-B102-5-7-082020 SO-B102-2-4-082020				ASPHALT	
1				0.0	FILL - GRAVEL with Fine to Coarse sand, trace concrete, gray, moist	
2						
3				0.0		
4					FILL - CLAYEY SAND, trace brick, trace wood, dark-brown, moist	No odors or staining noted in soil column
5				1.1		
6						
7				1.7		
8					FILL - SILTY CLAY/CLAYEY SILT, gray	
9				0.0		
10					FILL - GRAVEL with silt and sand, gray, wet	
11				--		
12						
13				--		
14					WOOD, wet	Wood was not screened with a PID
15				--		
16						
17				--		
18						
19				--	Fine SILTY SAND, trace shells, gray, wet	
20						

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



Cover
Cement
Bentonite
Casing
Screen
Sand
End Cap

Cover: 8-inch diameter, flush-mount steel well cover
Cement: Portland cement concrete
Bentonite: Hydrated granular bentonite (beneath cement); Hydrated bentonite pellets (beneath sand backfill)
Casing: 2-inch diameter schedule 40 PVC casing
Screen: 2-inch diameter schedule 40, 0.010 slot size, PVC screen

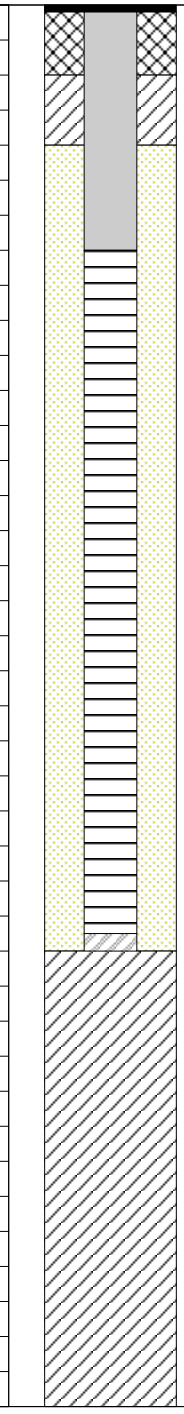
PROJECT: **Hardel Supplemental Phase II ESA**
Olympia, WA

Log of B103/MW103

BORING LOCATION: B103/MW103		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 8/20/2020	DATE FINISHED: 8/20/2020
DRILLING METHOD: Direct Push/Hollow-Stem Augers for Monitoring Well		TOTAL DEPTH (ft.): 20	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: DT7800 Combo Rig		DEPTH TO WATER: DURING: 3.92	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: 3.5-13.5	BOREHOLE BACKFILL: See Below

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0	SO-B103-1-3-082020				CRUSHED CONCRETE	
1				0.0	FILL - Fine to Coarse SAND with gravel, trace brick, trace concrete, brown, moist	
2						
3				0.0		
4						
5				0.0		
6					FILL - SILTY CLAY/CLAYEY SILT, gray	No odors or staining noted in soil column
7				0.0		
8						
9				0.0		
10					FILL - Fine to Coarse SAND with gravel, brown, wet	
11				0.0		
12						
13				--	FILL - WOOD and CLAYEY SAND, trace ceramics, brown, wet	Wood was not screened with a PID
14						
15				0.0		
16						
17				0.0		
18					Fine SILTY SAND, trace shells, trace wood, gray, wet	
19				0.0		
20						

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



Cover: 8-inch diameter, flush-mount steel well cover
Cement: Portland cement concrete
Bentonite: Hydrated granular bentonite (beneath cement); Hydrated bentonite pellets (beneath sand backfill)
Casing: 2-inch diameter schedule 40 PVC casing
Screen: 2-inch diameter schedule 40, 0.010 slot size, PVC screen

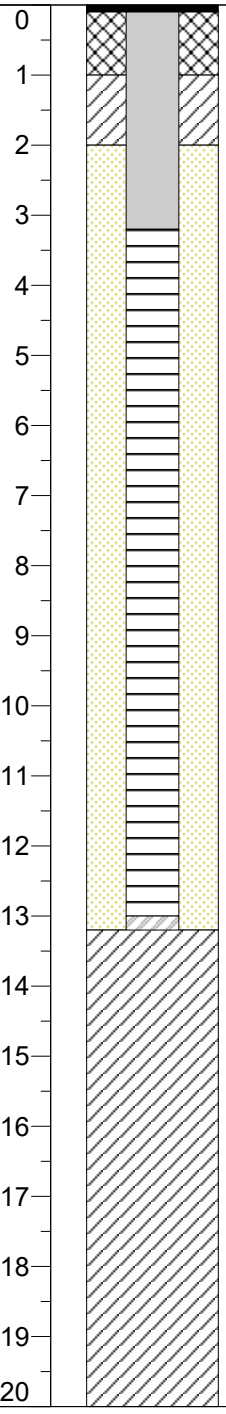
PROJECT: **Hardel Supplemental Phase II ESA**
Olympia, WA

Log of B104/MW104

BORING LOCATION: B104/MW104		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 8/20/2020	DATE FINISHED: 8/20/2020
DRILLING METHOD: Direct Push/Hollow-Stem Augers for Monitoring Well		TOTAL DEPTH (ft.): 20	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: DT7800 Combo Rig		DEPTH TO WATER: DURING: 8.63	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: 3.2-13.2	BOREHOLE BACKFILL: See Below

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0	SO-B104-1-3-082020				GRAVEL	
1				0.0	FILL - Fine to Coarse SAND with gravel, trace asphalt, trace concrete, light-brown, moist	No odors or staining noted in soil column
2						
3				0.0		
4					FILL - LEAN CLAY, gray	
5				0.0		
6						
7				0.0		
8						
9				0.0	FILL - SILT, gray	Saturated wood seams from 9-10' and 12-12.5'
10						
11				0.0		
12						
13				0.0		
14						
15				--	FILL - WOOD	Wood was not screened with a PID
16						
17				0.0	Fine SILTY SAND with shells, trace wood, gray, wet	
18						
19				0.0		
20						

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



- Cover
- Cement
- Bentonite
- Casing
- Screen
- Sand
- End Cap

Cover: 8-inch diameter, flush-mount steel well cover
Cement: Portland cement concrete
Bentonite: Hydrated granular bentonite (beneath cement); Hydrated bentonite pellets (beneath sand backfill)
Casing: 2-inch diameter schedule 40 PVC casing
Screen: 2-inch diameter schedule 40, 0.010 slot size, PVC screen

PROJECT: Hardel Supplemental Phase II ESA
Olympia, WA

Log of B105

BORING LOCATION: B105		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 8/20/2020	DATE FINISHED: 8/20/2020
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 10	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Geoprobe		DEPTH TO WATER: DURING: 5.2	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: NA	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	SO-B105-2-4-082020				ASPHALT		
					AGGREGATE BASE		
1				0.0	FILL - Fine to Coarse SAND, light brown, moist	Wood at 3.5'	
2							
3				0.0			
4							
5				0.0	Fine SILTY SAND, increasing shell content with depth, gray, moist to wet	No odors or staining noted in soil column	
6							
7				0.0			
8							
9				0.0	SILT, gray, wet		
10							

PROJECT: Hardel Supplemental Phase II ESA
Olympia, WA

Log of B106

BORING LOCATION: B106		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 8/20/2020	DATE FINISHED: 8/20/2020
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 10	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Geoprobe		DEPTH TO WATER: DURING: 8	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: NA	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0–1	SO-B106-6-8-082020			0.0	CRUSHED CONCRETE	No odors or staining noted in soil column	
1–5				0.0	FILL - Fine to Coarse SILTY SAND, dark brown, moist		
5				0.0	CONCRETE		
5–8				3.2	Fine to Coarse SAND, trace organics, dark brown, moist		
8–10				0.0	Fine SILTY SAND with shells, trace wood, gray, wet		

PROJECT: Hardel Supplemental Phase II ESA
Olympia, WA

Log of B107

BORING LOCATION: B107		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 8/20/2020	DATE FINISHED: 8/20/2020
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 10	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Geoprobe		DEPTH TO WATER: DURING: 3.8	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: NA	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	SO-B107-2-4-082020				CRUSHED CONCRETE	No odors or staining noted in soil column	
1				0.0			
2					FILL - Fine to Coarse SAND, trace silt, light brown, moist		
3				0.0			
4					FILL - SILTY LEAN CLAY, dark bown		
5				0.0			
6					FILL - Fine to Coarse SILTY SAND, trace concrete, trace gravel, brown and gray, moist to wet		
7				0.0			
8					ORGANIC CLAY and WOOD, dark brown		
9				0.0			
10							

PROJECT: **Hardel Supplemental Phase II ESA**
Olympia, WA

Log of B2-C

BORING LOCATION: B2-C		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 8/20/2020	DATE FINISHED: 8/20/2020
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 15	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Geoprobe		DEPTH TO WATER: DURING: 4.5	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: NA	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0–4	SO-B2-C-8.5-10-082020			0.0	FILL - Fine to Coarse SAND with gravel, gray, moist	No odors or staining noted in soil column	
4–10				0.0 / 0.0 / 3.6	FILL - CLAYEY SAND with wood, brown, moist to wet	Sheen on soil 9-9.75'	
10–14				0.0	SILTY GRAVEL with wood, gray, wet		
14–15				0.0	WOOD, wet		

PROJECT: Hardel Supplemental Phase II ESA
Olympia, WA

Log of B2-N

BORING LOCATION: B2-N		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 8/20/2020	DATE FINISHED: 8/20/2020
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 10	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Geoprobe		DEPTH TO WATER: DURING: 4.51	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: NA	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	SO-B2-N-3-5-082020				ASPHALT		
1				0.0	FILL - GRAVEL with sand, gray, moist		
2					WOOD with clayey sand, brown, moist	No staining noted in soil column	
3				0.0			
4					FILL - Fine to Coarse CLAYEY SAND, gray, wet		
5				0.0			
6							
7				--	WOOD, brown and black, wet	Organic swampy odor noted from 5.5-10' Wood was not screened with PID	
8							
9				--			
10							

PROJECT: **Hardel Supplemental Phase II ESA**
Olympia, WA

Log of B2-E

BORING LOCATION: B2-E		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 8/20/2020	DATE FINISHED: 8/20/2020
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 10	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Geoprobe		DEPTH TO WATER: DURING: 5	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: NA	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0–3	SO-B2-E-3-5.5-082020			0.0	FILL - Fine to Coarse SAND with gravel, gray, moist		
3–5.5				0.0	FILL - Fine to Coarse CLAYEY SAND, brown, moist to wet	No staining noted in soil column	
5.5–7				0.0	FILL - WOOD, wet	Wood was not screened with PID	
7–10				0.0	FILL - WOOD and SILTY CLAY, black, wet	Organic swampy odor noted from 7-10'	

PROJECT: **Hardel Supplemental Phase II ESA**
Olympia, WA

Log of B2-S

BORING LOCATION: B2-S		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 8/20/2020	DATE FINISHED: 8/20/2020
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 10	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Geoprobe		DEPTH TO WATER: DURING: 4.12	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: NA	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0–1	SO-B2-S-8-10-082020			0.0	FILL - Fine to Coarse SAND with gravel, gray, moist	No staining noted in soil column	
1–5				--	WOOD	Wood was not screened with PID	
5–8				0.0	FILL - CLAYEY SAND with wood, brown, moist		
8–10				0.0	SILTY GRAVEL, black, wet	Organic swampy odor noted from 8-10'	

PROJECT: Hardel Supplemental Phase II ESA
Olympia, WA

Log of B2-W

BORING LOCATION: B2-W		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 8/20/2020	DATE FINISHED: 8/20/2020
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 10	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Geoprobe		DEPTH TO WATER: DURING: 6	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: NA	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0							
1				0.0	FILL - Fine to Coarse SAND with gravel, gray, moist	No odors or staining noted in soil column	
2							
3				0.0			
4					FILL - CLAYEY SAND, dark brown		
5				0.9			
6					FILL - Fine to Coarse SILTY SAND, some clay, brown and gray, moist to wet		
7	SO-B2-W-7-8.5-082020						
8				1.9			
9				0.0	LEAN CLAY with silt, gray		
10							

PROJECT:	Hardel Olympia, WA	Log of B201	
BORING LOCATION:	B201	GROUND SURFACE ELEVATION AND DATUM:	--
DRILLING CONTRACTOR:	ESN	DATE STARTED: 01/7/21	DATE FINISHED: 01/7/21
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.): 10	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT:	Geoprobe	DEPTH TO WATER: DURING: 5'	AFTER: --
LOGGED BY:	Joel Hecker	SCREEN INTERVAL: NA	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	No Sample Collected				ASPHALT	No odors or stains noted in soil column	
1				0.0			
2					FILL - Fine to Coarse SAND with gravel, trace brick, trace concrete, gray, moist		
3				0.0			
4							
5				0.0			
6					Fine to Coarse SILTY GRAVEL with sand, gray, wet		
7				0.0			
8							
9				0.0	Fine SILTY SAND, trace shells, gray, wet		
10							

PROJECT: Hardel, Olympia, WA	**Log of B202**
BORING LOCATION: B202	GROUND SURFACE ELEVATION AND DATUM: 3.5'
DRILLING CONTRACTOR: ESN	DATE STARTED: 01/7/21 / DATE FINISHED: 01/7/21
DRILLING METHOD: Direct Push	TOTAL DEPTH (ft.): 10 / MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Geoprobe	DEPTH TO WATER: DURING: Wet Surface / AFTER: 3.5'
LOGGED BY: Joel Hecker	SCREEN INTERVAL: NA / BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					CRUSHED CONCRETE		
1				1.2	FILL - Fine to Coarse GRAVEL with sand, gray, wet	Sheen on saturated soil	
2					WOOD		
3				--			
4							
5	SO-B202-5-6-010721			30.8	FILL - Fine to Coarse SAND with gravel, trace wood, gray, wet	Strong hydrocarbon odor 3-7'	
6				20.2	FILL - SANDY CLAY, some silt, brown		
7				9.1			
8					Fine to Coarse SILTY SAND with shells, gray, wet		
9				3.5			
10							

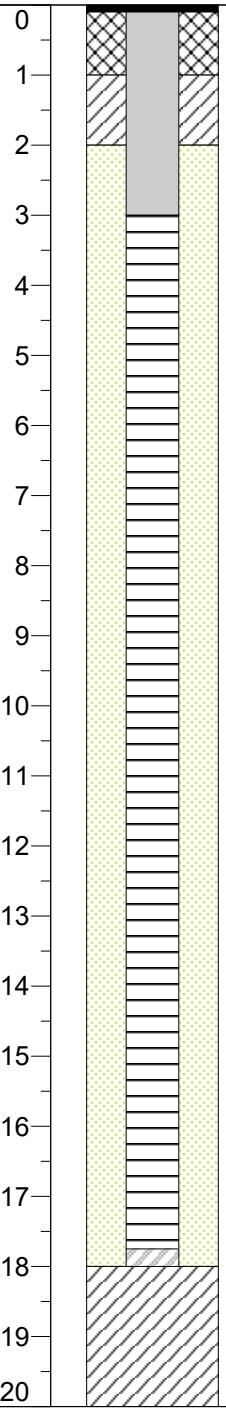
PROJECT: Hardel, Olympia, WA

Log of B203/MW105

BORING LOCATION: B203/MW105		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 1/7/21	DATE FINISHED: 1/7/21
DRILLING METHOD: Direct Push/Hollow-Stem Augers for Monitoring Well		TOTAL DEPTH (ft.): 20	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: DT7800 Combo Rig		DEPTH TO WATER: DURING: 7'	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: 3.0-18.0	BOREHOLE BACKFILL: See Well Construction

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0	No Sample Collected				ASPHALT	No odors or staining noted in soil column
1				0.0	FILL - Fine to Coarse SAND with gravel, gray and brown, moist	
2						
3				0.0		
4						
5				0.0	FILL - GRAVEL with seams of clayey sand and clay, trace wood, trace brick, brown and gray, moist-to-wet	
6						
7				0.0		
8						
9				0.0		
10						
11				0.0	SILTY GRAVEL, gray, wet	
12						
13				0.0		
14						
15				0.0		
16						
17				0.0	SILTY SAND and GRAVEL, gray, wet	
18						
19						
20						

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



Cover
Cement
Bentonite
Casing
Screen
Sand
End Cap

Cover: 8-inch diameter, flush-mount steel well cover
Cement: Portland cement concrete
Bentonite: Hydrated granular bentonite (beneath cement); Hydrated bentonite pellets (beneath sand backfill)
Casing: 2-inch diameter schedule 40 PVC casing
Screen: 2-inch diameter schedule 40, 0.010 slot size, PVC screen

PROJECT: Hardel
Olympia, WA

Log of B204

BORING LOCATION: B204		GROUND SURFACE ELEVATION AND DATUM: --	
DRILLING CONTRACTOR: ESN		DATE STARTED: 01/7/21	DATE FINISHED: 01/7/21
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 10	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: Geoprobe		DEPTH TO WATER: DURING: 5'	AFTER: --
LOGGED BY: Joel Hecker		SCREEN INTERVAL: NA	BOREHOLE BACKFILL: Bentonite

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0	SO-B204-5-7-010721				ASPHALT	No odors or stains noted in soil column	
1				0.0	FILL - Fine to Coarse SAND with gravel, trace brick, trace concrete, gray and brown, moist		
2							
3				0.0	FILL - SANDY CLAY with gravel, brown		
4							
5				0.3	Fine to Coarse SAND with gravel, some silt, gray, moist-to-wet		
6							
7				0.5	Fine SILTY SAND with shells, gray, wet		
8							
9				0.0	ORGANIC CLAY, dark brown		
10							

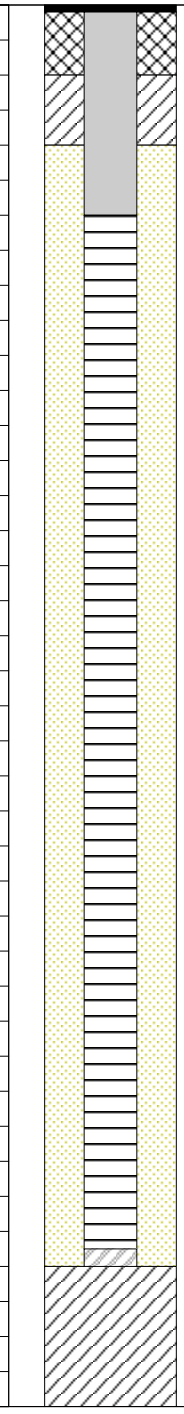
PROJECT: Hardel, Olympia, WA

Log of B205/MW106

BORING LOCATION: B205/MW106	GROUND SURFACE ELEVATION AND DATUM: --
DRILLING CONTRACTOR: ESN	DATE STARTED: 1/7/21 / DATE FINISHED: 1/7/21
DRILLING METHOD: Direct Push/Hollow-Stem Augers for Monitoring Well	TOTAL DEPTH (ft.): 20 / MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: DT7800 Combo Rig	DEPTH TO WATER: DURING: 4.75' / AFTER: --
LOGGED BY: Joel Hecker	SCREEN INTERVAL: 3.0-18.0 / BOREHOLE BACKFILL: See Well Construction

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0	No Sample Collected				ASPHALT	No odors or staining noted in soil column
1				0.0		
2					FILL - Fine to Coarse SAND with gravel, trace brick, trace concrete, gray and brown, moist	
3				0.0		
4						
5				0.0		
6						
7				0.0		
8						
9				0.0		
10						
11				0.0		
12					SILT, occasional saturated sand seams, gray, wet	
13				0.0		
14						
15				0.0		
16						
17				0.0		
18						
19						
20						

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

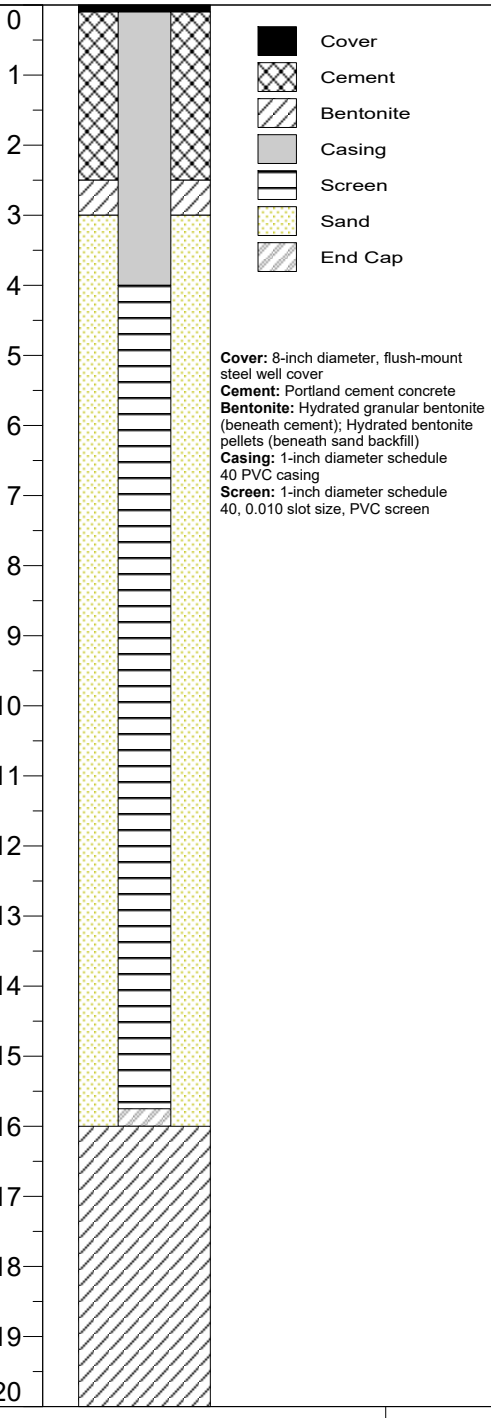


Cover: 8-inch diameter, flush-mount steel well cover
Cement: Portland cement concrete
Bentonite: Hydrated granular bentonite (beneath cement); Hydrated bentonite pellets (beneath sand backfill)
Casing: 2-inch diameter schedule 40 PVC casing
Screen: 2-inch diameter schedule 40, 0.010 slot size, PVC screen

PROJECT: Hardel, Olympia, WA	**Log of MW107**
BORING LOCATION: MW107	GROUND SURFACE ELEVATION AND DATUM: 10.5
DRILLING CONTRACTOR: ESN	DATE STARTED: 4/22/21 / DATE FINISHED: 4/22/21
DRILLING METHOD: Hollow Stem Augers	TOTAL DEPTH (ft.): 20 / MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: DT7800 Combo Rig	DEPTH TO WATER: DURING: 11 / AFTER: 10.5
LOGGED BY: Joel Hecker	SCREEN INTERVAL: 4.0-16.0 / BOREHOLE BACKFILL: See Well Construction

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0	No Sample Collected				Asphalt	
1				0.0	FILL - Fine to Coarse SAND with gravel, gray, moist	
2						
3				0.0		
4						
5				0.0	FILL - SILTY CLAY, trace wood, trace gravel, gray	
6						
7				0.0		
8						
9				0.0		
10						
11				0.0		
12					Fine SILTY SAND with shells, gray, wet	No odors or staining noted in soil column
13				0.0		
14						
15				0.0		
16						
17				0.0	SILT, gray, wet	Seam of silty gravel 17-17.25'
18						
19				0.0	Fine to Coarse SILTY SAND with gravel, gray, wet	
20						

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



Cover: 8-inch diameter, flush-mount steel well cover
Cement: Portland cement concrete
Bentonite: Hydrated granular bentonite (beneath cement); Hydrated bentonite pellets (beneath sand backfill)
Casing: 1-inch diameter schedule 40 PVC casing
Screen: 1-inch diameter schedule 40, 0.010 slot size, PVC screen

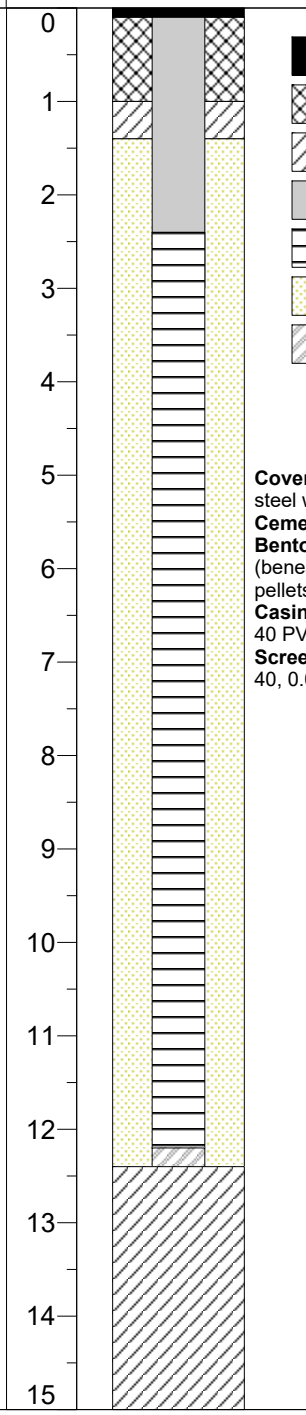
PROJECT: Hardel
Olympia, WA

Log of PZ101

BORING LOCATION: PZ101		GROUND SURFACE ELEVATION AND DATUM: 4.5	
DRILLING CONTRACTOR: ESN		DATE STARTED: 4/22/21	DATE FINISHED: 4/22/21
DRILLING METHOD: Direct Push		TOTAL DEPTH (ft.): 15	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: DT7800 Combo Rig		DEPTH TO WATER: DURING: ~5	AFTER: 4.5
LOGGED BY: Joel Hecker		SCREEN INTERVAL: 2.4-12.4	BOREHOLE BACKFILL: See Well Construction

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0–5	No Sample Collected			--		
5–11				0.0	FILL - Fine to Coarse gravel with SAND, gray, moist-to-wet	
11–13				0.0	Fine to Coarse SILTY SAND with shells, gray, wet	No odors or staining noted in soil column
13–15				0.0	SILTY CLAYEY SAND with wood, brown, wet	

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

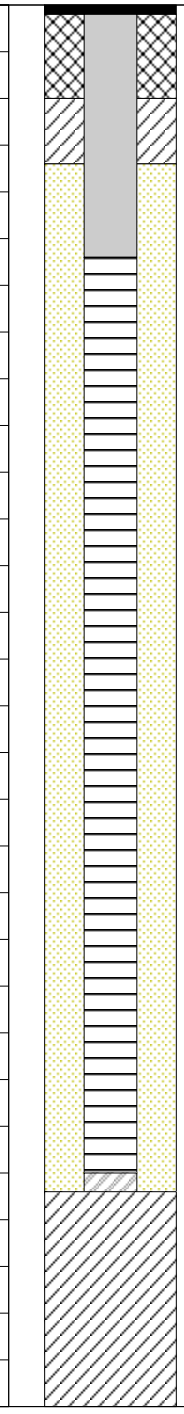


Cover
Cement
Bentonite
Casing
Screen
Sand
End Cap

Cover: 8-inch diameter, flush-mount steel well cover
Cement: Portland cement concrete
Bentonite: Hydrated granular bentonite (beneath cement); Hydrated bentonite pellets (beneath sand backfill)
Casing: 1-inch diameter schedule 40 PVC casing
Screen: 1-inch diameter schedule 40, 0.010 slot size, PVC screen

PROJECT: Hardel, Olympia, WA	**Log of PZ102**
BORING LOCATION: PZ102	GROUND SURFACE ELEVATION AND DATUM: 2.7
DRILLING CONTRACTOR: ESN	DATE STARTED: 4/22/21 / DATE FINISHED: 4/22/21
DRILLING METHOD: Direct Push	TOTAL DEPTH (ft.): 15 / MEASURING POINT: Ground Surface
DRILLING EQUIPMENT: DT7800 Combo Rig	DEPTH TO WATER: DURING: 4 / AFTER: 2.7
LOGGED BY: Joel Hecker	SCREEN INTERVAL: 2.7-12.7 / BOREHOLE BACKFILL: See Well Construction

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0–4.5	No Sample Collected			0.0	FILL - Fine to Coarse SILTY SAND with gravel, gray, moist-to-wet	No odors or staining noted in soil column
4.5–5				0.0	FILL - SILTY CLAY, gray	
5–12				0.0	FILL - CLAYEY SAND with wood, brown, wet	
12–15				--	WOOD	

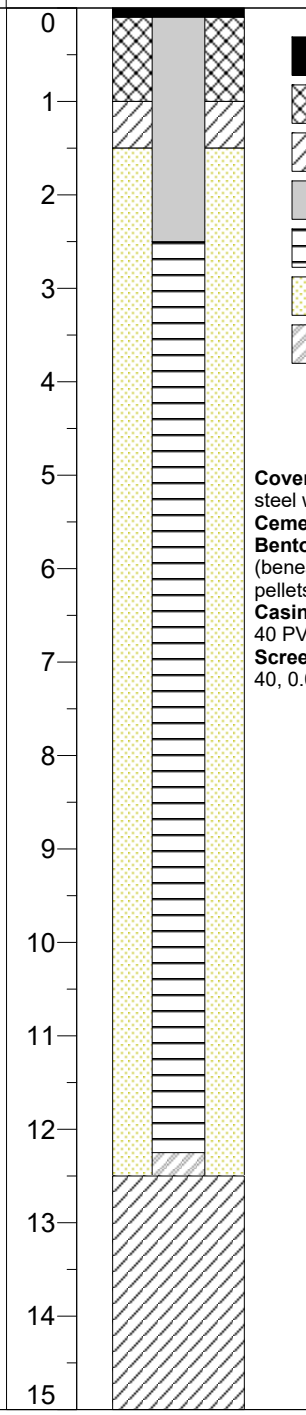


Cover
Cement
Bentonite
Casing
Screen
Sand
End Cap

Cover: 8-inch diameter, flush-mount steel well cover
Cement: Portland cement concrete
Bentonite: Hydrated granular bentonite (beneath cement); Hydrated bentonite pellets (beneath sand backfill)
Casing: 1-inch diameter schedule 40 PVC casing
Screen: 1-inch diameter schedule 40, 0.010 slot size, PVC screen

PROJECT:	Hardel Olympia, WA	Log of PZ103	
BORING LOCATION:	PZ103	GROUND SURFACE ELEVATION AND DATUM: 2.5	
DRILLING CONTRACTOR:	ESN	DATE STARTED: 4/22/21	DATE FINISHED: 4/22/21
DRILLING METHOD:	Direct Push	TOTAL DEPTH (ft.): 15	MEASURING POINT: Ground Surface
DRILLING EQUIPMENT:	DT7800 Combo Rig	DEPTH TO WATER: DURING: 3	AFTER: 2.5
LOGGED BY:	Joel Hecker	SCREEN INTERVAL: 2.5-12.5	BOREHOLE BACKFILL: See Well Construction

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Litho.	PID Reading	DESCRIPTION	BORING REMARKS
0	No Sample Collected			0.0	FILL - Fine to Coarse SAND with gravel, gray, moist-to-wet	No odors or staining noted in soil column
1				0.0		
2				0.0		
3				0.0		
4				0.0		
5				0.0		
6				0.0		
7				0.0		
8				0.0		
9				0.0	Fine SILTY SAND with shells, gray, wet	
10				0.0		
11				0.0		
12				0.0		
13				0.0		
14				0.0	Ground WOOD fibers	
15				0.0		



Cover
Cement
Bentonite
Casing
Screen
Sand
End Cap

Cover: 8-inch diameter, flush-mount steel well cover
Cement: Portland cement concrete
Bentonite: Hydrated granular bentonite (beneath cement); Hydrated bentonite pellets (beneath sand backfill)
Casing: 1-inch diameter schedule 40 PVC casing
Screen: 1-inch diameter schedule 40, 0.010 slot size, PVC screen

Appendix E

June 2020 Phase II ESA

Libby Environmental, Inc.
3322 South Bay Road NE • Olympia, WA 98506-2957

July 8, 2020

Joel Hecker
Pioneer Technologies Corporation
5205 Corporate Center Ct SE, Suite C
Lacey, WA 98503

Dear Mr. Hecker:

Please find enclosed the analytical data report for the Hardel Site Project located in Olympia, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
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Chain of Custody Record

www.LibbyEnvironmental.com

Client: Pioneer Technologies
Address: 5205 Corporate Center Court SE, Suite C
City: Lacey State: WA Zip: 98503
Phone: 360-828-3739 Fax:
Client Project # Hardel Site

Date: 06/03/2020 Page: 1 of 2
Project Manager: Joel Hecker
Project Name: Hardel Site
Location: 1210 West Bay Dr. City, State: Olympia WA
Collector: SH / MK Date of Collection: 6/3
Email: heckerj@uspioneer.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	EPH		Field Notes
1 GW-B1-0603	10-15	1400	Grab	multiple	X		X			X			X			X			Metals dissolved in field
2 GW-B2-0603	3-8	1300	↓	↓	↓		↓			↓			↓			↓			↓
3 GW-B3-0603	3-8	1210																	
4 GW-B4-0603	7-12	1110																	
5 GW-B5-0603	3-8	1000																	
6 GW-B6-0603	3-8	915																	
7 GW-B6-0603-01	3-8	915				X		X			X				X				
8 Trip Blank 0603	—	—			X														
9 S-B1-4-5-0603	4-5	1240			X	X		X			X		X						Sample potentially impacted
10 S-B2-2-4-0603	2-4	1230														⊗			Sample potentially impacted
11 S-B3-2-3-0603	2-3	1130														⊗			
12 S-B4-1-3-0603	1-3	1030																	Std TAT
13 S-B4-1-3-0603-01	1-3	1030												↓					Added 6-11-2020
14 S-B4-11-12-0603	11-12	1045			X									X					per Joel via email.
15 S-B5-3-4-0603	3-4	0920			X	X		X			X			[redacted]	X				
16 S-B6-3-4-0603	3-4	0845			X	X		X			X				X				
17 S-B7-3-5-0603	3-5	1600			X	X		X			X				X				

Relinquished by: [signature] Date / Time 6/3 1712
Received by: [signature] Date / Time 6/3/20 1710 HE 1540

Relinquished by: Date / Time
Received by: Date / Time

Relinquished by: Date / Time
Received by: Date / Time

Sample Receipt

Good Condition?	(Y) N
Cooler Temp.	°C
Sample Temp.	°C
Total Number of Containers	

Remarks: need TPH-D, G, + HO

TAT: 24HR 48HR (5-DAY)

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

Chain of Custody Record

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Date: 6/3 Page: 2 of 2

Client: Pioneer Technologies

Project Manager: Joel Hecker

Address:

Project Name: Hardel

City: State: Zip:

Location: City, State:

Phone: 360-828-3729 Fax:

Collector: Date of Collection: 6/3

Client Project #

Email: heckerj@uspioneer.com

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	TOC			Field Notes
1	S-B8-4-5-0603	4-5	1620	Grab	multiple	X		X			X					X		⊗			Std TAT
2	S-B9-6-7-0603	6-7	1640	↓	↓	X		X			X					X					Added 6-11-2020 per Joel via email
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
16																					
17																					

Relinquished by:	Date / Time 6/3 1710	Received by:	Date / Time 6/3/20 1710
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition? (Y) N

Cooler Temp. °C

Sample Temp. °C

Total Number of Containers

Remarks: need TPH-D, G, + HO

TAT: 24HR 48HR (5-DAY)

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

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HARDEL SITE PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L200603-7

Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		Method Blank	S-B1-4-5-0603	S-B1-4-5-0603 Dup	S-B2-2-4-0603	S-B3-2-3-0603	S-B4-1-3-0603
Date Sampled	Reporting	N/A	6/3/2020	6/3/2020	6/3/2020	6/3/2020	6/3/2020
Date Analyzed	Limits	6/5/2020	6/5/2020	6/5/2020	6/5/2020	6/5/2020	6/5/2020
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Dichlorodifluoromethane	0.06	nd	nd	nd	nd	nd	nd
Chloromethane	0.06	nd	nd	nd	nd	nd	nd
Vinyl chloride	0.02	nd	nd	nd	nd	nd	nd
Bromomethane	0.09	nd	nd	nd	nd	nd	nd
Chloroethane	0.06	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.05	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Methylene chloride	0.02	nd	nd	nd	nd	nd	nd
Methyl *tert*- Butyl Ether (MTBE)	0.05	nd	nd	nd	nd	nd	nd
trans -1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.03	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
cis -1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Chloroform	0.02	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	0.02	nd	nd	nd	nd	nd	nd
Carbon tetrachloride	0.03	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Benzene	0.02	nd	nd	nd	0.34	nd	nd
1,2-Dichloroethane (EDC)	0.03	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.03	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	0.02	nd	nd	nd	nd	nd	nd
Dibromomethane	0.04	nd	nd	nd	nd	nd	nd
Bromodichloromethane	0.02	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.03	nd	nd	nd	nd	nd	nd
Trans-1,3-Dichloropropene	0.03	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	0.03	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
Dibromochloromethane	0.03	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB) *	0.005	nd	nd	nd	nd	nd	nd
Chlorobenzene	0.02	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.03	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.03	nd	nd	nd	0.33	nd	nd
Total Xylenes	0.03	nd	nd	nd	2.5	nd	nd
Styrene	0.02	nd	nd	nd	nd	nd	nd

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HARDEL SITE PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L200603-7

Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		Method Blank	S-B1-4-5-0603	S-B1-4-5-0603 Dup	S-B2-2-4-0603	S-B3-2-3-0603	S-B4-1-3-0603
Date Sampled	Reporting	N/A	6/3/2020	6/3/2020	6/3/2020	6/3/2020	6/3/2020
Date Analyzed	Limits	6/5/2020	6/5/2020	6/5/2020	6/5/2020	6/5/2020	6/5/2020
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Bromoform	0.03	nd	nd	nd	nd	nd	nd
Isopropylbenzene	0.08	nd	nd	nd	0.56	nd	nd
1,2,3-Trichloropropane	0.03	nd	nd	nd	nd	nd	nd
Bromobenzene	0.03	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.03	nd	nd	nd	nd	nd	nd
n-Propylbenzene	0.02	nd	nd	nd	0.95	nd	nd
2-Chlorotoluene	0.02	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	0.02	nd	nd	nd	nd	nd	nd
1,3,5-Trimethylbenzene	0.02	nd	nd	nd	3.6	nd	nd
tert-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,2,4-Trimethylbenzene	0.02	nd	nd	nd	10	nd	nd
sec-Butylbenzene	0.02	nd	nd	nd	1.3	nd	nd
1,3-Dichlorobenzene	0.03	nd	nd	nd	nd	nd	nd
p-Isopropyltoluene	0.02	nd	nd	nd	1.4	nd	nd
1,4-Dichlorobenzene	0.03	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	0.03	nd	nd	nd	nd	nd	nd
n-Butylbenzene	0.02	nd	nd	nd	1.4	nd	nd
1,2-Dibromo-3-Chloropropane	0.05	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorolbenzene	0.05	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	0.10	nd	nd	nd	nd	nd	nd
Naphthalene	0.05	nd	nd	nd	3.3	nd	nd
1,2,3-Trichlorobenzene	0.10	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		104	92	101	96	107	102
1,2-Dichloroethane-d4		110	81	107	113	110	91
Toluene-d8		103	101	102	102	100	103
4-Bromofluorobenzene		93	83	85	106	83	91

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

* ANALYZED BY SIM
ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

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HARDEL SITE PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L200603-7

Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		S-B4-1-3-0603-01	S-B4-11-12-0603	S-B5-3-4-0603	S-B6-3-4-0603	S-B7-3-5-0603	S-B8-4-5-0603
Date Sampled	Reporting	6/3/2020	6/3/2020	6/3/2020	6/3/2020	6/3/2020	6/3/2020
Date Analyzed	Limits	6/5/2020	6/5/2020	6/5/2020	6/5/2020	6/5/2020	6/5/2020
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Dichlorodifluoromethane	0.06	nd	nd	nd	nd	nd	nd
Chloromethane	0.06	nd	nd	nd	nd	nd	nd
Vinyl chloride	0.02	nd	nd	nd	nd	nd	nd
Bromomethane	0.09	nd	nd	nd	nd	nd	nd
Chloroethane	0.06	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.05	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Methylene chloride	0.02	nd	nd	nd	nd	nd	nd
Methyl *tert*- Butyl Ether (MTBE)	0.05	nd	nd	nd	nd	nd	nd
trans -1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.03	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
cis -1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Chloroform	0.02	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	0.02	nd	nd	nd	nd	nd	nd
Carbon tetrachloride	0.03	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Benzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.03	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.03	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	0.02	nd	nd	nd	nd	nd	nd
Dibromomethane	0.04	nd	nd	nd	nd	nd	nd
Bromodichloromethane	0.02	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.03	nd	nd	nd	nd	nd	nd
Trans-1,3-Dichloropropene	0.03	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	0.03	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
Dibromochloromethane	0.03	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB) *	0.005	nd	nd	nd	nd	nd	nd
Chlorobenzene	0.02	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.03	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.03	nd	nd	nd	nd	nd	nd
Total Xylenes	0.03	nd	nd	nd	nd	nd	nd
Styrene	0.02	nd	nd	nd	nd	nd	nd

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HARDEL SITE PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L200603-7

Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		S-B4-1-3-0603-01	S-B4-11-12-0603	S-B5-3-4-0603	S-B6-3-4-0603	S-B7-3-5-0603	S-B8-4-5-0603
Date Sampled	Reporting	6/3/2020	6/3/2020	6/3/2020	6/3/2020	6/3/2020	6/3/2020
Date Analyzed	Limits	6/5/2020	6/5/2020	6/5/2020	6/5/2020	6/5/2020	6/5/2020
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Bromoform	0.03	nd	nd	nd	nd	nd	nd
Isopropylbenzene	0.08	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	0.03	nd	nd	nd	nd	nd	nd
Bromobenzene	0.03	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.03	nd	nd	nd	nd	nd	nd
n-Propylbenzene	0.02	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	0.02	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	0.02	nd	nd	nd	nd	nd	nd
1,3,5-Trimethylbenzene	0.02	nd	nd	nd	nd	0.049	nd
tert-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,2,4-Trimethylbenzene	0.02	nd	nd	nd	0.036	0.17	nd
sec-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	0.03	nd	nd	nd	nd	nd	nd
p-Isopropyltoluene	0.02	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	0.03	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	0.03	nd	nd	nd	nd	nd	nd
n-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	0.05	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorolbenzene	0.05	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	0.10	nd	nd	nd	nd	nd	nd
Naphthalene	0.05	nd	nd	nd	nd	0.27	nd
1,2,3-Trichlorobenzene	0.10	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		105	106	106	110	101	105
1,2-Dichloroethane-d4		98	104	95	112	88	98
Toluene-d8		102	103	101	102	103	100
4-Bromofluorobenzene		95	94	95	94	88	92

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

* ANALYZED BY SIM
ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

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HARDEL SITE PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L200603-7

Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		S-B9-6-7-0603	S-B9-6-7-0603 Dup
Date Sampled	Reporting	6/3/2020	6/3/2020
Date Analyzed	Limits	6/5/2020	6/5/2020
	(mg/kg)	(mg/kg)	(mg/kg)
Dichlorodifluoromethane	0.06	nd	nd
Chloromethane	0.06	nd	nd
Vinyl chloride	0.02	nd	nd
Bromomethane	0.09	nd	nd
Chloroethane	0.06	nd	nd
Trichlorofluoromethane	0.05	nd	nd
1,1-Dichloroethene	0.05	nd	nd
Methylene chloride	0.02	nd	nd
Methyl *tert*- Butyl Ether (MTBE)	0.05	nd	nd
trans -1,2-Dichloroethene	0.02	nd	nd
1,1-Dichloroethane	0.03	nd	nd
2,2-Dichloropropane	0.05	nd	nd
cis -1,2-Dichloroethene	0.02	nd	nd
Chloroform	0.02	nd	nd
1,1,1-Trichloroethane (TCA)	0.02	nd	nd
Carbon tetrachloride	0.03	nd	nd
1,1-Dichloropropene	0.02	nd	nd
Benzene	0.02	nd	nd
1,2-Dichloroethane (EDC)	0.03	nd	nd
Trichloroethene (TCE)	0.03	nd	nd
1,2-Dichloropropane	0.02	nd	nd
Dibromomethane	0.04	nd	nd
Bromodichloromethane	0.02	nd	nd
cis-1,3-Dichloropropene	0.02	nd	nd
Toluene	0.03	nd	nd
Trans-1,3-Dichloropropene	0.03	nd	nd
1,1,2-Trichloroethane	0.03	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd
1,3-Dichloropropane	0.05	nd	nd
Dibromochloromethane	0.03	nd	nd
1,2-Dibromoethane (EDB) *	0.005	nd	nd
Chlorobenzene	0.02	nd	nd
1,1,1,2-Tetrachloroethane	0.03	nd	nd
Ethylbenzene	0.03	nd	nd
Total Xylenes	0.03	nd	nd
Styrene	0.02	nd	nd

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HARDEL SITE PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L200603-7

Volatile Organic Compounds by EPA Method 8260D in Soil

Sample Description		S-B9-6-7-0603	S-B9-6-7-0603 Dup
Date Sampled	Reporting	6/3/2020	6/3/2020
Date Analyzed	Limits	6/5/2020	6/5/2020
	(mg/kg)	(mg/kg)	(mg/kg)
Bromoform	0.03	nd	nd
Isopropylbenzene	0.08	nd	nd
1,2,3-Trichloropropane	0.03	nd	nd
Bromobenzene	0.03	nd	nd
1,1,2,2-Tetrachloroethane	0.03	nd	nd
n-Propylbenzene	0.02	nd	nd
2-Chlorotoluene	0.02	nd	nd
4-Chlorotoluene	0.02	nd	nd
1,3,5-Trimethylbenzene	0.02	nd	nd
tert-Butylbenzene	0.02	nd	nd
1,2,4-Trimethylbenzene	0.02	nd	nd
sec-Butylbenzene	0.02	nd	nd
1,3-Dichlorobenzene	0.03	nd	nd
p-Isopropyltoluene	0.02	nd	nd
1,4-Dichlorobenzene	0.03	nd	nd
1,2-Dichlorobenzene	0.03	nd	nd
n-Butylbenzene	0.02	nd	nd
1,2-Dibromo-3-Chloropropane	0.05	nd	nd
1,2,4-Trichlorolbenzene	0.05	nd	nd
Hexachloro-1,3-butadiene	0.10	nd	nd
Naphthalene	0.05	nd	nd
1,2,3-Trichlorobenzene	0.10	nd	nd
Surrogate Recovery			
Dibromofluoromethane		103	102
1,2-Dichloroethane-d4		98	98
Toluene-d8		99	101
4-Bromofluorobenzene		86	84

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

* ANALYZED BY SIM
ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

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HARDEL SITE PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L200603-7

Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		Method Blank	GW-B1-0603	GW-B2-0603	GW-B3-0603	GW-B4-0603	GW-B4-0603 Dup
Date Sampled	Reporting	N/A	6/3/2020	6/3/2020	6/3/2020	6/3/2020	6/3/2020
Date Analyzed	Limits	6/4/2020	6/4/2020	6/4/2020	6/4/2020	6/4/2020	6/4/2020
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Dichlorodifluoromethane	2.0	nd	nd	nd	nd	nd	nd
Chloromethane	2.0	nd	nd	nd	nd	nd	nd
Vinyl chloride	0.2	nd	nd	nd	nd	nd	nd
Bromomethane	2.0	nd	nd	nd	nd	nd	nd
Chloroethane	2.0	nd	nd	6.0	nd	nd	nd
Trichlorofluoromethane	2.0	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	2.0	nd	nd	nd	nd	nd	nd
Methylene chloride	1.0	nd	nd	nd	nd	nd	nd
Methyl *tert*- Butyl Ether (MTBE)	5.0	nd	nd	nd	nd	nd	nd
trans -1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	1.0	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	2.0	nd	nd	nd	nd	nd	nd
cis -1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
Chloroform	1.0	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	1.0	nd	nd	nd	nd	nd	nd
Carbon tetrachloride	1.0	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	1.0	nd	nd	nd	nd	nd	nd
Benzene	1.0	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	1.0	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.4	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	1.0	nd	nd	nd	nd	nd	nd
Dibromomethane	1.0	nd	nd	nd	nd	nd	nd
Bromodichloromethane	1.0	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	1.0	nd	nd	nd	nd	nd	nd
Toluene	1.0	nd	nd	nd	nd	nd	nd
Trans-1,3-Dichloropropene	1.0	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	1.0	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	1.0	nd	nd	nd	nd	nd	nd
Dibromochloromethane	1.0	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB) *	0.01	nd	nd	nd	0.096	nd	nd
Chlorobenzene	1.0	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	1.0	nd	nd	nd	nd	nd	nd
Ethylbenzene	1.0	nd	nd	nd	nd	nd	nd
Total Xylenes	2.0	nd	nd	nd	nd	nd	nd
Styrene	1.0	nd	nd	nd	nd	nd	nd

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Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		Method Blank	GW-B1-0603	GW-B2-0603	GW-B3-0603	GW-B4-0603	GW-B4-0603 Dup
Date Sampled	Reporting	N/A	6/3/2020	6/3/2020	6/3/2020	6/3/2020	6/3/2020
Date Analyzed	Limits	6/4/2020	6/4/2020	6/4/2020	6/4/2020	6/4/2020	6/4/2020
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Bromoform	1.0	nd	nd	nd	nd	nd	nd
Isopropylbenzene	4.0	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	1.0	nd	nd	nd	nd	nd	nd
Bromobenzene	1.0	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	1.0	nd	nd	nd	nd	nd	nd
n-Propylbenzene	1.0	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	1.0	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	1.0	nd	nd	nd	nd	nd	nd
1,3,5-Trimethylbenzene	1.0	nd	nd	1.1	nd	nd	nd
tert-Butylbenzene	1.0	nd	nd	nd	nd	nd	nd
1,2,4-Trimethylbenzene	1.0	nd	nd	3.2	nd	nd	nd
sec-Butylbenzene	1.0	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	1.0	nd	nd	nd	nd	nd	nd
p-Isopropyltoluene	1.0	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	1.0	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	1.0	nd	nd	nd	nd	nd	nd
n-Butylbenzene	1.0	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	1.0	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorolbenzene	2.0	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	5.0	nd	nd	nd	nd	nd	nd
Naphthalene	5.0	nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	5.0	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		103	103	101	101	101	104
1,2-Dichloroethane-d4		102	106	95	93	95	101
Toluene-d8		101	101	96	101	102	100
4-Bromofluorobenzene		88	90	78	86	88	87

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

* ANALYZED BY SIM
ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

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Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		GW-B5-0603	GW-B6-0603	GW-B6-0603-01	Trip Blank 0603
Date Sampled	Reporting	6/3/2020	6/3/2020	6/3/2020	6/3/2020
Date Analyzed	Limits	6/4/2020	6/4/2020	6/4/2020	6/4/2020
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Dichlorodifluoromethane	2.0	nd	nd	nd	nd
Chloromethane	2.0	nd	nd	nd	nd
Vinyl chloride	0.2	nd	nd	nd	nd
Bromomethane	2.0	nd	nd	nd	nd
Chloroethane	2.0	nd	nd	nd	nd
Trichlorofluoromethane	2.0	nd	nd	nd	nd
1,1-Dichloroethene	2.0	nd	nd	nd	nd
Methylene chloride	1.0	nd	nd	nd	nd
Methyl *tert*- Butyl Ether (MTBE)	5.0	nd	nd	nd	nd
trans -1,2-Dichloroethene	1.0	nd	nd	nd	nd
1,1-Dichloroethane	1.0	nd	nd	nd	nd
2,2-Dichloropropane	2.0	nd	nd	nd	nd
cis -1,2-Dichloroethene	1.0	nd	nd	nd	nd
Chloroform	1.0	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	1.0	nd	nd	nd	nd
Carbon tetrachloride	1.0	nd	nd	nd	nd
1,1-Dichloropropene	1.0	nd	nd	nd	nd
Benzene	1.0	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	1.0	nd	nd	nd	nd
Trichloroethene (TCE)	0.4	0.55	0.44	0.58	nd
1,2-Dichloropropane	1.0	nd	nd	nd	nd
Dibromomethane	1.0	nd	nd	nd	nd
Bromodichloromethane	1.0	nd	nd	nd	nd
cis-1,3-Dichloropropene	1.0	nd	nd	nd	nd
Toluene	1.0	nd	nd	nd	nd
Trans-1,3-Dichloropropene	1.0	nd	nd	nd	nd
1,1,2-Trichloroethane	1.0	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	3.4	nd	nd	nd
1,3-Dichloropropane	1.0	nd	nd	nd	nd
Dibromochloromethane	1.0	nd	nd	nd	nd
1,2-Dibromoethane (EDB) *	0.01	nd	0.13	0.096	nd
Chlorobenzene	1.0	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	1.0	nd	nd	nd	nd
Ethylbenzene	1.0	nd	nd	nd	nd
Total Xylenes	2.0	nd	nd	nd	nd
Styrene	1.0	nd	nd	nd	nd

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Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		GW-B5-0603	GW-B6-0603	GW-B6-0603-01	Trip Blank 0603
Date Sampled	Reporting	6/3/2020	6/3/2020	6/3/2020	6/3/2020
Date Analyzed	Limits	6/4/2020	6/4/2020	6/4/2020	6/4/2020
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Bromoform	1.0	nd	nd	nd	nd
Isopropylbenzene	4.0	nd	nd	nd	nd
1,2,3-Trichloropropane	1.0	nd	nd	nd	nd
Bromobenzene	1.0	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	1.0	nd	nd	nd	nd
n-Propylbenzene	1.0	nd	nd	nd	nd
2-Chlorotoluene	1.0	nd	nd	nd	nd
4-Chlorotoluene	1.0	nd	nd	nd	nd
1,3,5-Trimethylbenzene	1.0	nd	nd	nd	nd
tert-Butylbenzene	1.0	nd	nd	nd	nd
1,2,4-Trimethylbenzene	1.0	nd	nd	nd	nd
sec-Butylbenzene	1.0	nd	nd	nd	nd
1,3-Dichlorobenzene	1.0	nd	nd	nd	nd
p-Isopropyltoluene	1.0	nd	nd	nd	nd
1,4-Dichlorobenzene	1.0	nd	nd	nd	nd
1,2-Dichlorobenzene	1.0	nd	nd	nd	nd
n-Butylbenzene	1.0	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	1.0	nd	nd	nd	nd
1,2,4-Trichlorolbenzene	2.0	nd	nd	nd	nd
Hexachloro-1,3-butadiene	5.0	nd	nd	nd	nd
Naphthalene	5.0	nd	nd	nd	nd
1,2,3-Trichlorobenzene	5.0	nd	nd	nd	nd
Surrogate Recovery					
Dibromofluoromethane		99	102	101	104
1,2-Dichloroethane-d4		90	104	94	103
Toluene-d8		104	104	105	94
4-Bromofluorobenzene		85	83	81	79

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

* ANALYZED BY SIM
ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

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Gasoline by NWTPH-Gx in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Gasoline (mg/kg)
Method Blank	6/5/2020	103%	nd
S-B1-4-5-0603	6/5/2020	101%	nd
S-B1-4-5-0603 Dup	6/5/2020	102%	nd
S-B2-2-4-0603	6/5/2020	102%	190
S-B3-2-3-0603	6/5/2020	100%	nd
S-B4-1-3-0603	6/5/2020	103%	nd
S-B4-1-3-0603-01	6/5/2020	102%	nd
S-B4-11-12-0603	6/5/2020	103%	nd
S-B5-3-4-0603	6/5/2020	101%	nd
S-B6-3-4-0603	6/5/2020	102%	nd
S-B7-3-5-0603	6/5/2020	103%	nd
S-B8-4-5-0603	6/5/2020	100%	nd
S-B9-6-7-0603	6/5/2020	99%	nd
S-B9-6-7-0603 Dup	6/5/2020	101%	nd
Practical Quantitation Limit			10

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Toluene-d8): 65% TO 135%

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Gasoline by NWTPH-Gx in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Gasoline (µg/L)
Method Blank	6/4/2020	101%	nd
GW-B1-0603	6/4/2020	101%	nd
GW-B2-0603	6/4/2020	96%	nd
GW-B3-0603	6/4/2020	101%	nd
GW-B4-0603	6/4/2020	102%	nd
GW-B4-0603 Dup	6/4/2020	100%	nd
GW-B5-0603	6/4/2020	104%	nd
GW-B6-0603	6/4/2020	104%	nd
GW-B6-0603-01	6/4/2020	105%	nd
Practical Quantitation Limit			100

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Toluene-d8): 65% TO 135%

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Diesel & Oil by NWTPH-Dx/Dx Extended in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	6/4/2020	118%	nd	nd
Method Blank	6/9/2020	124%	nd	nd
S-B1-4-5-0603	6/4/2020	119%	nd	2600
S-B2-2-4-0603	6/4/2020	int	41000	1500
S-B3-2-3-0603	6/4/2020	108%	nd	3300
S-B4-1-3-0603	6/9/2020	124%	nd	450
S-B4-1-3-0603 Dup	6/9/2020	123%	nd	640
S-B4-1-3-0603-01	6/9/2020	113%	nd	560
S-B4-11-12-0603	6/4/2020	106%	nd	420
S-B5-3-4-0603	6/4/2020	121%	nd	nd
S-B6-3-4-0603	6/4/2020	98%	nd	nd
S-B6-3-4-0603 Dup	6/4/2020	108%	nd	nd
S-B7-3-5-0603	6/4/2020	126%	nd	430
S-B8-4-5-0603	6/4/2020	123%	nd	nd
S-B9-6-7-0603	6/4/2020	112%	nd	nd
Practical Quantitation Limit			50	250

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

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Diesel & Oil by NWTPH-Dx/Dx Extended in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (µg/L)	Oil (µg/L)
Method Blank	6/5/2020	97%	nd	nd
GW-B1-0603	6/5/2020	99%	nd	nd
GW-B2-0603	6/5/2020	90%	nd	nd
GW-B3-0603	6/5/2020	95%	nd	nd
GW-B4-0603	6/5/2020	112%	nd	nd
GW-B5-0603	6/5/2020	93%	nd	nd
GW-B6-0603	6/5/2020	101%	nd	nd
GW-B6-0603-01	6/5/2020	89%	nd	nd
GW-B6-0603-01 Dup	6/5/2020	103%	nd	nd
Practical Quantitation Limit			200	400

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

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Total Metals by EPA Method 7010 Series in Soil

Sample Number	Date Analyzed	Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Arsenic (mg/kg)
Method Blank	6/9/2020	nd	nd	nd	nd
S-B1-4-5-0603	6/9/2020	38	nd	14	6.5
S-B2-2-4-0603	6/9/2020	16	nd	37	10
S-B3-2-3-0603	6/9/2020	nd	nd	12	7.3
S-B4-1-3-0603	6/9/2020	12	nd	10	6.9
S-B4-1-3-0603-01	6/9/2020	8.2	nd	18	9.0
S-B4-11-12-0603	6/9/2020	9.2	nd	24	nd
S-B5-3-4-0603	6/9/2020	nd	nd	23	7.0
S-B6-3-4-0603	6/9/2020	7.2	nd	13	nd
S-B7-3-5-0603	6/9/2020	11	nd	20	8.2
S-B8-4-5-0603	6/9/2020	nd	nd	10	8.8
S-B8-4-5-0603 Dup	6/9/2020	nd	nd	11	9.6
S-B9-6-7-0603	6/9/2020	nd	nd	6.7	nd
Practical Quantitation Limit		5.0	0.5	5.0	5.0

"nd" Indicates not detected at the listed detection limits.

ANALYSES PERFORMED BY: Dirk Peterson

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Total Mercury by EPA Method 7471 in Soil

Sample Number	Date Analyzed	Mercury (mg/kg)
Method Blank	6/9/2020	nd
S-B1-4-5-0603	6/9/2020	nd
S-B2-2-4-0603	6/9/2020	nd
S-B3-2-3-0603	6/9/2020	nd
S-B4-1-3-0603	6/9/2020	nd
S-B4-1-3-0603-01	6/9/2020	nd
S-B4-11-12-0603	6/9/2020	nd
S-B5-3-4-0603	6/9/2020	nd
S-B6-3-4-0603	6/9/2020	nd
S-B7-3-5-0603	6/9/2020	nd
S-B8-4-5-0603	6/9/2020	nd
S-B8-4-5-0603 Dup	6/9/2020	nd
S-B9-6-7-0603	6/9/2020	nd
Practical Quantitation Limit		0.5

"nd" Indicates not detected at the listed detection limits.

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Total Metals by EPA Method 7010 Series in Water

Sample Number	Date Analyzed	Lead (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Arsenic (µg/L)
Method Blank	6/9/2020	nd	nd	nd	nd
GW-B1-0603	6/9/2020	nd	nd	nd	nd
GW-B2-0603	6/9/2020	nd	nd	nd	nd
GW-B3-0603	6/9/2020	nd	nd	11	nd
GW-B4-0603	6/9/2020	nd	nd	nd	nd
GW-B5-0603	6/9/2020	nd	nd	nd	nd
GW-B6-0603	6/9/2020	nd	nd	nd	11
GW-B6-0603-01	6/9/2020	nd	nd	nd	9.9
GW-B6-0603-01 Dup	6/9/2020	nd	nd	nd	8.5
Practical Quantitation Limit		5.0	0.5	5.0	3.0

"nd" Indicates not detected at the listed detection limits.

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QA/QC Data - Volatile Organic Compounds by EPA 8260D in Soil

Matrix Spike Sample Identification: S-B9-6-7-0603

	Spiked Conc. (mg/kg)	MS Response (mg/kg)	MSD Response (mg/kg)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Dichlorodifluoromethane	0.25	0.18	0.19	74	76	3.2	65-135	
Chloromethane	0.25	0.21	0.22	86	88	2.8	65-135	
Vinyl chloride	0.25	0.27	0.27	106	110	3.0	65-135	
Bromomethane	0.25	0.26	0.25	102	100	2.4	65-135	
Chloroethane	0.25	0.23	0.071	92	28	105.3	65-135	R, S
Trichlorofluoromethane	0.25	0.30	0.056	121	22	137.4	65-135	R, S
1,1-Dichloroethene	0.25	0.33	0.31	132	122	7.9	65-135	
Methylene chloride	0.25	0.33	0.32	131	129	1.2	65-135	
Methyl *tert*- Butyl Ether (MTBE)	0.25	0.25	0.32	99	129	26.7	65-135	
trans -1,2-Dichloroethene	0.25	0.32	0.32	129	128	0.9	65-135	
1,1-Dichloroethane	0.25	0.31	0.34	125	134	7.4	65-135	
2,2-Dichloropropane	0.25	0.32	0.34	128	135	4.9	65-135	
cis -1,2-Dichloroethene	0.25	0.22	0.24	86	98	12.2	65-135	
Chloroform	0.25	0.30	0.33	118	132	10.9	65-135	
1,1,1-Trichloroethane (TCA)	0.25	0.31	0.33	124	132	6.3	65-135	
Carbon tetrachloride	0.25	0.31	0.33	124	131	5.3	65-135	
1,1-Dichloropropene	0.25	0.22	0.24	86	95	9.3	65-135	
Benzene	0.25	0.26	0.29	105	117	10.8	65-135	
1,2-Dichloroethane (EDC)	0.25	0.21	0.27	84	109	25.7	65-135	
Trichloroethene (TCE)	0.25	0.24	0.26	95	104	9.3	65-135	
1,2-Dichloropropane	0.25	0.25	0.29	99	116	16.0	65-135	
Dibromomethane	0.25	0.18	0.23	71	92	26.0	65-135	
Bromodichloromethane	0.25	0.26	0.31	105	122	14.8	65-135	
cis-1,3-Dichloropropene	0.25	0.17	0.22	68	89	27.0	65-135	
Toluene	0.25	0.26	0.28	105	114	8.1	65-135	
Trans-1,3-Dichloropropene	0.25	0.17	0.20	68	79	15.8	65-135	
1,1,2-Trichloroethane	0.25	0.21	0.23	82	91	10.1	65-135	
Tetrachloroethene (PCE)	0.25	0.22	0.21	88	83	5.2	65-135	
1,3-Dichloropropane	0.25	0.17	0.20	68	80	15.6	65-135	
Dibromochloromethane	0.25	0.20	0.22	80	87	8.6	65-135	
1,2-Dibromoethane (EDB)	0.25	0.16	0.20	66	78	17.8	65-135	
Chlorobenzene	0.25	0.26	0.25	105	102	3.5	65-135	
Ethylbenzene	0.25	0.26	0.20	105	80	27.7	65-135	
1,1,1,2-Tetrachloroethane	0.25	0.30	0.29	120	118	2.4	65-135	
Total Xylenes	0.75	0.74	0.70	98	93	4.9	65-135	
Styrene	0.25	0.21	0.21	86	84	2.4	65-135	

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HARDEL SITE PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L200603-7

QA/QC Data - Volatile Organic Compounds by EPA 8260D in Soil

Matrix Spike Sample Identification: S-B9-6-7-0603

	Spiked Conc. (mg/kg)	MS Response (mg/kg)	MSD Response (mg/kg)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Bromoform	0.25	0.17	0.19	68	74	9.0	65-135	
Isopropylbenzene	0.25	0.25	0.23	99	92	8.0	65-135	
1,1,2,2-Tetrachloroethane	0.25	0.18	0.23	70	91	26.3	65-135	
Bromobenzene	0.25	0.19	0.22	76	88	15.2	65-135	
n-Propylbenzene	0.25	0.26	0.27	104	109	4.5	65-135	
1,2,3-Trichloropropane	0.25	0.20	0.22	78	88	12.5	65-135	
2-Chlorotoluene	0.25	0.24	0.26	96	102	6.9	65-135	
1,3,5-Trimethylbenzene	0.25	0.25	0.27	101	108	6.5	65-135	
4-Chlorotoluene	0.25	0.23	0.25	90	102	11.7	65-135	
tert-Butylbenzene	0.25	0.23	0.23	90	93	3.1	65-135	
1,2,4-Trimethylbenzene	0.25	0.25	0.27	99	107	8.2	65-135	
sec-Butylbenzene	0.25	0.25	0.26	102	104	2.7	65-135	
Isopropyltoluene	0.25	0.23	0.24	92	95	3.4	65-135	
1,3-Dichlorobenzene	0.25	0.21	0.24	84	94	11.2	65-135	
1,4-Dichlorobenzene	0.25	0.21	0.25	86	100	15.5	65-135	
n-Butylbenzene	0.25	0.25	0.26	102	104	2.7	65-135	
1,2-Dichlorobenzene	0.25	0.17	0.21	69	85	20.7	65-135	
1,2-Dibromo-3-Chloropropane	0.25	0.22	0.25	87	99	12.9	65-135	
1,2,4-Trichlorolbenzene	0.25	0.17	0.19	67	76	12.4	65-135	
Hexachloro-1,3-butadiene	0.25	0.25	0.23	98	92	5.9	65-135	
Naphthalene	0.25	0.17	0.17	70	67	4.1	65-135	
1,2,3-Trichlorobenzene	0.25	0.17	0.17	68	70	1.7	65-135	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	100	103	65-135
1,2-Dichloroethane-d4	98	110	65-135
Toluene-d8	108	107	65-135
4-Bromofluorobenzene	109	95	65-135

ACCEPTABLE RPD IS 35%
"R" High relative percent difference observed.
"S" Spike recovery outside accepted recovery limits.

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Libby Project # L200603-7

Laboratory Control Sample

	Spiked Conc. (mg/kg)	LCS Response (mg/kg)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Dichlorodifluoromethane	0.25	0.21	85	80-120	
Chloromethane	0.25	0.29	116	80-120	
Vinyl chloride	0.25	0.21	82	80-120	
Bromomethane	0.25	0.25	100	80-120	
Chloroethane	0.25	0.21	82	80-120	
Trichlorofluoromethane	0.25	0.24	94	80-120	
1,1-Dichloroethene	0.25	0.24	97	80-120	
Methylene chloride	0.25	0.25	99	80-120	
Methyl *tert*- Butyl Ether (MTBE)	0.25	0.23	92	80-120	
trans -1,2-Dichloroethene	0.25	0.24	97	80-120	
1,1-Dichloroethane	0.25	0.23	91	80-120	
2,2-Dichloropropane	0.25	0.29	115	80-120	
cis -1,2-Dichloroethene	0.25	0.27	110	80-120	
Chloroform	0.25	0.27	106	80-120	
1,1,1-Trichloroethane (TCA)	0.25	0.28	110	80-120	
Carbon tetrachloride	0.25	0.28	110	80-120	
1,1-Dichloropropene	0.25	0.22	90	80-120	
Benzene	0.25	0.25	102	80-120	
1,2-Dichloroethane (EDC)	0.25	0.23	92	80-120	
Trichloroethene (TCE)	0.25	0.23	92	80-120	
1,2-Dichloropropane	0.25	0.24	98	80-120	
Dibromomethane	0.25	0.23	92	80-120	
Bromodichloromethane	0.25	0.26	105	80-120	
cis-1,3-Dichloropropene	0.25	0.22	86	80-120	
Toluene	0.25	0.25	100	80-120	
Trans-1,3-Dichloropropene	0.25	0.22	86	80-120	
1,1,2-Trichloroethane	0.25	0.26	102	80-120	
Tetrachloroethene (PCE)	0.25	0.21	85	80-120	
1,3-Dichloropropane	0.25	0.22	87	80-120	
Dibromochloromethane	0.25	0.24	95	80-120	
1,2-Dibromoethane (EDB)	0.25	0.222	89	80-120	
Chlorobenzene	0.25	0.25	98	80-120	
Ethylbenzene	0.25	0.24	95	80-120	
1,1,1,2-Tetrachloroethane	0.25	0.28	111	80-120	
Total Xylenes	0.75	0.71	95	80-120	
Styrene	0.25	0.22	88	80-120	

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Laboratory Control Sample

	Spiked Conc. (mg/kg)	LCS Response (mg/kg)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Bromoform	0.25	0.23	93	80-120	
Isopropylbenzene	0.25	0.24	97	80-120	
1,1,2,2-Tetrachloroethane	0.25	0.25	101	80-120	
Bromobenzene	0.25	0.22	89	80-120	
n-Propylbenzene	0.25	0.26	103	80-120	
1,2,3-Trichloropropane	0.25	0.27	107	80-120	
2-Chlorotoluene	0.25	0.25	100	80-120	
1,3,5-Trimethylbenzene	0.25	0.29	114	80-120	
4-Chlorotoluene	0.25	0.28	112	80-120	
tert-Butylbenzene	0.25	0.24	98	80-120	
1,2,4-Trimethylbenzene	0.25	0.29	116	80-120	
sec-Butylbenzene	0.25	0.29	118	80-120	
Isopropyltoluene	0.25	0.30	120	80-120	
1,3-Dichlorobenzene	0.25	0.24	94	80-120	
1,4-Dichlorobenzene	0.25	0.24	94	80-120	
n-Butylbenzene	0.25	0.27	107	80-120	
1,2-Dichlorobenzene	0.25	0.23	91	80-120	
1,2-Dibromo-3-Chloropropane	0.25	0.21	84	80-120	
1,2,4-Trichlorolbenzene	0.25	0.25	101	80-120	
Hexachloro-1,3-butadiene	0.25	0.28	113	80-120	
Naphthalene	0.25	0.26	105	80-120	
1,2,3-Trichlorobenzene	0.25	0.23	92	80-120	

Surrogate Recovery			
Dibromofluoromethane	101	65-135	
1,2-Dichloroethane-d4	96	65-135	
Toluene-d8	107	65-135	
4-Bromofluorobenzene	98	65-135	

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HARDEL SITE PROJECT
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CCV 6-4-2020

	Spiked Conc. (mg/kg)	CCV Response (mg/kg)	CCV Recovery (%)	CCV Recovery Limits (%)	Data Flag
Dichlorodifluoromethane	0.50	0.41	81	80-120	
Chloromethane	0.50	0.41	81	80-120	
Vinyl chloride	0.50	0.47	94	80-120	
Bromomethane	0.50	0.45	90	80-120	
Chloroethane	0.50	0.56	112	80-120	
Trichlorofluoromethane	0.50	0.58	116	80-120	
1,1-Dichloroethene	0.50	0.59	118	80-120	
Methylene chloride	0.50	0.53	106	80-120	
Methyl *tert*- Butyl Ether (MTBE)	0.50	0.42	84	80-120	
trans -1,2-Dichloroethene	0.50	0.46	93	80-120	
1,1-Dichloroethane	0.50	0.57	113	80-120	
2,2-Dichloropropane	0.50	0.56	111	80-120	
cis -1,2-Dichloroethene	0.50	0.44	88	80-120	
Chloroform	0.50	0.52	104	80-120	
1,1,1-Trichloroethane (TCA)	0.50	0.56	111	80-120	
Carbon tetrachloride	0.50	0.58	116	80-120	
1,1-Dichloropropene	0.50	0.48	95	80-120	
Benzene	0.50	0.52	103	80-120	
1,2-Dichloroethane (EDC)	0.50	0.45	91	80-120	
Trichloroethene (TCE)	0.50	0.47	94	80-120	
1,2-Dichloropropane	0.50	0.50	100	80-120	
Dibromomethane	0.50	0.42	84	80-120	
Bromodichloromethane	0.50	0.53	106	80-120	
cis-1,3-Dichloropropene	0.50	0.46	91	80-120	
Toluene	0.50	0.54	108	80-120	
Trans-1,3-Dichloropropene	0.50	0.42	83	80-120	
1,1,2-Trichloroethane	0.50	0.44	88	80-120	
Tetrachloroethene (PCE)	0.50	0.43	86	80-120	
1,3-Dichloropropane	0.50	0.42	84	80-120	
Dibromochloromethane	0.50	0.45	90	80-120	
1,2-Dibromoethane (EDB)	0.50	0.450	90	80-120	
Chlorobenzene	0.50	0.40	80	80-120	
Ethylbenzene	0.50	0.51	101	80-120	
1,1,1,2-Tetrachloroethane	0.50	0.53	105	80-120	
Total Xylenes	1.50	1.57	105	80-120	
Styrene	0.50	0.48	95	80-120	

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HARDEL SITE PROJECT
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Libby Project # L200603-7

CCV 6-4-2020

	Spiked Conc. (mg/kg)	CCV Response (mg/kg)	CCV Recovery (%)	CCV Recovery Limits (%)	Data Flag
Bromoform	0.50	0.43	85	80-120	
Isopropylbenzene	0.50	0.53	106	80-120	
1,1,2,2-Tetrachloroethane	0.50	0.44	88	80-120	
Bromobenzene	0.50	0.42	84	80-120	
n-Propylbenzene	0.50	0.55	110	80-120	
1,2,3-Trichloropropane	0.50	0.55	109	80-120	
2-Chlorotoluene	0.50	0.52	104	80-120	
1,3,5-Trimethylbenzene	0.50	0.53	107	80-120	
4-Chlorotoluene	0.50	0.45	90	80-120	
tert-Butylbenzene	0.50	0.51	101	80-120	
1,2,4-Trimethylbenzene	0.50	0.53	106	80-120	
sec-Butylbenzene	0.50	0.57	114	80-120	
Isopropyltoluene	0.50	0.51	103	80-120	
1,3-Dichlorobenzene	0.50	0.46	93	80-120	
1,4-Dichlorobenzene	0.50	0.47	93	80-120	
n-Butylbenzene	0.50	0.55	110	80-120	
1,2-Dichlorobenzene	0.50	0.43	86	80-120	
1,2-Dibromo-3-Chloropropane	0.50	0.52	104	80-120	
1,2,4-Trichlorolbenzene	0.50	0.41	83	80-120	
Hexachloro-1,3-butadiene	0.50	0.49	99	80-120	
Naphthalene	0.50	0.48	95	80-120	
1,2,3-Trichlorobenzene	0.50	0.41	82	80-120	

Surrogate Recovery			
Dibromofluoromethane	97	65-135	
1,2-Dichloroethane-d4	101	65-135	
Toluene-d8	108	65-135	
4-Bromofluorobenzene	101	65-135	

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HARDEL SITE PROJECT
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QA/QC Data - Volatile Organic Compounds by EPA 8260D in Water

Matrix Spike Sample Identification: GW-B2-0603

	Spiked Conc. (µg/L)	MS Response (µg/L)	MSD Response (µg/L)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Dichlorodifluoromethane	5.0	3.3	3.7	65	74	12.9	65-135	
Chloromethane	5.0	4.2	4.0	84	80	4.9	65-135	
Vinyl chloride	5.0	5.5	5.1	110	101	8.5	65-135	
Bromomethane	5.0	5.8	6.8	116	135	15.1	65-135	
Chloroethane	5.0	6.4	5.1	128	102	22.6	65-135	
Trichlorofluoromethane	5.0	6.2	6.4	124	128	3.2	65-135	
1,1-Dichloroethene	5.0	6.3	6.7	126	134	6.2	65-135	
Methylene chloride	5.0	5.9	6.4	118	128	8.1	65-135	
Methyl *tert*- Butyl Ether (MTBE)	5.0	5.7	4.8	113	96	16.3	65-135	
trans -1,2-Dichloroethene	5.0	5.9	6.7	118	134	12.7	65-135	
1,1-Dichloroethane	5.0	6.2	6.7	124	134	7.8	65-135	
2,2-Dichloropropane	5.0	5.6	5.3	112	106	5.5	65-135	
cis -1,2-Dichloroethene	5.0	4.1	4.1	82	82	0.0	65-135	
Chloroform	5.0	5.6	5.3	113	106	6.2	65-135	
1,1,1-Trichloroethane (TCA)	5.0	6.2	5.9	124	118	5.3	65-135	
Carbon tetrachloride	5.0	6.5	6.0	130	120	7.8	65-135	
1,1-Dichloropropene	5.0	4.4	4.3	89	86	3.2	65-135	
Benzene	5.0	5.2	5.1	104	102	1.9	65-135	
1,2-Dichloroethane (EDC)	5.0	4.9	4.3	99	86	13.9	65-135	
Trichloroethene (TCE)	5.0	4.7	4.6	94	92	2.2	65-135	
1,2-Dichloropropane	5.0	4.8	4.6	96	92	4.3	65-135	
Dibromomethane	5.0	4.1	3.6	82	72	13.0	65-135	
Bromodichloromethane	5.0	5.3	4.9	106	98	7.8	65-135	
cis-1,3-Dichloropropene	5.0	3.5	3.3	70	66	5.9	65-135	
Toluene	5.0	4.9	4.9	98	98	0.0	65-135	
Trans-1,3-Dichloropropene	5.0	3.6	3.3	72	65	9.6	65-135	
1,1,2-Trichloroethane	5.0	5.0	4.2	100	84	17.4	65-135	
Tetrachloroethene (PCE)	5.0	4.4	4.2	88	84	4.7	65-135	
1,3-Dichloropropane	5.0	4.2	3.6	84	72	15.4	65-135	
Dibromochloromethane	5.0	4.7	4.0	94	80	16.1	65-135	
1,2-Dibromoethane (EDB)	5.0	4.0	3.4	80	68	15.6	65-135	
Chlorobenzene	5.0	5.0	4.8	100	96	4.1	65-135	
Ethylbenzene	5.0	5.1	5.0	102	100	2.0	65-135	
1,1,1,2-Tetrachloroethane	5.0	5.8	5.5	116	110	5.3	65-135	
Total Xylenes	15.0	14.9	14.9	99	99	0.0	65-135	
Styrene	5.0	4.1	4.0	82	80	2.5	65-135	

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HARDEL SITE PROJECT
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QA/QC Data - Volatile Organic Compounds by EPA 8260D in Water

Matrix Spike Sample Identification: GW-B2-0603

	Spiked Conc. (µg/L)	MS Response (µg/L)	MSD Response (µg/L)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Bromoform	5.0	4.1	3.5	82	70	15.8	65-135	
Isopropylbenzene	5.0	4.5	4.6	90	92	2.2	65-135	
1,1,2,2-Tetrachloroethane	5.0	5.4	4.8	108	96	11.8	65-135	
Bromobenzene	5.0	4.5	4.4	90	87	3.4	65-135	
n-Propylbenzene	5.0	6.1	6.1	122	122	0.0	65-135	
1,2,3-Trichloropropane	5.0	5.0	4.5	100	90	10.5	65-135	
2-Chlorotoluene	5.0	5.7	5.6	114	112	1.8	65-135	
1,3,5-Trimethylbenzene	5.0	5.7	6.0	114	120	5.1	65-135	
4-Chlorotoluene	5.0	5.0	4.9	100	98	2.0	65-135	
tert-Butylbenzene	5.0	5.0	5.1	100	102	2.0	65-135	
1,2,4-Trimethylbenzene	5.0	6.5	6.8	130	136	4.3	65-135	S
sec-Butylbenzene	5.0	5.8	6.2	116	124	6.3	65-135	
Isopropyltoluene	5.0	5.9	6.4	118	128	8.1	65-135	
1,3-Dichlorobenzene	5.0	4.9	4.9	98	98	0.0	65-135	
1,4-Dichlorobenzene	5.0	5.0	5.1	100	102	2.0	65-135	
n-Butylbenzene	5.0	6.3	6.5	126	130	3.1	65-135	
1,2-Dichlorobenzene	5.0	4.5	4.4	90	88	2.2	65-135	
1,2-Dibromo-3-Chloropropane	5.0	3.5	4.1	70	82	15.8	65-135	
1,2,4-Trichlorolbenzene	5.0	4.2	4.5	84	90	6.9	65-135	
Hexachloro-1,3-butadiene	5.0	4.7	5.1	94	102	8.2	65-135	
Naphthalene	5.0	5.5	5.8	110	117	6.0	65-135	
1,2,3-Trichlorobenzene	5.0	3.9	4.7	78	95	19.4	65-135	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	102	99	65-135
1,2-Dichloroethane-d4	109	98	65-135
Toluene-d8	99	103	65-135
4-Bromofluorobenzene	85	86	65-135

"S" Spike recovery outside accepted recovery limits.
ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Sherry Chilcutt

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HARDEL SITE PROJECT
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Libby Project # L200603-7

Laboratory Control Sample

	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Dichlorodifluoromethane	5.0	4.2	84	80-120	
Chloromethane	5.0	4.2	84	80-120	
Vinyl chloride	5.0	5.0	100	80-120	
Bromomethane	5.0	4.9	98	80-120	
Chloroethane	5.0	5.9	118	80-120	
Trichlorofluoromethane	5.0	5.8	116	80-120	
1,1-Dichloroethene	5.0	5.9	118	80-120	
Methylene chloride	5.0	5.7	114	80-120	
Methyl *tert*- Butyl Ether (MTBE)	5.0	4.0	80	80-120	
trans -1,2-Dichloroethene	5.0	5.9	118	80-120	
1,1-Dichloroethane	5.0	5.3	106	80-120	
2,2-Dichloropropane	5.0	5.3	106	80-120	
cis -1,2-Dichloroethene	5.0	4.1	82	80-120	
Chloroform	5.0	4.9	98	80-120	
1,1,1-Trichloroethane (TCA)	5.0	5.3	106	80-120	
Carbon tetrachloride	5.0	5.7	114	80-120	
1,1-Dichloropropene	5.0	4.6	92	80-120	
Benzene	5.0	4.9	98	80-120	
1,2-Dichloroethane (EDC)	5.0	4.6	92	80-120	
Trichloroethene (TCE)	5.0	4.6	92	80-120	
1,2-Dichloropropane	5.0	4.4	88	80-120	
Dibromomethane	5.0	4.8	96	80-120	
Bromodichloromethane	5.0	4.6	92	80-120	
cis-1,3-Dichloropropene	5.0	5.2	104	80-120	
Toluene	5.0	4.9	98	80-120	
Trans-1,3-Dichloropropene	5.0	4.0	80	80-120	
1,1,2-Trichloroethane	5.0	4.2	84	80-120	
Tetrachloroethene (PCE)	5.0	5.0	100	80-120	
1,3-Dichloropropane	5.0	4.0	80	80-120	
Dibromochloromethane	5.0	4.4	88	80-120	
1,2-Dibromoethane (EDB)	5.0	4.7	94	80-120	
Chlorobenzene	5.0	5.2	104	80-120	
Ethylbenzene	5.0	5.3	106	80-120	
1,1,1,2-Tetrachloroethane	5.0	5.7	114	80-120	
Total Xylenes	15.0	15.9	106	80-120	
Styrene	5.0	4.6	92	80-120	

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Pioneer Technologies
Olympia, Washington
Libby Project # L200603-7

Laboratory Control Sample

	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Bromoform	5.0	4.0	80	80-120	
Isopropylbenzene	5.0	5.3	106	80-120	
1,1,2,2-Tetrachloroethane	5.0	4.7	94	80-120	
Bromobenzene	5.0	4.9	98	80-120	
n-Propylbenzene	5.0	6.0	120	80-120	
1,2,3-Trichloropropane	5.0	4.4	88	80-120	
2-Chlorotoluene	5.0	5.7	114	80-120	
1,3,5-Trimethylbenzene	5.0	5.9	118	80-120	
4-Chlorotoluene	5.0	5.5	110	80-120	
tert-Butylbenzene	5.0	5.5	110	80-120	
1,2,4-Trimethylbenzene	5.0	5.6	112	80-120	
sec-Butylbenzene	5.0	5.6	112	80-120	
Isopropyltoluene	5.0	5.6	112	80-120	
1,3-Dichlorobenzene	5.0	5.3	106	80-120	
1,4-Dichlorobenzene	5.0	5.5	110	80-120	
n-Butylbenzene	5.0	5.7	114	80-120	
1,2-Dichlorobenzene	5.0	5.0	100	80-120	
1,2-Dibromo-3-Chloropropane	5.0	4.4	88	80-120	
1,2,4-Trichlorolbenzene	5.0	5.0	100	80-120	
Hexachloro-1,3-butadiene	5.0	5.0	99	80-120	
Naphthalene	5.0	5.2	103	80-120	
1,2,3-Trichlorobenzene	5.0	5.4	108	80-120	

Surrogate Recovery			
Dibromofluoromethane	92	65-135	
1,2-Dichloroethane-d4	100	65-135	
Toluene-d8	101	65-135	
4-Bromofluorobenzene	106	65-135	

ANALYSES PERFORMED BY: Sherry Chilcutt

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CCV 6-4-2020

	Spiked Conc. (µg/L)	CCV Response (µg/L)	CCV Recovery (%)	CCV Recovery Limits (%)
Dichlorodifluoromethane	10.0	8.0	80	80-120
Chloromethane	10.0	8.0	80	80-120
SIM Vinyl chloride	10.0	8.1	81	80-120
Vinyl chloride	10.0	9.2	92	80-120
Bromomethane	10.0	11.2	112	80-120
Chloroethane	10.0	10.9	109	80-120
Trichlorofluoromethane	10.0	10.9	109	80-120
1,1-Dichloroethene	10.0	10.9	109	80-120
Methylene chloride	10.0	9.8	98	80-120
Methyl *tert*- Butyl Ether (MTBE)	10.0	8.8	88	80-120
trans -1,2-Dichloroethene	10.0	9.0	90	80-120
1,1-Dichloroethane	10.0	9.8	98	80-120
2,2-Dichloropropane	10.0	9.8	98	80-120
cis -1,2-Dichloroethene	10.0	8.2	82	80-120
Chloroform	10.0	9.2	92	80-120
1,1,1-Trichloroethane (TCA)	10.0	9.9	99	80-120
Carbon tetrachloride	10.0	10.4	104	80-120
1,1-Dichloropropene	10.0	9.0	90	80-120
Benzene	10.0	9.6	96	80-120
1,2-Dichloroethane (EDC)	10.0	8.7	87	80-120
SIM Trichloroethene (TCE)	10.0	9.5	95	80-120
Trichloroethene (TCE)	10.0	8.5	85	80-120
1,2-Dichloropropane	10.0	8.9	89	80-120
Dibromomethane	10.0	8.1	81	80-120
Bromodichloromethane	10.0	9.2	92	80-120
cis-1,3-Dichloropropene	10.0	8.1	81	80-120
Toluene	10.0	9.8	98	80-120
Trans-1,3-Dichloropropene	10.0	8.1	81	80-120
1,1,2-Trichloroethane	10.0	8.2	82	80-120
Tetrachloroethene (PCE)	10.0	9.2	92	80-120
1,3-Dichloropropane	10.0	8.1	81	80-120
Dibromochloromethane	10.0	8.7	87	80-120
SIM 1,2-Dibromoethane (EDB)	10.0	8.8	88	80-120
1,2-Dibromoethane (EDB)	10.0	8.1	81	80-120
Chlorobenzene	10.0	9.5	95	80-120
Ethylbenzene	10.0	9.8	98	80-120
1,1,1,2-Tetrachloroethane	10.0	10.3	103	80-120
Total Xylenes	30.0	30.2	101	80-120
Styrene	10.0	8.8	88	80-120

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CCV 6-4-2020

	Spiked Conc. (µg/L)	CCV Response (µg/L)	CCV Recovery (%)	CCV Recovery Limits (%)
Bromoform	10.0	8.1	81	80-120
Isopropylbenzene	10.0	9.8	98	80-120
1,1,2,2-Tetrachloroethane	10.0	10.1	101	80-120
Bromobenzene	10.0	10.5	105	80-120
n-Propylbenzene	10.0	11.3	113	80-120
1,2,3-Trichloropropane	10.0	9.7	97	80-120
2-Chlorotoluene	10.0	11.9	119	80-120
1,3,5-Trimethylbenzene	10.0	11.9	119	80-120
4-Chlorotoluene	10.0	11.8	118	80-120
tert-Butylbenzene	10.0	11.9	119	80-120
1,2,4-Trimethylbenzene	10.0	12.0	120	80-120
sec-Butylbenzene	10.0	11.1	111	80-120
Isopropyltoluene	10.0	11.8	118	80-120
1,3-Dichlorobenzene	10.0	11.0	110	80-120
1,4-Dichlorobenzene	10.0	11.0	110	80-120
n-Butylbenzene	10.0	11.9	119	80-120
1,2-Dichlorobenzene	10.0	10.1	101	80-120
1,2-Dibromo-3-Chloropropane	10.0	11.6	116	80-120
1,2,4-Trichlorolbenzene	10.0	8.9	89	80-120
Hexachloro-1,3-butadiene	10.0	10.8	108	80-120
Naphthalene	10.0	9.9	99	80-120
1,2,3-Trichlorobenzene	10.0	8.6	86	80-120

Surrogate Recovery			
Dibromofluoromethane	93	65-135	
1,2-Dichloroethane-d4	90	65-135	
Toluene-d8	106	65-135	
4-Bromofluorobenzene	91	65-135	

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QA/QC Gasoline by NWTPH-Gx in Soil

Sample Number	Date Analyzed	Gasoline (mg/kg)	Gasoline (% Recovery)	CCV Recovery Limits (%)
12.5 ppm LCS	6/5/2020	14	112%	70-130%
12.5 ppm LCSD	6/5/2020	13	104%	70-130%
RPD			7%	30%
Practical Quantitation Limit		10		

CCV Gasoline by NWTPH-Gx in Soil

Sample Number	Date Analyzed	Gasoline (mg/kg)	CCV (%)	CCV Recovery Limits (%)
50 ppm CCV	6/5/2020	40.5	81%	80-120%
Practical Quantitation Limit		10		

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QA/QC Gasoline by NWTPH-Gx in Water

Sample Number	Date Analyzed	Gasoline (µg/L)	Gasoline (% Recovery)	CCV Recovery Limits (%)
500 ppb LCS	6/4/2020	415	83%	70-130%
500 ppb LCSD	6/4/2020	429	86%	70-130%
RPD			4%	30%
Practical Quantitation Limit		100		

CCV Gasoline by NWTPH-Gx in Water

Sample Number	Date Analyzed	Gasoline (µg/L)	CCV (%)	CCV Recovery Limits (%)
1000 ppb CCV	6/4/2020	831	83%	80-120%
Practical Quantitation Limit		100		

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QA/QC Diesel by NWTPH-Dx in Soil

Sample Number	Date Analyzed	Diesel (mg/kg)	Diesel (% Recovery)	CCV Recovery Limits (%)
100 ppm LCS 060420	6/4/2020	89	89%	70-130%
100 ppm LCSD 060420	6/4/2020	86	86%	70-130%
RPD			3%	30%
100 ppm LCS 060920	6/9/2020	83	83%	70-130%
100 ppm LCSD 060920	6/9/2020	108	108%	70-130%
RPD			26%	30%
Practical Quantitation Limit		50		

CCV Diesel by NWTPH-Dx in Soil

Sample Number	Date Analyzed	Diesel (mg/kg)	CCV (%)	CCV Recovery Limits (%)
CCV Jamaica FID 1 500 ppm	6/4/2020	555	111%	85-115%
CCV Jamaica FID 2 500 ppm	6/4/2020	569	114%	85-115%
CCV Jamaica FID 1 500 ppm	6/9/2020	497	100%	85-115%
Practical Quantitation Limit		50		

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QA/QC Diesel by NWTPH-Dx in Water

Sample Number	Date Analyzed	Diesel (µg/L)	Diesel (% Recovery)	CCV Recovery Limits (%)
400 ppb LCS 060520	6/5/2020	367	92%	70-130%
400 ppb LCSD 060520	6/5/2020	405	101%	70-130%
RPD			9%	30%
Practical Quantitation Limit		50		

CCV Diesel by NWTPH-Dx in Water

Sample Number	Date Analyzed	Diesel (µg/L)	CCV (%)	CCV Recovery Limits (%)
CCV Elmer FID 1 500 ppm	6/5/2020	502	100%	85-115%
CCV Elmer FID 2 500 ppm	6/5/2020	545	109%	85-115%
Practical Quantitation Limit		50		

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QA/QC Total Metals by EPA Method 7010 Series in Soil

Sample Number	Date Analyzed	Lead (% Recovery)	Cadmium (% Recovery)	Chromium (% Recovery)	Arsenic (% Recovery)
LCS 060520	6/9/2020	115%	97%	117%	101%
L200604-5 MS	6/9/2020	115%	113%	104%	84%
L200604-5 MSD	6/9/2020	116%	116%	105%	91%
RPD	6/9/2020	1%	3%	1%	8%

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 75%-125%
ACCEPTABLE RPD IS 20%

QA/QC Total Metals by EPA Method 7010 Series in Soil

Sample Number	Date Analyzed	Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Arsenic (mg/kg)
Spike Concentration		1.00	0.50	0.50	2.50
LCS 060520	6/9/2020	1.15	0.483	0.584	2.53
Spike Concentration		1.0	0.5	0.5	1.0
L200604-5 MS	6/9/2020	1.15	0.557	0.520	0.84
L200604-5 MSD	6/9/2020	1.16	0.580	0.525	0.91
RPD	6/9/2020	1%	4%	1%	8%

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 75%-125%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Dirk Peterson

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CCV Total Metals by EPA Method 7010 Series in Soil

Sample Number	Date Analyzed	Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Arsenic (mg/kg)
Spike Concentration		2.5	0.5	0.5	10
CCV 6-9-20	6/9/2020	2.35	0.490	0.540	9.40
CCV Recovery %		94%	98%	108%	94%
CCB		nd	nd	nd	nd
CCV 6-9-20-B	6/9/2020	2.73	0.462	0.495	9.9
CCV Recovery %		109%	92%	99%	99%
CCB-B		nd	nd	nd	nd

CCV Recovery Limits %: 90-110%

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QA/QC Total Mercury by EPA Method 7471 in Soil

Sample Number	Date Analyzed	Mercury (% Recovery)
LCS 060520	6/9/2020	102%
L200604-5 MS	6/9/2020	90%
L200604-5 MSD	6/9/2020	90%
RPD	6/9/2020	0%

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 80%-120%
ACCEPTABLE RECOVERY LIMITS FOR LCS: 80%-120%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Dirk Peterson

QA/QC Total Mercury by EPA Method 7471 in Soil

Sample Number	Date Analyzed	Mercury (mg/kg)
Spike Concentration		2.00
LCS 060520	6/9/2020	2.04
L200604-5 MS	6/9/2020	1.79
L200604-5 MSD	6/9/2020	1.79
RPD	6/9/2020	0%

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 80%-120%
ACCEPTABLE RECOVERY LIMITS FOR LCS: 80%-120%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Dirk Peterson

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CCV Total Mercury by EPA Method 7471 in Soil

Sample Number	Date Analyzed	Mercury (mg/kg)
Spike Concentration		5.0
CCV 6-9-20	6/9/2020	4.67
CCV Recovery %		93%
CCB		nd
CCV 6-9-20-B	6/9/2020	4.67
CCV Recovery %		93%
CCB-B		nd

ACCEPTABLE RECOVERY LIMITS FOR CCV: 80%-120%

ANALYSES PERFORMED BY: Dirk Peterson

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QA/QC Total Metals by EPA Method 7010 Series in Water

Sample Number	Date Analyzed	Lead (% Recovery)	Cadmium (% Recovery)	Chromium (% Recovery)	Arsenic (% Recovery)
LCS 060920	6/9/2020	114%	94%	92%	106%
GW-B6-0603-01 MS	6/9/2020	106%	93%	107%	94%
GW-B6-0603-01 MSD	6/9/2020	110%	92%	105%	95%
RPD	6/9/2020	4%	1%	2%	1%

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 75%-125%
ACCEPTABLE RECOVERY LIMITS FOR LCS: 80%-120%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Dirk Peterson

QA/QC Total Metals by EPA Method 7010 Series in Water

Sample Number	Date Analyzed	Lead (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Arsenic (µg/L)
Spike Concentration		20	10	10	50
LCS 060920	6/9/2020	22.8	9.4	9.2	52.9
GW-B6-0603-01 MS	6/9/2020	21.2	9.3	10.7	46.9
GW-B6-0603-01 MSD	6/9/2020	21.9	9.2	10.5	47.4
RPD	6/9/2020	3%	1%	2%	1%

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 75%-125%
ACCEPTABLE RECOVERY LIMITS FOR LCS: 80%-120%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Dirk Peterson

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CCV Total Metals by EPA Method 7010 Series in Water

Sample Number	Date Analyzed	Lead (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Arsenic (µg/L)
Spike Concentration		50	10	10	50
CCV 6-9-20	6/4/2020	52	9.7	10.6	204
CCV Recovery %		104%	97%	106%	102%
CCB		nd	nd	nd	nd

ACCEPTABLE RECOVERY LIMITS FOR CCV: 90%-110%

ANALYSES PERFORMED BY: Dirk Peterson

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HARDEL SITE PROJECT
Pioneer Technologies
Libby Project # L200603-7
Date Received 6/3/2020
Time Received 5:10 PM

Received By KE

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody complete?	☑ Yes	☐ No	
2. How was the sample delivered?	☑ Hand Delivered	☐ Picked Up	☐ Shipped

Log In

3. Cooler or Shipping Container is present.	☑ Yes	☐ No	☐ N/A
4. Cooler or Shipping Container is in good condition.	☑ Yes	☐ No	☐ N/A
5. Cooler or Shipping Container has Custody Seals present.	☐ Yes	☑ No	☐ N/A
6. Was an attempt made to cool the samples?	☑ Yes	☐ No	☐ N/A
7. Temperature of cooler (0°C to 8°C recommended)	0.9 °C		
8. Temperature of sample(s) (0°C to 8°C recommended)	1.8 °C		
9. Did all containers arrive in good condition (unbroken)?	☑ Yes	☐ No	
10. Is it clear what analyses were requested?	☑ Yes	☐ No	
11. Did container labels match Chain of Custody?	☑ Yes	☐ No	
12. Are matrices correctly identified on Chain of Custody?	☑ Yes	☐ No	
13. Are correct containers used for the analysis indicated?	☑ Yes	☐ No	
14. Is there sufficient sample volume for indicated analysis?	☑ Yes	☐ No	
15. Were all containers properly preserved per each analysis?	☑ Yes	☐ No	
16. Were VOA vials collected correctly (no headspace)?	☑ Yes	☐ No	☐ N/A
17. Were all holding times able to be met?	☑ Yes	☐ No	

Discrepancies/ Notes

18. Was client notified of all discrepancies? ☐ Yes ☐ No ☑ N/A

Person Notified: _____ Date: _____

By Whom: _____ Via: _____

Regarding: _____

19. Comments. _____

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info@fremontanalytical.com

Libby Environmental
Kodey Eley
3322 South Bay Road NE
Olympia, WA 98506

RE: Hardel Site
Work Order Number: 2006085

July 02, 2020

Attention Kodey Eley:

Fremont Analytical, Inc. received 18 sample(s) on 6/4/2020 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH
Mercury by EPA Method 245.1
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)
Sample Moisture (Percent Moisture)
Semi-Volatile Organic Compounds by EPA Method 8270
Total Metals by EPA Method 200.8
Total Metals by EPA Method 6020B
Total Organic Carbon by EPA 9060

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

CLIENT: Libby Environmental
Project: Hardel Site
Work Order: 2006085

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2006085-001	GW-B1-0603	06/03/2020 2:00 PM	06/04/2020 12:24 PM
2006085-002	GW-B2-0603	06/03/2020 1:00 PM	06/04/2020 12:24 PM
2006085-003	GW-B3-0603	06/03/2020 12:10 PM	06/04/2020 12:24 PM
2006085-004	GW-B4-0603	06/03/2020 11:10 AM	06/04/2020 12:24 PM
2006085-005	GW-B5-0603	06/03/2020 10:00 AM	06/04/2020 12:24 PM
2006085-006	GW-B6-0603	06/03/2020 9:15 AM	06/04/2020 12:24 PM
2006085-007	GW-B6-0603-01	06/03/2020 9:15 AM	06/04/2020 12:24 PM
2006085-008	S-B1-4-5-0603	06/03/2020 1:40 PM	06/04/2020 12:24 PM
2006085-009	S-B2-2-4-0603	06/03/2020 12:30 PM	06/04/2020 12:24 PM
2006085-010	S-B3-2-3-0603	06/03/2020 11:30 PM	06/04/2020 12:24 PM
2006085-011	S-B4-1-3-0603	06/03/2020 10:30 AM	06/04/2020 12:24 PM
2006085-012	S-B4-1-3-0603-01	06/03/2020 10:30 AM	06/04/2020 12:24 PM
2006085-013	S-B4-11-12-0603	06/03/2020 10:45 AM	06/04/2020 12:24 PM
2006085-014	S-B5-3-4-0603	06/03/2020 9:20 AM	06/04/2020 12:24 PM
2006085-015	S-B6-3-4-0603	06/03/2020 8:45 AM	06/04/2020 12:24 PM
2006085-016	S-B7-3-5-0603	06/03/2020 4:00 PM	06/04/2020 12:24 PM
2006085-017	S-B8-4-5-0603	06/03/2020 4:20 PM	06/04/2020 12:24 PM
2006085-018	S-B9-6-7-0603	06/03/2020 4:40 PM	06/04/2020 12:24 PM

Case Narrative

WO#: **2006085**
Date: **7/2/2020**

CLIENT: Libby Environmental
Project: Hardel Site

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

7/2/2020: Revision 2 includes addition of Level 2b data package.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Client: Libby Environmental
Collection Date: 6/3/2020 2:00:00 PM
Project: Hardel Site
Lab ID: 2006085-001
Matrix: Water
Client Sample ID: GW-B1-0603

Semi-Volatile Organic Compounds by EPA Method 8270 Batch ID: 28620 Analyst: SB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Phenol	2.10	1.98		µg/L	1	6/15/2020 5:10:36 PM
2-Chlorophenol	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
1,3-Dichlorobenzene	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
1,4-Dichlorobenzene	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
1,2-Dichlorobenzene	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
Benzyl alcohol	ND	0.991	Q	µg/L	1	6/15/2020 5:10:36 PM
Bis(2-chloroethyl) ether	ND	1.98		µg/L	1	6/15/2020 5:10:36 PM
2-Methylphenol (o-cresol)	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
Hexachloroethane	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
N-Nitrosodi-n-propylamine	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
3&4-Methylphenol (m, p-cresol)	1.48	0.991	Q	µg/L	1	6/15/2020 5:10:36 PM
Nitrobenzene	ND	1.98		µg/L	1	6/15/2020 5:10:36 PM
Isophorone	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
2-Nitrophenol	ND	1.98		µg/L	1	6/15/2020 5:10:36 PM
2,4-Dimethylphenol	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
Bis(2-chloroethoxy)methane	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
2,4-Dichlorophenol	ND	1.98		µg/L	1	6/15/2020 5:10:36 PM
1,2,4-Trichlorobenzene	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
Naphthalene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
4-Chloroaniline	ND	4.95		µg/L	1	6/15/2020 5:10:36 PM
Hexachlorobutadiene	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
4-Chloro-3-methylphenol	ND	4.95		µg/L	1	6/15/2020 5:10:36 PM
2-Methylnaphthalene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
1-Methylnaphthalene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Hexachlorocyclopentadiene	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
2,4,6-Trichlorophenol	ND	1.98		µg/L	1	6/15/2020 5:10:36 PM
2,4,5-Trichlorophenol	ND	1.98		µg/L	1	6/15/2020 5:10:36 PM
2-Chloronaphthalene	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
2-Nitroaniline	ND	4.95		µg/L	1	6/15/2020 5:10:36 PM
Acenaphthene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Dimethylphthalate	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
2,6-Dinitrotoluene	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
Acenaphthylene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
2,4-Dinitrophenol	ND	1.98		µg/L	1	6/15/2020 5:10:36 PM
Dibenzofuran	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
2,4-Dinitrotoluene	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
4-Nitrophenol	ND	4.95	Q*	µg/L	1	6/15/2020 5:10:36 PM
Fluorene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
4-Chlorophenyl phenyl ether	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM

Client: Libby Environmental
Collection Date: 6/3/2020 2:00:00 PM
Project: Hardel Site
Lab ID: 2006085-001
Matrix: Water
Client Sample ID: GW-B1-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 28620		Analyst: SB
Diethylphthalate	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
4,6-Dinitro-2-methylphenol	ND	4.95		µg/L	1	6/15/2020 5:10:36 PM
4-Bromophenyl phenyl ether	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
Hexachlorobenzene	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
Pentachlorophenol	ND	1.98		µg/L	1	6/15/2020 5:10:36 PM
Phenanthrene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Anthracene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Carbazole	ND	4.95		µg/L	1	6/15/2020 5:10:36 PM
Di-n-butyl phthalate	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
Fluoranthene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Pyrene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Benzyl Butylphthalate	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
bis(2-Ethylhexyl)adipate	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
Benz(a)anthracene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Chrysene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Bis(2-ethylhexyl) phthalate	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
Di-n-octyl phthalate	ND	0.991		µg/L	1	6/15/2020 5:10:36 PM
Benzo(b)fluoranthene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Benzo(k)fluoranthene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Benzo(a)pyrene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Indeno(1,2,3-cd)pyrene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Dibenz(a,h)anthracene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Benzo(g,h,i)perylene	ND	0.495		µg/L	1	6/15/2020 5:10:36 PM
Surr: 2,4,6-Tribromophenol	143	24.7 - 176		%Rec	1	6/15/2020 5:10:36 PM
Surr: 2-Fluorobiphenyl	121	54.8 - 148		%Rec	1	6/15/2020 5:10:36 PM
Surr: Nitrobenzene-d5	116	40.8 - 151		%Rec	1	6/15/2020 5:10:36 PM
Surr: Phenol-d6	38.3	5 - 116		%Rec	1	6/15/2020 5:10:36 PM
Surr: p-Terphenyl	60.3	51.7 - 162		%Rec	1	6/15/2020 5:10:36 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
* - Flagged value is not within established control limits.

Mercury by EPA Method 245.1				Batch ID: 28625		Analyst: WF
Mercury	ND	0.100		µg/L	1	6/11/2020 5:56:41 PM
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Barium	125	2.50		µg/L	1	6/8/2020 2:59:46 PM

Analytical Report

Work Order: **2006085**
Date Reported: **7/2/2020**

Client: Libby Environmental
Project: Hardel Site
Lab ID: 2006085-001
Client Sample ID: **GW-B1-0603**

Collection Date: 6/3/2020 2:00:00 PM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Selenium	ND	5.00		µg/L	1	6/8/2020 2:59:46 PM
Silver	ND	0.250		µg/L	1	6/8/2020 2:59:46 PM

Client: Libby Environmental
Collection Date: 6/3/2020 1:00:00 PM
Project: Hardel Site
Lab ID: 2006085-002
Matrix: Water
Client Sample ID: GW-B2-0603

Semi-Volatile Organic Compounds by EPA Method 8270 Batch ID: 28620 Analyst: SB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Phenol	ND	2.00		µg/L	1	6/15/2020 5:55:37 PM
2-Chlorophenol	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
1,3-Dichlorobenzene	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
1,4-Dichlorobenzene	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
1,2-Dichlorobenzene	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
Benzyl alcohol	ND	0.998	Q	µg/L	1	6/15/2020 5:55:37 PM
Bis(2-chloroethyl) ether	ND	2.00		µg/L	1	6/15/2020 5:55:37 PM
2-Methylphenol (o-cresol)	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
Hexachloroethane	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
N-Nitrosodi-n-propylamine	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
3&4-Methylphenol (m, p-cresol)	ND	0.998	Q	µg/L	1	6/15/2020 5:55:37 PM
Nitrobenzene	ND	2.00		µg/L	1	6/15/2020 5:55:37 PM
Isophorone	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
2-Nitrophenol	ND	2.00		µg/L	1	6/15/2020 5:55:37 PM
2,4-Dimethylphenol	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
Bis(2-chloroethoxy)methane	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
2,4-Dichlorophenol	ND	2.00		µg/L	1	6/15/2020 5:55:37 PM
1,2,4-Trichlorobenzene	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
Naphthalene	1.28	0.499		µg/L	1	6/15/2020 5:55:37 PM
4-Chloroaniline	ND	4.99		µg/L	1	6/15/2020 5:55:37 PM
Hexachlorobutadiene	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
4-Chloro-3-methylphenol	ND	4.99		µg/L	1	6/15/2020 5:55:37 PM
2-Methylnaphthalene	4.60	0.499		µg/L	1	6/15/2020 5:55:37 PM
1-Methylnaphthalene	6.16	0.499		µg/L	1	6/15/2020 5:55:37 PM
Hexachlorocyclopentadiene	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
2,4,6-Trichlorophenol	ND	2.00		µg/L	1	6/15/2020 5:55:37 PM
2,4,5-Trichlorophenol	ND	2.00		µg/L	1	6/15/2020 5:55:37 PM
2-Chloronaphthalene	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
2-Nitroaniline	ND	4.99		µg/L	1	6/15/2020 5:55:37 PM
Acenaphthene	0.699	0.499		µg/L	1	6/15/2020 5:55:37 PM
Dimethylphthalate	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
2,6-Dinitrotoluene	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
Acenaphthylene	ND	0.499		µg/L	1	6/15/2020 5:55:37 PM
2,4-Dinitrophenol	ND	2.00		µg/L	1	6/15/2020 5:55:37 PM
Dibenzofuran	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
2,4-Dinitrotoluene	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
4-Nitrophenol	ND	4.99	Q*	µg/L	1	6/15/2020 5:55:37 PM
Fluorene	0.726	0.499		µg/L	1	6/15/2020 5:55:37 PM
4-Chlorophenyl phenyl ether	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM

Client: Libby Environmental
Collection Date: 6/3/2020 1:00:00 PM
Project: Hardel Site
Lab ID: 2006085-002
Matrix: Water
Client Sample ID: GW-B2-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 28620		Analyst: SB
Diethylphthalate	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
4,6-Dinitro-2-methylphenol	ND	4.99		µg/L	1	6/15/2020 5:55:37 PM
4-Bromophenyl phenyl ether	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
Hexachlorobenzene	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
Pentachlorophenol	ND	2.00		µg/L	1	6/15/2020 5:55:37 PM
Phenanthrene	0.880	0.499		µg/L	1	6/15/2020 5:55:37 PM
Anthracene	ND	0.499		µg/L	1	6/15/2020 5:55:37 PM
Carbazole	ND	4.99		µg/L	1	6/15/2020 5:55:37 PM
Di-n-butyl phthalate	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
Fluoranthene	ND	0.499		µg/L	1	6/15/2020 5:55:37 PM
Pyrene	ND	0.499		µg/L	1	6/15/2020 5:55:37 PM
Benzyl Butylphthalate	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
bis(2-Ethylhexyl)adipate	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
Benz(a)anthracene	ND	0.499		µg/L	1	6/15/2020 5:55:37 PM
Chrysene	ND	0.499		µg/L	1	6/15/2020 5:55:37 PM
Bis(2-ethylhexyl) phthalate	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
Di-n-octyl phthalate	ND	0.998		µg/L	1	6/15/2020 5:55:37 PM
Benzo(b)fluoranthene	ND	0.499		µg/L	1	6/15/2020 5:55:37 PM
Benzo(k)fluoranthene	ND	0.499		µg/L	1	6/15/2020 5:55:37 PM
Benzo(a)pyrene	ND	0.499		µg/L	1	6/15/2020 5:55:37 PM
Indeno(1,2,3-cd)pyrene	ND	0.499		µg/L	1	6/15/2020 5:55:37 PM
Dibenz(a,h)anthracene	ND	0.499		µg/L	1	6/15/2020 5:55:37 PM
Benzo(g,h,i)perylene	ND	0.499		µg/L	1	6/15/2020 5:55:37 PM
Surr: 2,4,6-Tribromophenol	147	24.7 - 176		%Rec	1	6/15/2020 5:55:37 PM
Surr: 2-Fluorobiphenyl	131	54.8 - 148		%Rec	1	6/15/2020 5:55:37 PM
Surr: Nitrobenzene-d5	122	40.8 - 151		%Rec	1	6/15/2020 5:55:37 PM
Surr: Phenol-d6	41.5	5 - 116		%Rec	1	6/15/2020 5:55:37 PM
Surr: p-Terphenyl	119	51.7 - 162		%Rec	1	6/15/2020 5:55:37 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
* - Flagged value is not within established control limits.

Mercury by EPA Method 245.1				Batch ID: 28625		Analyst: WF
Mercury	ND	0.100		µg/L	1	6/11/2020 6:03:30 PM
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Barium	56.4	2.50		µg/L	1	6/8/2020 3:10:55 PM

Analytical Report

Work Order: **2006085**
Date Reported: **7/2/2020**

Client: Libby Environmental
Project: Hardel Site
Lab ID: 2006085-002
Client Sample ID: **GW-B2-0603**

Collection Date: 6/3/2020 1:00:00 PM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Selenium	ND	5.00		µg/L	1	6/8/2020 3:10:55 PM
Silver	ND	0.250		µg/L	1	6/9/2020 12:48:34 PM

Client: Libby Environmental
Collection Date: 6/3/2020 12:10:00 PM
Project: Hardel Site
Lab ID: 2006085-003
Matrix: Water
Client Sample ID: GW-B3-0603

Semi-Volatile Organic Compounds by EPA Method 8270 Batch ID: 28620 Analyst: SB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Phenol	ND	1.98		µg/L	1	6/15/2020 6:18:12 PM
2-Chlorophenol	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
1,3-Dichlorobenzene	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
1,4-Dichlorobenzene	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
1,2-Dichlorobenzene	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
Benzyl alcohol	ND	0.989	Q	µg/L	1	6/15/2020 6:18:12 PM
Bis(2-chloroethyl) ether	ND	1.98		µg/L	1	6/15/2020 6:18:12 PM
2-Methylphenol (o-cresol)	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
Hexachloroethane	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
N-Nitrosodi-n-propylamine	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
3&4-Methylphenol (m, p-cresol)	ND	0.989	Q	µg/L	1	6/15/2020 6:18:12 PM
Nitrobenzene	ND	1.98		µg/L	1	6/15/2020 6:18:12 PM
Isophorone	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
2-Nitrophenol	ND	1.98		µg/L	1	6/15/2020 6:18:12 PM
2,4-Dimethylphenol	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
Bis(2-chloroethoxy)methane	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
2,4-Dichlorophenol	ND	1.98		µg/L	1	6/15/2020 6:18:12 PM
1,2,4-Trichlorobenzene	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
Naphthalene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
4-Chloroaniline	ND	4.94		µg/L	1	6/15/2020 6:18:12 PM
Hexachlorobutadiene	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
4-Chloro-3-methylphenol	ND	4.94		µg/L	1	6/15/2020 6:18:12 PM
2-Methylnaphthalene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
1-Methylnaphthalene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Hexachlorocyclopentadiene	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
2,4,6-Trichlorophenol	ND	1.98		µg/L	1	6/15/2020 6:18:12 PM
2,4,5-Trichlorophenol	ND	1.98		µg/L	1	6/15/2020 6:18:12 PM
2-Chloronaphthalene	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
2-Nitroaniline	ND	4.94		µg/L	1	6/15/2020 6:18:12 PM
Acenaphthene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Dimethylphthalate	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
2,6-Dinitrotoluene	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
Acenaphthylene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
2,4-Dinitrophenol	ND	1.98		µg/L	1	6/15/2020 6:18:12 PM
Dibenzofuran	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
2,4-Dinitrotoluene	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
4-Nitrophenol	ND	4.94	Q*	µg/L	1	6/15/2020 6:18:12 PM
Fluorene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
4-Chlorophenyl phenyl ether	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM

Client: Libby Environmental
Collection Date: 6/3/2020 12:10:00 PM
Project: Hardel Site
Lab ID: 2006085-003
Matrix: Water
Client Sample ID: GW-B3-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 28620		Analyst: SB
Diethylphthalate	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
4,6-Dinitro-2-methylphenol	ND	4.94		µg/L	1	6/15/2020 6:18:12 PM
4-Bromophenyl phenyl ether	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
Hexachlorobenzene	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
Pentachlorophenol	ND	1.98		µg/L	1	6/15/2020 6:18:12 PM
Phenanthrene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Anthracene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Carbazole	ND	4.94		µg/L	1	6/15/2020 6:18:12 PM
Di-n-butyl phthalate	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
Fluoranthene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Pyrene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Benzyl Butylphthalate	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
bis(2-Ethylhexyl)adipate	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
Benz(a)anthracene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Chrysene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Bis(2-ethylhexyl) phthalate	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
Di-n-octyl phthalate	ND	0.989		µg/L	1	6/15/2020 6:18:12 PM
Benzo(b)fluoranthene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Benzo(k)fluoranthene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Benzo(a)pyrene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Indeno(1,2,3-cd)pyrene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Dibenz(a,h)anthracene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Benzo(g,h,i)perylene	ND	0.494		µg/L	1	6/15/2020 6:18:12 PM
Surr: 2,4,6-Tribromophenol	133	24.7 - 176		%Rec	1	6/15/2020 6:18:12 PM
Surr: 2-Fluorobiphenyl	106	54.8 - 148		%Rec	1	6/15/2020 6:18:12 PM
Surr: Nitrobenzene-d5	92.3	40.8 - 151		%Rec	1	6/15/2020 6:18:12 PM
Surr: Phenol-d6	32.6	5 - 116		%Rec	1	6/15/2020 6:18:12 PM
Surr: p-Terphenyl	131	51.7 - 162		%Rec	1	6/15/2020 6:18:12 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
* - Flagged value is not within established control limits.

Mercury by EPA Method 245.1				Batch ID: 28625		Analyst: WF
Mercury	ND	0.100		µg/L	1	6/11/2020 6:05:11 PM
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Barium	178	2.50		µg/L	1	6/8/2020 3:16:29 PM

Analytical Report

Work Order: **2006085**
Date Reported: **7/2/2020**

Client: Libby Environmental
Project: Hardel Site
Lab ID: 2006085-003
Client Sample ID: **GW-B3-0603**

Collection Date: 6/3/2020 12:10:00 PM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Selenium	ND	5.00		µg/L	1	6/8/2020 3:16:29 PM
Silver	ND	0.250		µg/L	1	6/8/2020 3:16:29 PM

Client: Libby Environmental
Collection Date: 6/3/2020 11:10:00 AM
Project: Hardel Site
Lab ID: 2006085-004
Matrix: Water
Client Sample ID: GW-B4-0603

Semi-Volatile Organic Compounds by EPA Method 8270 Batch ID: 28620 Analyst: SB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Phenol	ND	2.00		µg/L	1	6/15/2020 6:40:42 PM
2-Chlorophenol	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
1,3-Dichlorobenzene	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
1,4-Dichlorobenzene	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
1,2-Dichlorobenzene	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
Benzyl alcohol	ND	0.999	Q	µg/L	1	6/15/2020 6:40:42 PM
Bis(2-chloroethyl) ether	ND	2.00		µg/L	1	6/15/2020 6:40:42 PM
2-Methylphenol (o-cresol)	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
Hexachloroethane	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
N-Nitrosodi-n-propylamine	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
3&4-Methylphenol (m, p-cresol)	ND	0.999	Q	µg/L	1	6/15/2020 6:40:42 PM
Nitrobenzene	ND	2.00		µg/L	1	6/15/2020 6:40:42 PM
Isophorone	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
2-Nitrophenol	ND	2.00		µg/L	1	6/15/2020 6:40:42 PM
2,4-Dimethylphenol	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
Bis(2-chloroethoxy)methane	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
2,4-Dichlorophenol	ND	2.00		µg/L	1	6/15/2020 6:40:42 PM
1,2,4-Trichlorobenzene	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
Naphthalene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
4-Chloroaniline	ND	4.99		µg/L	1	6/15/2020 6:40:42 PM
Hexachlorobutadiene	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
4-Chloro-3-methylphenol	ND	4.99		µg/L	1	6/15/2020 6:40:42 PM
2-Methylnaphthalene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
1-Methylnaphthalene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
Hexachlorocyclopentadiene	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
2,4,6-Trichlorophenol	ND	2.00		µg/L	1	6/15/2020 6:40:42 PM
2,4,5-Trichlorophenol	ND	2.00		µg/L	1	6/15/2020 6:40:42 PM
2-Chloronaphthalene	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
2-Nitroaniline	ND	4.99		µg/L	1	6/15/2020 6:40:42 PM
Acenaphthene	1.22	0.499		µg/L	1	6/15/2020 6:40:42 PM
Dimethylphthalate	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
2,6-Dinitrotoluene	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
Acenaphthylene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
2,4-Dinitrophenol	ND	2.00		µg/L	1	6/15/2020 6:40:42 PM
Dibenzofuran	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
2,4-Dinitrotoluene	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
4-Nitrophenol	ND	4.99	Q*	µg/L	1	6/15/2020 6:40:42 PM
Fluorene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
4-Chlorophenyl phenyl ether	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM

Client: Libby Environmental **Collection Date:** 6/3/2020 11:10:00 AM
Project: Hardel Site
Lab ID: 2006085-004 **Matrix:** Water
Client Sample ID: GW-B4-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 28620		Analyst: SB
Diethylphthalate	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
4,6-Dinitro-2-methylphenol	ND	4.99		µg/L	1	6/15/2020 6:40:42 PM
4-Bromophenyl phenyl ether	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
Hexachlorobenzene	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
Pentachlorophenol	ND	2.00		µg/L	1	6/15/2020 6:40:42 PM
Phenanthrene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
Anthracene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
Carbazole	ND	4.99		µg/L	1	6/15/2020 6:40:42 PM
Di-n-butyl phthalate	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
Fluoranthene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
Pyrene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
Benzyl Butylphthalate	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
bis(2-Ethylhexyl)adipate	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
Benz(a)anthracene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
Chrysene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
Bis(2-ethylhexyl) phthalate	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
Di-n-octyl phthalate	ND	0.999		µg/L	1	6/15/2020 6:40:42 PM
Benzo(b)fluoranthene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
Benzo(k)fluoranthene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
Benzo(a)pyrene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
Indeno(1,2,3-cd)pyrene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
Dibenz(a,h)anthracene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
Benzo(g,h,i)perylene	ND	0.499		µg/L	1	6/15/2020 6:40:42 PM
Surr: 2,4,6-Tribromophenol	137	24.7 - 176		%Rec	1	6/15/2020 6:40:42 PM
Surr: 2-Fluorobiphenyl	130	54.8 - 148		%Rec	1	6/15/2020 6:40:42 PM
Surr: Nitrobenzene-d5	118	40.8 - 151		%Rec	1	6/15/2020 6:40:42 PM
Surr: Phenol-d6	39.8	5 - 116		%Rec	1	6/15/2020 6:40:42 PM
Surr: p-Terphenyl	145	51.7 - 162		%Rec	1	6/15/2020 6:40:42 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
* - Flagged value is not within established control limits.

Mercury by EPA Method 245.1				Batch ID: 28625		Analyst: WF
Mercury	ND	0.100		µg/L	1	6/11/2020 6:06:52 PM
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Barium	65.0	2.50		µg/L	1	6/8/2020 3:43:01 PM

Analytical Report

Work Order: **2006085**
Date Reported: **7/2/2020**

Client: Libby Environmental
Collection Date: 6/3/2020 11:10:00 AM
Project: Hardel Site
Lab ID: 2006085-004
Matrix: Water
Client Sample ID: GW-B4-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Selenium	ND	5.00		µg/L	1	6/8/2020 3:43:01 PM
Silver	ND	0.250		µg/L	1	6/8/2020 3:43:01 PM

Client: Libby Environmental
Collection Date: 6/3/2020 10:00:00 AM
Project: Hardel Site
Lab ID: 2006085-005
Matrix: Water
Client Sample ID: GW-B5-0603

Semi-Volatile Organic Compounds by EPA Method 8270 Batch ID: 28620 Analyst: SB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Phenol	ND	2.00		µg/L	1	6/15/2020 7:03:09 PM
2-Chlorophenol	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
1,3-Dichlorobenzene	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
1,4-Dichlorobenzene	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
1,2-Dichlorobenzene	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
Benzyl alcohol	ND	0.999	Q	µg/L	1	6/15/2020 7:03:09 PM
Bis(2-chloroethyl) ether	ND	2.00		µg/L	1	6/15/2020 7:03:09 PM
2-Methylphenol (o-cresol)	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
Hexachloroethane	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
N-Nitrosodi-n-propylamine	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
3&4-Methylphenol (m, p-cresol)	ND	0.999	Q	µg/L	1	6/15/2020 7:03:09 PM
Nitrobenzene	ND	2.00		µg/L	1	6/15/2020 7:03:09 PM
Isophorone	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
2-Nitrophenol	ND	2.00		µg/L	1	6/15/2020 7:03:09 PM
2,4-Dimethylphenol	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
Bis(2-chloroethoxy)methane	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
2,4-Dichlorophenol	ND	2.00		µg/L	1	6/15/2020 7:03:09 PM
1,2,4-Trichlorobenzene	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
Naphthalene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
4-Chloroaniline	ND	4.99		µg/L	1	6/15/2020 7:03:09 PM
Hexachlorobutadiene	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
4-Chloro-3-methylphenol	ND	4.99		µg/L	1	6/15/2020 7:03:09 PM
2-Methylnaphthalene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
1-Methylnaphthalene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Hexachlorocyclopentadiene	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
2,4,6-Trichlorophenol	ND	2.00		µg/L	1	6/15/2020 7:03:09 PM
2,4,5-Trichlorophenol	ND	2.00		µg/L	1	6/15/2020 7:03:09 PM
2-Chloronaphthalene	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
2-Nitroaniline	ND	4.99		µg/L	1	6/15/2020 7:03:09 PM
Acenaphthene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Dimethylphthalate	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
2,6-Dinitrotoluene	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
Acenaphthylene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
2,4-Dinitrophenol	ND	2.00		µg/L	1	6/15/2020 7:03:09 PM
Dibenzofuran	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
2,4-Dinitrotoluene	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
4-Nitrophenol	ND	4.99	Q*	µg/L	1	6/15/2020 7:03:09 PM
Fluorene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
4-Chlorophenyl phenyl ether	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM

Client: Libby Environmental
Collection Date: 6/3/2020 10:00:00 AM
Project: Hardel Site
Lab ID: 2006085-005
Matrix: Water
Client Sample ID: GW-B5-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 28620		Analyst: SB
Diethylphthalate	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
4,6-Dinitro-2-methylphenol	ND	4.99		µg/L	1	6/15/2020 7:03:09 PM
4-Bromophenyl phenyl ether	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
Hexachlorobenzene	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
Pentachlorophenol	ND	2.00		µg/L	1	6/15/2020 7:03:09 PM
Phenanthrene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Anthracene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Carbazole	ND	4.99		µg/L	1	6/15/2020 7:03:09 PM
Di-n-butyl phthalate	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
Fluoranthene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Pyrene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Benzyl Butylphthalate	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
bis(2-Ethylhexyl)adipate	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
Benz(a)anthracene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Chrysene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Bis(2-ethylhexyl) phthalate	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
Di-n-octyl phthalate	ND	0.999		µg/L	1	6/15/2020 7:03:09 PM
Benzo(b)fluoranthene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Benzo(k)fluoranthene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Benzo(a)pyrene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Indeno(1,2,3-cd)pyrene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Dibenz(a,h)anthracene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Benzo(g,h,i)perylene	ND	0.499		µg/L	1	6/15/2020 7:03:09 PM
Surr: 2,4,6-Tribromophenol	139	24.7 - 176		%Rec	1	6/15/2020 7:03:09 PM
Surr: 2-Fluorobiphenyl	121	54.8 - 148		%Rec	1	6/15/2020 7:03:09 PM
Surr: Nitrobenzene-d5	105	40.8 - 151		%Rec	1	6/15/2020 7:03:09 PM
Surr: Phenol-d6	37.7	5 - 116		%Rec	1	6/15/2020 7:03:09 PM
Surr: p-Terphenyl	141	51.7 - 162		%Rec	1	6/15/2020 7:03:09 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
* - Flagged value is not within established control limits.

Mercury by EPA Method 245.1				Batch ID: 28625		Analyst: WF
Mercury	ND	0.100		µg/L	1	6/11/2020 6:08:34 PM
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Barium	8.87	2.50		µg/L	1	6/8/2020 3:48:35 PM

Analytical Report

Work Order: **2006085**
Date Reported: **7/2/2020**

Client: Libby Environmental
Project: Hardel Site
Lab ID: 2006085-005
Client Sample ID: **GW-B5-0603**

Collection Date: 6/3/2020 10:00:00 AM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Selenium	ND	5.00		µg/L	1	6/8/2020 3:48:35 PM
Silver	ND	0.250		µg/L	1	6/8/2020 3:48:35 PM

Client: Libby Environmental
Collection Date: 6/3/2020 9:15:00 AM
Project: Hardel Site
Lab ID: 2006085-006
Matrix: Water
Client Sample ID: GW-B6-0603

Semi-Volatile Organic Compounds by EPA Method 8270 Batch ID: 28620 Analyst: SB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Phenol	ND	1.98		µg/L	1	6/15/2020 7:25:43 PM
2-Chlorophenol	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
1,3-Dichlorobenzene	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
1,4-Dichlorobenzene	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
1,2-Dichlorobenzene	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
Benzyl alcohol	ND	0.992	Q	µg/L	1	6/15/2020 7:25:43 PM
Bis(2-chloroethyl) ether	ND	1.98		µg/L	1	6/15/2020 7:25:43 PM
2-Methylphenol (o-cresol)	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
Hexachloroethane	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
N-Nitrosodi-n-propylamine	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
3&4-Methylphenol (m, p-cresol)	ND	0.992	Q	µg/L	1	6/15/2020 7:25:43 PM
Nitrobenzene	ND	1.98		µg/L	1	6/15/2020 7:25:43 PM
Isophorone	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
2-Nitrophenol	ND	1.98		µg/L	1	6/15/2020 7:25:43 PM
2,4-Dimethylphenol	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
Bis(2-chloroethoxy)methane	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
2,4-Dichlorophenol	ND	1.98		µg/L	1	6/15/2020 7:25:43 PM
1,2,4-Trichlorobenzene	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
Naphthalene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
4-Chloroaniline	ND	4.96		µg/L	1	6/15/2020 7:25:43 PM
Hexachlorobutadiene	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
4-Chloro-3-methylphenol	ND	4.96		µg/L	1	6/15/2020 7:25:43 PM
2-Methylnaphthalene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
1-Methylnaphthalene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Hexachlorocyclopentadiene	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
2,4,6-Trichlorophenol	ND	1.98		µg/L	1	6/15/2020 7:25:43 PM
2,4,5-Trichlorophenol	ND	1.98		µg/L	1	6/15/2020 7:25:43 PM
2-Chloronaphthalene	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
2-Nitroaniline	ND	4.96		µg/L	1	6/15/2020 7:25:43 PM
Acenaphthene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Dimethylphthalate	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
2,6-Dinitrotoluene	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
Acenaphthylene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
2,4-Dinitrophenol	ND	1.98		µg/L	1	6/15/2020 7:25:43 PM
Dibenzofuran	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
2,4-Dinitrotoluene	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
4-Nitrophenol	ND	4.96	Q*	µg/L	1	6/15/2020 7:25:43 PM
Fluorene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
4-Chlorophenyl phenyl ether	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM

Client: Libby Environmental
Collection Date: 6/3/2020 9:15:00 AM
Project: Hardel Site
Lab ID: 2006085-006
Matrix: Water
Client Sample ID: GW-B6-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 28620		Analyst: SB
Diethylphthalate	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
4,6-Dinitro-2-methylphenol	ND	4.96		µg/L	1	6/15/2020 7:25:43 PM
4-Bromophenyl phenyl ether	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
Hexachlorobenzene	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
Pentachlorophenol	ND	1.98		µg/L	1	6/15/2020 7:25:43 PM
Phenanthrene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Anthracene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Carbazole	ND	4.96		µg/L	1	6/15/2020 7:25:43 PM
Di-n-butyl phthalate	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
Fluoranthene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Pyrene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Benzyl Butylphthalate	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
bis(2-Ethylhexyl)adipate	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
Benz(a)anthracene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Chrysene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Bis(2-ethylhexyl) phthalate	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
Di-n-octyl phthalate	ND	0.992		µg/L	1	6/15/2020 7:25:43 PM
Benzo(b)fluoranthene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Benzo(k)fluoranthene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Benzo(a)pyrene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Indeno(1,2,3-cd)pyrene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Dibenz(a,h)anthracene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Benzo(g,h,i)perylene	ND	0.496		µg/L	1	6/15/2020 7:25:43 PM
Surr: 2,4,6-Tribromophenol	131	24.7 - 176		%Rec	1	6/15/2020 7:25:43 PM
Surr: 2-Fluorobiphenyl	111	54.8 - 148		%Rec	1	6/15/2020 7:25:43 PM
Surr: Nitrobenzene-d5	101	40.8 - 151		%Rec	1	6/15/2020 7:25:43 PM
Surr: Phenol-d6	35.1	5 - 116		%Rec	1	6/15/2020 7:25:43 PM
Surr: p-Terphenyl	134	51.7 - 162		%Rec	1	6/15/2020 7:25:43 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
* - Flagged value is not within established control limits.

Mercury by EPA Method 245.1				Batch ID: 28625		Analyst: WF
Mercury	ND	0.100		µg/L	1	6/11/2020 6:15:10 PM
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Barium	8.46	2.50		µg/L	1	6/8/2020 3:54:09 PM

Analytical Report

Work Order: **2006085**
Date Reported: **7/2/2020**

Client: Libby Environmental
Project: Hardel Site
Lab ID: 2006085-006
Client Sample ID: **GW-B6-0603**

Collection Date: 6/3/2020 9:15:00 AM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Selenium	ND	5.00		µg/L	1	6/8/2020 3:54:09 PM
Silver	ND	0.250		µg/L	1	6/8/2020 3:54:09 PM

Client: Libby Environmental
Collection Date: 6/3/2020 9:15:00 AM
Project: Hardel Site
Lab ID: 2006085-007
Matrix: Water
Client Sample ID: GW-B6-0603-01

Semi-Volatile Organic Compounds by EPA Method 8270 Batch ID: 28620 Analyst: SB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Phenol	ND	1.98		µg/L	1	6/15/2020 7:48:16 PM
2-Chlorophenol	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
1,3-Dichlorobenzene	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
1,4-Dichlorobenzene	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
1,2-Dichlorobenzene	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
Benzyl alcohol	ND	0.990	Q	µg/L	1	6/15/2020 7:48:16 PM
Bis(2-chloroethyl) ether	ND	1.98		µg/L	1	6/15/2020 7:48:16 PM
2-Methylphenol (o-cresol)	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
Hexachloroethane	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
N-Nitrosodi-n-propylamine	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
3&4-Methylphenol (m, p-cresol)	ND	0.990	Q	µg/L	1	6/15/2020 7:48:16 PM
Nitrobenzene	ND	1.98		µg/L	1	6/15/2020 7:48:16 PM
Isophorone	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
2-Nitrophenol	ND	1.98		µg/L	1	6/15/2020 7:48:16 PM
2,4-Dimethylphenol	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
Bis(2-chloroethoxy)methane	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
2,4-Dichlorophenol	ND	1.98		µg/L	1	6/15/2020 7:48:16 PM
1,2,4-Trichlorobenzene	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
Naphthalene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
4-Chloroaniline	ND	4.95		µg/L	1	6/15/2020 7:48:16 PM
Hexachlorobutadiene	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
4-Chloro-3-methylphenol	ND	4.95		µg/L	1	6/15/2020 7:48:16 PM
2-Methylnaphthalene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
1-Methylnaphthalene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Hexachlorocyclopentadiene	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
2,4,6-Trichlorophenol	ND	1.98		µg/L	1	6/15/2020 7:48:16 PM
2,4,5-Trichlorophenol	ND	1.98		µg/L	1	6/15/2020 7:48:16 PM
2-Chloronaphthalene	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
2-Nitroaniline	ND	4.95		µg/L	1	6/15/2020 7:48:16 PM
Acenaphthene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Dimethylphthalate	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
2,6-Dinitrotoluene	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
Acenaphthylene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
2,4-Dinitrophenol	ND	1.98		µg/L	1	6/15/2020 7:48:16 PM
Dibenzofuran	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
2,4-Dinitrotoluene	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
4-Nitrophenol	ND	4.95	Q*	µg/L	1	6/15/2020 7:48:16 PM
Fluorene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
4-Chlorophenyl phenyl ether	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM

Client: Libby Environmental **Collection Date:** 6/3/2020 9:15:00 AM
Project: Hardel Site
Lab ID: 2006085-007 **Matrix:** Water
Client Sample ID: GW-B6-0603-01

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 28620		Analyst: SB
Diethylphthalate	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
4,6-Dinitro-2-methylphenol	ND	4.95		µg/L	1	6/15/2020 7:48:16 PM
4-Bromophenyl phenyl ether	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
Hexachlorobenzene	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
Pentachlorophenol	ND	1.98		µg/L	1	6/15/2020 7:48:16 PM
Phenanthrene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Anthracene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Carbazole	ND	4.95		µg/L	1	6/15/2020 7:48:16 PM
Di-n-butyl phthalate	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
Fluoranthene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Pyrene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Benzyl Butylphthalate	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
bis(2-Ethylhexyl)adipate	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
Benz(a)anthracene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Chrysene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Bis(2-ethylhexyl) phthalate	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
Di-n-octyl phthalate	ND	0.990		µg/L	1	6/15/2020 7:48:16 PM
Benzo(b)fluoranthene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Benzo(k)fluoranthene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Benzo(a)pyrene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Indeno(1,2,3-cd)pyrene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Dibenz(a,h)anthracene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Benzo(g,h,i)perylene	ND	0.495		µg/L	1	6/15/2020 7:48:16 PM
Surr: 2,4,6-Tribromophenol	141	24.7 - 176		%Rec	1	6/15/2020 7:48:16 PM
Surr: 2-Fluorobiphenyl	121	54.8 - 148		%Rec	1	6/15/2020 7:48:16 PM
Surr: Nitrobenzene-d5	117	40.8 - 151		%Rec	1	6/15/2020 7:48:16 PM
Surr: Phenol-d6	38.5	5 - 116		%Rec	1	6/15/2020 7:48:16 PM
Surr: p-Terphenyl	147	51.7 - 162		%Rec	1	6/15/2020 7:48:16 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
* - Flagged value is not within established control limits.

Mercury by EPA Method 245.1				Batch ID: 28625		Analyst: WF
Mercury	ND	0.100		µg/L	1	6/11/2020 6:16:52 PM
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Barium	10.3	2.50		µg/L	1	6/8/2020 3:59:43 PM

Client: Libby Environmental
Collection Date: 6/3/2020 9:15:00 AM
Project: Hardel Site
Lab ID: 2006085-007
Matrix: Water
Client Sample ID: GW-B6-0603-01

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 200.8				Batch ID: 28580		Analyst: CO
Selenium	ND	5.00		µg/L	1	6/8/2020 3:59:43 PM
Silver	ND	0.250		µg/L	1	6/8/2020 3:59:43 PM

Client: Libby Environmental
Collection Date: 6/3/2020 1:40:00 PM
Project: Hardel Site
Lab ID: 2006085-008
Matrix: Soil
Client Sample ID: S-B1-4-5-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 28581		Analyst: SB
Naphthalene	ND	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
2-Methylnaphthalene	ND	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
1-Methylnaphthalene	ND	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Acenaphthylene	ND	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Acenaphthene	ND	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Fluorene	ND	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Phenanthrene	69.2	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Anthracene	89.4	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Fluoranthene	665	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Pyrene	927	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Benz(a)anthracene	184	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Chrysene	265	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Benzo(b)fluoranthene	252	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Benzo(k)fluoranthene	121	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Benzo(a)pyrene	155	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Indeno(1,2,3-cd)pyrene	61.8	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Dibenz(a,h)anthracene	54.2	45.5		µg/Kg-dry	1	6/8/2020 8:29:30 PM
Benzo(g,h,i)perylene	48.5	45.5	Q	µg/Kg-dry	1	6/8/2020 8:29:30 PM
Surr: 2-Fluorobiphenyl	72.2	6.91 - 127		%Rec	1	6/8/2020 8:29:30 PM
Surr: Terphenyl-d14 (surr)	122	32.9 - 153		%Rec	1	6/8/2020 8:29:30 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Total Metals by EPA Method 6020B				Batch ID: 28586		Analyst: CO
Barium	86.8	0.426		mg/Kg-dry	1	6/10/2020 12:25:00 PM
Selenium	1.09	0.426		mg/Kg-dry	1	6/9/2020 5:47:03 PM
Silver	0.129	0.0851		mg/Kg-dry	1	6/9/2020 5:47:03 PM
Sample Moisture (Percent Moisture)				Batch ID: R59697		Analyst: SBM
Percent Moisture	12.4	0.500		wt%	1	6/9/2020 2:48:41 PM

Client: Libby Environmental
Collection Date: 6/3/2020 12:30:00 PM
Project: Hardel Site
Lab ID: 2006085-009
Matrix: Soil
Client Sample ID: S-B2-2-4-0603

Extractable Petroleum Hydrocarbons by NWEPH

Batch ID: 28677 Analyst: DW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Aliphatic Hydrocarbon (C8-C10)	52.3	24.2	*	mg/Kg-dry	1	6/23/2020 11:50:00 PM
Aliphatic Hydrocarbon (C10-C12)	383	12.1	*	mg/Kg-dry	1	6/23/2020 11:50:00 PM
Aliphatic Hydrocarbon (C12-C16)	1,880	60.4	D	mg/Kg-dry	5	6/24/2020 4:19:00 PM
Aliphatic Hydrocarbon (C16-C21)	1,390	60.4	D	mg/Kg-dry	5	6/24/2020 4:19:00 PM
Aliphatic Hydrocarbon (C21-C34)	1,180	60.4	D	mg/Kg-dry	5	6/24/2020 4:19:00 PM
Aromatic Hydrocarbon (C8-C10)	22.6	12.1	*Q	mg/Kg-dry	1	6/23/2020 4:28:00 PM
Aromatic Hydrocarbon (C10-C12)	72.9	12.1		mg/Kg-dry	1	6/23/2020 4:28:00 PM
Aromatic Hydrocarbon (C12-C16)	540	12.1		mg/Kg-dry	1	6/23/2020 4:28:00 PM
Aromatic Hydrocarbon (C16-C21)	958	12.1		mg/Kg-dry	1	6/23/2020 4:28:00 PM
Aromatic Hydrocarbon (C21-C34)	316	12.1		mg/Kg-dry	1	6/23/2020 4:28:00 PM
Surr: 1-Chlorooctadecane	70.1	60 - 140		%Rec	1	6/23/2020 11:50:00 PM
Surr: o-Terphenyl	72.6	60 - 140		%Rec	1	6/23/2020 4:28:00 PM

NOTES:
Q - Indicates a hydrocarbon range where the low calibration point read back at a level outside the acceptance criteria (+- 20%)
* - Flagged value is not within established control limits.

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 28581 Analyst: SB

Naphthalene	3,640	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
2-Methylnaphthalene	22,500	532	D	µg/Kg-dry	10	6/9/2020 11:13:17 AM
1-Methylnaphthalene	26,400	532	D	µg/Kg-dry	10	6/9/2020 11:13:17 AM
Acenaphthylene	ND	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
Acenaphthene	4,810	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
Fluorene	6,100	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
Phenanthrene	16,900	532	D	µg/Kg-dry	10	6/9/2020 11:13:17 AM
Anthracene	1,450	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
Fluoranthene	918	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
Pyrene	1,650	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
Benz(a)anthracene	83.4	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
Chrysene	141	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
Benzo(b)fluoranthene	62.2	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
Benzo(k)fluoranthene	ND	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
Benzo(a)pyrene	ND	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
Indeno(1,2,3-cd)pyrene	ND	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
Dibenz(a,h)anthracene	ND	53.2		µg/Kg-dry	1	6/8/2020 8:51:45 PM
Benzo(g,h,i)perylene	ND	53.2	Q	µg/Kg-dry	1	6/8/2020 8:51:45 PM
Surr: 2-Fluorobiphenyl	103	6.91 - 127		%Rec	1	6/8/2020 8:51:45 PM
Surr: Terphenyl-d14 (surr)	113	32.9 - 153		%Rec	1	6/8/2020 8:51:45 PM

Client: Libby Environmental
Collection Date: 6/3/2020 12:30:00 PM
Project: Hardel Site
Lab ID: 2006085-009
Matrix: Soil
Client Sample ID: S-B2-2-4-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 28581		Analyst: SB
NOTES: Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria						
Total Metals by EPA Method 6020B				Batch ID: 28586		Analyst: CO
Barium	294	5.42	D	mg/Kg-dry	10	6/10/2020 3:46:25 PM
Selenium	0.999	0.542		mg/Kg-dry	1	6/9/2020 5:52:36 PM
Silver	0.391	0.108		mg/Kg-dry	1	6/9/2020 5:52:36 PM
Sample Moisture (Percent Moisture)				Batch ID: R59697		Analyst: SBM
Percent Moisture	27.3	0.500		wt%	1	6/9/2020 2:48:41 PM

Client: Libby Environmental
Collection Date: 6/3/2020 11:30:00 PM
Project: Hardel Site
Lab ID: 2006085-010
Matrix: Soil
Client Sample ID: S-B3-2-3-0603

Extractable Petroleum Hydrocarbons by NWEPH

Batch ID: 28677 Analyst: DW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Aliphatic Hydrocarbon (C8-C10)	ND	18.3	*	mg/Kg-dry	1	6/24/2020 5:48:00 PM
Aliphatic Hydrocarbon (C10-C12)	ND	9.16	*	mg/Kg-dry	1	6/24/2020 5:48:00 PM
Aliphatic Hydrocarbon (C12-C16)	ND	9.16		mg/Kg-dry	1	6/24/2020 5:48:00 PM
Aliphatic Hydrocarbon (C16-C21)	19.4	9.16		mg/Kg-dry	1	6/24/2020 5:48:00 PM
Aliphatic Hydrocarbon (C21-C34)	527	9.16		mg/Kg-dry	1	6/24/2020 5:48:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	9.16	*Q	mg/Kg-dry	1	6/23/2020 7:25:00 PM
Aromatic Hydrocarbon (C10-C12)	ND	9.16		mg/Kg-dry	1	6/23/2020 7:25:00 PM
Aromatic Hydrocarbon (C12-C16)	ND	9.16		mg/Kg-dry	1	6/23/2020 7:25:00 PM
Aromatic Hydrocarbon (C16-C21)	29.7	9.16		mg/Kg-dry	1	6/23/2020 7:25:00 PM
Aromatic Hydrocarbon (C21-C34)	470	9.16		mg/Kg-dry	1	6/23/2020 7:25:00 PM
Surr: 1-Chlorooctadecane	62.9	60 - 140		%Rec	1	6/24/2020 5:48:00 PM
Surr: o-Terphenyl	61.8	60 - 140		%Rec	1	6/23/2020 7:25:00 PM

NOTES:
Q - Indicates a hydrocarbon range where the low calibration point read back at a level outside the acceptance criteria (+/- 20%)
* - Flagged value is not within established control limits.

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 28581 Analyst: SB

Naphthalene	ND	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
2-Methylnaphthalene	ND	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
1-Methylnaphthalene	ND	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Acenaphthylene	ND	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Acenaphthene	ND	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Fluorene	ND	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Phenanthrene	83.4	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Anthracene	ND	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Fluoranthene	349	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Pyrene	353	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Benz(a)anthracene	120	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Chrysene	172	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Benzo(b)fluoranthene	150	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Benzo(k)fluoranthene	83.2	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Benzo(a)pyrene	110	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Indeno(1,2,3-cd)pyrene	ND	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Dibenz(a,h)anthracene	45.5	40.7		µg/Kg-dry	1	6/8/2020 9:13:55 PM
Benzo(g,h,i)perylene	ND	40.7	Q	µg/Kg-dry	1	6/8/2020 9:13:55 PM
Surr: 2-Fluorobiphenyl	89.4	6.91 - 127		%Rec	1	6/8/2020 9:13:55 PM
Surr: Terphenyl-d14 (surr)	117	32.9 - 153		%Rec	1	6/8/2020 9:13:55 PM

Client: Libby Environmental
Collection Date: 6/3/2020 11:30:00 PM
Project: Hardel Site
Lab ID: 2006085-010
Matrix: Soil
Client Sample ID: S-B3-2-3-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 28581		Analyst: SB

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Total Metals by EPA Method 6020B				Batch ID: 28613		Analyst: CO
Barium	56.7	0.421		mg/Kg-dry	1	6/10/2020 4:23:55 PM
Selenium	0.799	0.421		mg/Kg-dry	1	6/10/2020 4:23:55 PM
Silver	ND	0.0842		mg/Kg-dry	1	6/10/2020 4:23:55 PM
Sample Moisture (Percent Moisture)				Batch ID: R59697		Analyst: SBM
Percent Moisture	7.24	0.500		wt%	1	6/9/2020 2:48:41 PM

Client: Libby Environmental
Collection Date: 6/3/2020 10:30:00 AM
Project: Hardel Site
Lab ID: 2006085-011
Matrix: Soil
Client Sample ID: S-B4-1-3-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 28581		Analyst: SB
Naphthalene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
2-Methylnaphthalene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
1-Methylnaphthalene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Acenaphthylene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Acenaphthene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Fluorene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Phenanthrene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Anthracene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Fluoranthene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Pyrene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Benz(a)anthracene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Chrysene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Benzo(b)fluoranthene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Benzo(k)fluoranthene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Benzo(a)pyrene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Indeno(1,2,3-cd)pyrene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Dibenz(a,h)anthracene	ND	38.2		µg/Kg-dry	1	6/8/2020 9:36:06 PM
Benzo(g,h,i)perylene	ND	38.2	Q	µg/Kg-dry	1	6/8/2020 9:36:06 PM
Surr: 2-Fluorobiphenyl	68.2	6.91 - 127		%Rec	1	6/8/2020 9:36:06 PM
Surr: Terphenyl-d14 (surr)	112	32.9 - 153		%Rec	1	6/8/2020 9:36:06 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Total Metals by EPA Method 6020B				Batch ID: 28613		Analyst: CO
Barium	80.3	0.390		mg/Kg-dry	1	6/10/2020 4:57:19 PM
Selenium	1.28	0.390		mg/Kg-dry	1	6/10/2020 4:57:19 PM
Silver	ND	0.0780		mg/Kg-dry	1	6/10/2020 4:57:19 PM
Sample Moisture (Percent Moisture)				Batch ID: R59697		Analyst: SBM
Percent Moisture	6.41	0.500		wt%	1	6/9/2020 2:48:41 PM

Client: Libby Environmental
Collection Date: 6/3/2020 10:30:00 AM
Project: Hardel Site
Lab ID: 2006085-012
Matrix: Soil
Client Sample ID: S-B4-1-3-0603-01

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 28581		Analyst: SB
Naphthalene	ND	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
2-Methylnaphthalene	ND	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
1-Methylnaphthalene	ND	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Acenaphthylene	ND	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Acenaphthene	ND	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Fluorene	ND	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Phenanthrene	ND	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Anthracene	ND	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Fluoranthene	114	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Pyrene	107	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Benz(a)anthracene	109	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Chrysene	109	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Benzo(b)fluoranthene	71.4	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Benzo(k)fluoranthene	66.9	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Benzo(a)pyrene	68.3	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Indeno(1,2,3-cd)pyrene	ND	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Dibenz(a,h)anthracene	ND	38.4		µg/Kg-dry	1	6/8/2020 9:58:21 PM
Benzo(g,h,i)perylene	ND	38.4	Q	µg/Kg-dry	1	6/8/2020 9:58:21 PM
Surr: 2-Fluorobiphenyl	80.5	6.91 - 127		%Rec	1	6/8/2020 9:58:21 PM
Surr: Terphenyl-d14 (surr)	116	32.9 - 153		%Rec	1	6/8/2020 9:58:21 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Total Metals by EPA Method 6020B				Batch ID: 28613		Analyst: CO
Barium	63.8	0.425		mg/Kg-dry	1	6/10/2020 5:02:53 PM
Selenium	0.932	0.425		mg/Kg-dry	1	6/10/2020 5:02:53 PM
Silver	ND	0.0851		mg/Kg-dry	1	6/10/2020 5:02:53 PM
Sample Moisture (Percent Moisture)				Batch ID: R59697		Analyst: SBM
Percent Moisture	8.15	0.500		wt%	1	6/9/2020 2:48:41 PM

Client: Libby Environmental
Collection Date: 6/3/2020 10:45:00 AM
Project: Hardel Site
Lab ID: 2006085-013
Matrix: Soil
Client Sample ID: S-B4-11-12-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 28581		Analyst: SB
Naphthalene	ND	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
2-Methylnaphthalene	ND	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
1-Methylnaphthalene	ND	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Acenaphthylene	ND	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Acenaphthene	58.9	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Fluorene	ND	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Phenanthrene	61.7	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Anthracene	ND	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Fluoranthene	148	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Pyrene	123	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Benz(a)anthracene	ND	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Chrysene	ND	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Benzo(b)fluoranthene	ND	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Benzo(k)fluoranthene	ND	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Benzo(a)pyrene	ND	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Indeno(1,2,3-cd)pyrene	ND	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Dibenz(a,h)anthracene	ND	44.0		µg/Kg-dry	1	6/8/2020 10:20:31 PM
Benzo(g,h,i)perylene	ND	44.0	Q	µg/Kg-dry	1	6/8/2020 10:20:31 PM
Surr: 2-Fluorobiphenyl	58.3	6.91 - 127		%Rec	1	6/8/2020 10:20:31 PM
Surr: Terphenyl-d14 (surr)	116	32.9 - 153		%Rec	1	6/8/2020 10:20:31 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Total Metals by EPA Method 6020B				Batch ID: 28613		Analyst: CO
Barium	41.8	0.430		mg/Kg-dry	1	6/10/2020 5:19:37 PM
Selenium	0.846	0.430		mg/Kg-dry	1	6/10/2020 5:19:37 PM
Silver	ND	0.0860		mg/Kg-dry	1	6/10/2020 5:19:37 PM
Sample Moisture (Percent Moisture)				Batch ID: R59697		Analyst: SBM
Percent Moisture	15.1	0.500		wt%	1	6/9/2020 2:48:41 PM

Client: Libby Environmental
Collection Date: 6/3/2020 9:20:00 AM
Project: Hardel Site
Lab ID: 2006085-014
Matrix: Soil
Client Sample ID: S-B5-3-4-0603

Semi-Volatile Organic Compounds by EPA Method 8270 Batch ID: 28605 Analyst: SB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Phenol	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Bis(2-chloroethyl) ether	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
2-Chlorophenol	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
1,3-Dichlorobenzene	ND	81.3		µg/Kg-dry	1	6/12/2020 12:13:02 PM
1,4-Dichlorobenzene	ND	81.3		µg/Kg-dry	1	6/12/2020 12:13:02 PM
1,2-Dichlorobenzene	ND	81.3		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Benzyl alcohol	ND	108	Q	µg/Kg-dry	1	6/12/2020 12:13:02 PM
2-Methylphenol (o-cresol)	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Hexachloroethane	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
N-Nitrosodi-n-propylamine	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
3&4-Methylphenol (m, p-cresol)	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Nitrobenzene	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Isophorone	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
2-Nitrophenol	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
2,4-Dimethylphenol	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Bis(2-chloroethoxy)methane	ND	81.3		µg/Kg-dry	1	6/12/2020 12:13:02 PM
2,4-Dichlorophenol	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
1,2,4-Trichlorobenzene	ND	81.3		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Naphthalene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
4-Chloroaniline	ND	81.3		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Hexachlorobutadiene	ND	81.3		µg/Kg-dry	1	6/12/2020 12:13:02 PM
4-Chloro-3-methylphenol	ND	217		µg/Kg-dry	1	6/12/2020 12:13:02 PM
2-Methylnaphthalene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
1-Methylnaphthalene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Hexachlorocyclopentadiene	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
2,4,6-Trichlorophenol	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
2,4,5-Trichlorophenol	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
2-Chloronaphthalene	ND	81.3		µg/Kg-dry	1	6/12/2020 12:13:02 PM
2-Nitroaniline	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Acenaphthene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Dimethylphthalate	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
2,6-Dinitrotoluene	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Acenaphthylene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
2,4-Dinitrophenol	ND	569		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Dibenzofuran	ND	81.3		µg/Kg-dry	1	6/12/2020 12:13:02 PM
2,4-Dinitrotoluene	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
4-Nitrophenol	ND	542		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Fluorene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
4-Chlorophenyl phenyl ether	ND	81.3		µg/Kg-dry	1	6/12/2020 12:13:02 PM

Client: Libby Environmental
Collection Date: 6/3/2020 9:20:00 AM
Project: Hardel Site
Lab ID: 2006085-014
Matrix: Soil
Client Sample ID: S-B5-3-4-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 28605		Analyst: SB
Diethylphthalate	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
4,6-Dinitro-2-methylphenol	ND	217		µg/Kg-dry	1	6/12/2020 12:13:02 PM
4-Bromophenyl phenyl ether	ND	81.3		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Hexachlorobenzene	ND	81.3		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Pentachlorophenol	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Phenanthrene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Anthracene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Carbazole	ND	81.3		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Di-n-butylphthalate	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Fluoranthene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Pyrene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Butyl Benzylphthalate	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
bis(2-Ethylhexyl)adipate	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Benz(a)anthracene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Chrysene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
bis (2-Ethylhexyl) phthalate	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Di-n-octyl phthalate	ND	108		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Benzo(b)fluoranthene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Benzo(k)fluoranthene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Benzo(a)pyrene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Indeno(1,2,3-cd)pyrene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Dibenz(a,h)anthracene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Benzo(g,h,i)perylene	ND	54.2		µg/Kg-dry	1	6/12/2020 12:13:02 PM
Surr: 2,4,6-Tribromophenol	91.7	5 - 139		%Rec	1	6/12/2020 12:13:02 PM
Surr: 2-Fluorobiphenyl	72.1	5 - 131		%Rec	1	6/12/2020 12:13:02 PM
Surr: Nitrobenzene-d5	58.5	5 - 123		%Rec	1	6/12/2020 12:13:02 PM
Surr: Phenol-d6	78.3	5 - 129		%Rec	1	6/12/2020 12:13:02 PM
Surr: p-Terphenyl	109	13.8 - 140		%Rec	1	6/12/2020 12:13:02 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Total Metals by EPA Method 6020B				Batch ID: 28613		Analyst: CO
Barium	87.5	0.452		mg/Kg-dry	1	6/10/2020 5:25:11 PM
Selenium	1.23	0.452		mg/Kg-dry	1	6/10/2020 5:25:11 PM
Silver	ND	0.0904		mg/Kg-dry	1	6/10/2020 5:25:11 PM

Analytical Report

Work Order: **2006085**
Date Reported: **7/2/2020**

Client: Libby Environmental
Project: Hardel Site
Lab ID: 2006085-014
Client Sample ID: **S-B5-3-4-0603**

Collection Date: 6/3/2020 9:20:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R59697		Analyst: SBM
Percent Moisture	19.8	0.500		wt%	1	6/9/2020 2:48:41 PM

Client: Libby Environmental
Collection Date: 6/3/2020 8:45:00 AM
Project: Hardel Site
Lab ID: 2006085-015
Matrix: Soil
Client Sample ID: S-B6-3-4-0603

Semi-Volatile Organic Compounds by EPA Method 8270 Batch ID: 28605 Analyst: SB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Phenol	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Bis(2-chloroethyl) ether	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
2-Chlorophenol	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
1,3-Dichlorobenzene	ND	86.7		µg/Kg-dry	1	6/12/2020 12:35:24 PM
1,4-Dichlorobenzene	ND	86.7		µg/Kg-dry	1	6/12/2020 12:35:24 PM
1,2-Dichlorobenzene	ND	86.7		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Benzyl alcohol	ND	116	Q	µg/Kg-dry	1	6/12/2020 12:35:24 PM
2-Methylphenol (o-cresol)	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Hexachloroethane	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
N-Nitrosodi-n-propylamine	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
3&4-Methylphenol (m, p-cresol)	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Nitrobenzene	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Isophorone	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
2-Nitrophenol	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
2,4-Dimethylphenol	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Bis(2-chloroethoxy)methane	ND	86.7		µg/Kg-dry	1	6/12/2020 12:35:24 PM
2,4-Dichlorophenol	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
1,2,4-Trichlorobenzene	ND	86.7		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Naphthalene	316	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
4-Chloroaniline	ND	86.7		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Hexachlorobutadiene	ND	86.7		µg/Kg-dry	1	6/12/2020 12:35:24 PM
4-Chloro-3-methylphenol	ND	231		µg/Kg-dry	1	6/12/2020 12:35:24 PM
2-Methylnaphthalene	135	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
1-Methylnaphthalene	69.4	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Hexachlorocyclopentadiene	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
2,4,6-Trichlorophenol	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
2,4,5-Trichlorophenol	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
2-Chloronaphthalene	ND	86.7		µg/Kg-dry	1	6/12/2020 12:35:24 PM
2-Nitroaniline	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Acenaphthene	ND	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Dimethylphthalate	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
2,6-Dinitrotoluene	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Acenaphthylene	ND	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
2,4-Dinitrophenol	ND	607		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Dibenzofuran	ND	86.7		µg/Kg-dry	1	6/12/2020 12:35:24 PM
2,4-Dinitrotoluene	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
4-Nitrophenol	ND	578		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Fluorene	ND	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
4-Chlorophenyl phenyl ether	ND	86.7		µg/Kg-dry	1	6/12/2020 12:35:24 PM

Client: Libby Environmental
Collection Date: 6/3/2020 8:45:00 AM
Project: Hardel Site
Lab ID: 2006085-015
Matrix: Soil
Client Sample ID: S-B6-3-4-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 28605		Analyst: SB
Diethylphthalate	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
4,6-Dinitro-2-methylphenol	ND	231		µg/Kg-dry	1	6/12/2020 12:35:24 PM
4-Bromophenyl phenyl ether	ND	86.7		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Hexachlorobenzene	ND	86.7		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Pentachlorophenol	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Phenanthrene	77.3	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Anthracene	ND	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Carbazole	ND	86.7		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Di-n-butylphthalate	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Fluoranthene	80.1	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Pyrene	75.6	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Butyl Benzylphthalate	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
bis(2-Ethylhexyl)adipate	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Benz(a)anthracene	ND	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Chrysene	ND	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
bis (2-Ethylhexyl) phthalate	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Di-n-octyl phthalate	ND	116		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Benzo(b)fluoranthene	107	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Benzo(k)fluoranthene	ND	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Benzo(a)pyrene	ND	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Indeno(1,2,3-cd)pyrene	65.3	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Dibenz(a,h)anthracene	ND	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Benzo(g,h,i)perylene	82.8	57.8		µg/Kg-dry	1	6/12/2020 12:35:24 PM
Surr: 2,4,6-Tribromophenol	96.9	5 - 139		%Rec	1	6/12/2020 12:35:24 PM
Surr: 2-Fluorobiphenyl	74.8	5 - 131		%Rec	1	6/12/2020 12:35:24 PM
Surr: Nitrobenzene-d5	55.1	5 - 123		%Rec	1	6/12/2020 12:35:24 PM
Surr: Phenol-d6	65.3	5 - 129		%Rec	1	6/12/2020 12:35:24 PM
Surr: p-Terphenyl	119	13.8 - 140		%Rec	1	6/12/2020 12:35:24 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020B				Batch ID: 28613		Analyst: CO
Barium	120	0.457		mg/Kg-dry	1	6/10/2020 5:30:45 PM
Selenium	0.750	0.457		mg/Kg-dry	1	6/10/2020 5:30:45 PM
Silver	ND	0.0913		mg/Kg-dry	1	6/10/2020 5:30:45 PM

Analytical Report

Work Order: **2006085**
Date Reported: **7/2/2020**

Client: Libby Environmental
Project: Hardel Site
Lab ID: 2006085-015
Client Sample ID: **S-B6-3-4-0603**

Collection Date: 6/3/2020 8:45:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R59697		Analyst: SBM
Percent Moisture	14.4	0.500		wt%	1	6/9/2020 2:48:41 PM

Client: Libby Environmental
Collection Date: 6/3/2020 4:00:00 PM
Project: Hardel Site
Lab ID: 2006085-016
Matrix: Soil
Client Sample ID: S-B7-3-5-0603

Semi-Volatile Organic Compounds by EPA Method 8270 Batch ID: 28605 Analyst: SB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Phenol	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Bis(2-chloroethyl) ether	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
2-Chlorophenol	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
1,3-Dichlorobenzene	ND	86.4		µg/Kg-dry	1	6/12/2020 2:04:57 PM
1,4-Dichlorobenzene	ND	86.4		µg/Kg-dry	1	6/12/2020 2:04:57 PM
1,2-Dichlorobenzene	ND	86.4		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Benzyl alcohol	ND	115	Q	µg/Kg-dry	1	6/12/2020 2:04:57 PM
2-Methylphenol (o-cresol)	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Hexachloroethane	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
N-Nitrosodi-n-propylamine	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
3&4-Methylphenol (m, p-cresol)	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Nitrobenzene	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Isophorone	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
2-Nitrophenol	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
2,4-Dimethylphenol	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Bis(2-chloroethoxy)methane	ND	86.4		µg/Kg-dry	1	6/12/2020 2:04:57 PM
2,4-Dichlorophenol	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
1,2,4-Trichlorobenzene	ND	86.4		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Naphthalene	111	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
4-Chloroaniline	ND	86.4		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Hexachlorobutadiene	ND	86.4		µg/Kg-dry	1	6/12/2020 2:04:57 PM
4-Chloro-3-methylphenol	ND	230		µg/Kg-dry	1	6/12/2020 2:04:57 PM
2-Methylnaphthalene	ND	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
1-Methylnaphthalene	ND	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Hexachlorocyclopentadiene	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
2,4,6-Trichlorophenol	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
2,4,5-Trichlorophenol	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
2-Chloronaphthalene	ND	86.4		µg/Kg-dry	1	6/12/2020 2:04:57 PM
2-Nitroaniline	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Acenaphthene	ND	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Dimethylphthalate	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
2,6-Dinitrotoluene	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Acenaphthylene	155	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
2,4-Dinitrophenol	ND	605		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Dibenzofuran	ND	86.4		µg/Kg-dry	1	6/12/2020 2:04:57 PM
2,4-Dinitrotoluene	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
4-Nitrophenol	ND	576		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Fluorene	ND	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
4-Chlorophenyl phenyl ether	ND	86.4		µg/Kg-dry	1	6/12/2020 2:04:57 PM

Client: Libby Environmental
Collection Date: 6/3/2020 4:00:00 PM
Project: Hardel Site
Lab ID: 2006085-016
Matrix: Soil
Client Sample ID: S-B7-3-5-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 28605		Analyst: SB
Diethylphthalate	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
4,6-Dinitro-2-methylphenol	ND	230		µg/Kg-dry	1	6/12/2020 2:04:57 PM
4-Bromophenyl phenyl ether	ND	86.4		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Hexachlorobenzene	ND	86.4		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Pentachlorophenol	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Phenanthrene	126	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Anthracene	282	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Carbazole	98.8	86.4		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Di-n-butylphthalate	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Fluoranthene	242	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Pyrene	283	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Butyl Benzylphthalate	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
bis(2-Ethylhexyl)adipate	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Benz(a)anthracene	180	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Chrysene	440	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
bis (2-Ethylhexyl) phthalate	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Di-n-octyl phthalate	ND	115		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Benzo(b)fluoranthene	487	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Benzo(k)fluoranthene	347	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Benzo(a)pyrene	396	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Indeno(1,2,3-cd)pyrene	398	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Dibenz(a,h)anthracene	168	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Benzo(g,h,i)perylene	546	57.6		µg/Kg-dry	1	6/12/2020 2:04:57 PM
Surr: 2,4,6-Tribromophenol	113	5 - 139		%Rec	1	6/12/2020 2:04:57 PM
Surr: 2-Fluorobiphenyl	78.7	5 - 131		%Rec	1	6/12/2020 2:04:57 PM
Surr: Nitrobenzene-d5	67.9	5 - 123		%Rec	1	6/12/2020 2:04:57 PM
Surr: Phenol-d6	83.7	5 - 129		%Rec	1	6/12/2020 2:04:57 PM
Surr: p-Terphenyl	117	13.8 - 140		%Rec	1	6/12/2020 2:04:57 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Total Metals by EPA Method 6020B				Batch ID: 28613		Analyst: CO
Barium	103	0.488		mg/Kg-dry	1	6/10/2020 5:36:19 PM
Selenium	1.08	0.488		mg/Kg-dry	1	6/10/2020 5:36:19 PM
Silver	ND	0.0976		mg/Kg-dry	1	6/10/2020 5:36:19 PM

Analytical Report

Work Order: **2006085**
Date Reported: **7/2/2020**

Client: Libby Environmental
Project: Hardel Site
Lab ID: 2006085-016
Client Sample ID: **S-B7-3-5-0603**

Collection Date: 6/3/2020 4:00:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R59697		Analyst: SBM
Percent Moisture	20.6	0.500		wt%	1	6/9/2020 2:48:41 PM
Total Organic Carbon by EPA 9060				Batch ID: 28695		Analyst: SS
Total Organic Carbon	3.36	0.0750		%-dry	1	6/18/2020 11:36:00 AM

Analytical Report

Work Order: **2006085**
Date Reported: **7/2/2020**

Client: Libby Environmental
Collection Date: 6/3/2020 4:20:00 PM
Project: Hardel Site
Lab ID: 2006085-017
Matrix: Soil
Client Sample ID: S-B8-4-5-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 28595		Analyst: SB
Naphthalene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
2-Methylnaphthalene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
1-Methylnaphthalene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Acenaphthylene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Acenaphthene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Fluorene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Phenanthrene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Anthracene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Fluoranthene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Pyrene	109	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Benz(a)anthracene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Chrysene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Benzo(b)fluoranthene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Benzo(k)fluoranthene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Benzo(a)pyrene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Indeno(1,2,3-cd)pyrene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Dibenz(a,h)anthracene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Benzo(g,h,i)perylene	ND	43.8		µg/Kg-dry	1	6/11/2020 1:50:18 AM
Surr: 2-Fluorobiphenyl	63.1	6.91 - 127		%Rec	1	6/11/2020 1:50:18 AM
Surr: Terphenyl-d14 (surr)	108	32.9 - 153		%Rec	1	6/11/2020 1:50:18 AM
Sample Moisture (Percent Moisture)				Batch ID: R59697		Analyst: SBM
Percent Moisture	11.6	0.500		wt%	1	6/9/2020 2:48:41 PM

Client: Libby Environmental
Collection Date: 6/3/2020 4:40:00 PM
Project: Hardel Site
Lab ID: 2006085-018
Matrix: Soil
Client Sample ID: S-B9-6-7-0603

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 28595		Analyst: SB
Naphthalene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
2-Methylnaphthalene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
1-Methylnaphthalene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Acenaphthylene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Acenaphthene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Fluorene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Phenanthrene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Anthracene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Fluoranthene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Pyrene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Benz(a)anthracene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Chrysene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Benzo(b)fluoranthene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Benzo(k)fluoranthene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Benzo(a)pyrene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Indeno(1,2,3-cd)pyrene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Dibenz(a,h)anthracene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Benzo(g,h,i)perylene	ND	38.2		µg/Kg-dry	1	6/11/2020 2:12:36 AM
Surr: 2-Fluorobiphenyl	59.0	6.91 - 127		%Rec	1	6/11/2020 2:12:36 AM
Surr: Terphenyl-d14 (surr)	100	32.9 - 153		%Rec	1	6/11/2020 2:12:36 AM
Sample Moisture (Percent Moisture)				Batch ID: R59697		Analyst: SBM
Percent Moisture	9.51	0.500		wt%	1	6/9/2020 2:48:41 PM

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Organic Carbon by EPA 9060

Sample ID: CCV-28695A	SampType: CCV			Units: %-dry		Prep Date: 6/17/2020		RunNo: 59933			
Client ID: CCV	Batch ID: 28695					Analysis Date: 6/17/2020		SeqNo: 1199575			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.06	0.0750	1.000	0	106	90	110				

Sample ID: MB-28695	SampType: MBLK			Units: %-dry		Prep Date: 6/17/2020		RunNo: 59933			
Client ID: MBLKS	Batch ID: 28695					Analysis Date: 6/17/2020		SeqNo: 1199576			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.0750									

Sample ID: LCS-28695	SampType: LCS			Units: %-dry		Prep Date: 6/17/2020		RunNo: 59933			
Client ID: LCSS	Batch ID: 28695					Analysis Date: 6/17/2020		SeqNo: 1199577			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.07	0.0750	1.000	0	107	80	120				

Sample ID: 2006085-016ADUP	SampType: DUP			Units: %-dry		Prep Date: 6/17/2020		RunNo: 59933			
Client ID: S-B7-3-5-0603	Batch ID: 28695					Analysis Date: 6/17/2020		SeqNo: 1199579			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.94	0.0750						3.363	53.9	20	R

NOTES:
R - High RPD due to suspected sample inhomogeneity. The method is in control as indicated by the Laboratory Control Sample (LCS).

Sample ID: 2006085-016AMS	SampType: MS			Units: %-dry		Prep Date: 6/17/2020		RunNo: 59933			
Client ID: S-B7-3-5-0603	Batch ID: 28695					Analysis Date: 6/17/2020		SeqNo: 1199580			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	3.04	0.0750	1.000	3.363	-31.9	75	125				S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Organic Carbon by EPA 9060

Sample ID: **2006085-016AMSD**	SampType: **MSD**	Units: **%-dry**	Prep Date: **6/17/2020**	RunNo: **59933**
Client ID: **S-B7-3-5-0603**	Batch ID: **28695**		Analysis Date: **6/17/2020**	SeqNo: **1199581**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	3.36	0.0750	1.000	3.363	-0.700	75	125	3.044	9.75	20	S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **CCV-28695B**	SampType: **CCV**	Units: **%-dry**	Prep Date: **6/17/2020**	RunNo: **59933**
Client ID: **CCV**	Batch ID: **28695**		Analysis Date: **6/17/2020**	SeqNo: **1199585**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.05	0.0750	1.000	0	105	90	110				

Sample ID: **CCB-28695B**	SampType: **CCB**	Units: **%-dry**	Prep Date: **6/17/2020**	RunNo: **59933**
Client ID: **CCB**	Batch ID: **28695**		Analysis Date: **6/17/2020**	SeqNo: **1199586**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.0750									

Sample ID: **CCV-28695C**	SampType: **CCV**	Units: **%-dry**	Prep Date: **6/18/2020**	RunNo: **59933**
Client ID: **CCV**	Batch ID: **28695**		Analysis Date: **6/18/2020**	SeqNo: **1199587**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.03	0.0750	1.000	0	103	90	110				

Sample ID: **CCB-28695C**	SampType: **CCB**	Units: **%-dry**	Prep Date: **6/18/2020**	RunNo: **59933**
Client ID: **CCB**	Batch ID: **28695**		Analysis Date: **6/18/2020**	SeqNo: **1199588**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.0750									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Organic Carbon by EPA 9060

Sample ID: **CCV-28695D**	SampType: **CCV**			Units: **%-dry**		Prep Date: **6/18/2020**			RunNo: **59933**		
Client ID: **CCV**	Batch ID: **28695**					Analysis Date: **6/18/2020**			SeqNo: **1199590**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.06	0.0750	1.000	0	106	90	110				

Sample ID: **CCB-28695D**	SampType: **CCB**			Units: **%-dry**		Prep Date: **6/18/2020**			RunNo: **59933**		
Client ID: **CCB**	Batch ID: **28695**					Analysis Date: **6/18/2020**			SeqNo: **1199591**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.0750									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 200.8

Sample ID: **ICB-28580**	SampType: **ICB**	Units: **µg/L**	Prep Date: **6/8/2020**	RunNo: **59671**
Client ID: **ICB**	Batch ID: **28580**		Analysis Date: **6/8/2020**	SeqNo: **1193773**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	2.50									
Selenium	ND	5.00									
Silver	ND	0.250									

Sample ID: **ICV-28580**	SampType: **ICV**	Units: **µg/L**	Prep Date: **6/8/2020**	RunNo: **59671**
Client ID: **ICV**	Batch ID: **28580**		Analysis Date: **6/8/2020**	SeqNo: **1193775**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	101	2.50	100.0	0	101	90	110				
Selenium	24.0	5.00	25.00	0	95.9	90	110				
Silver	5.32	0.250	5.000	0	106	90	110				

Sample ID: **CCV-28580A**	SampType: **CCV**	Units: **µg/L**	Prep Date: **6/8/2020**	RunNo: **59671**
Client ID: **CCV**	Batch ID: **28580**		Analysis Date: **6/8/2020**	SeqNo: **1193776**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	97.4	2.50	100.0	0	97.4	85	115				
Selenium	24.9	5.00	25.00	0	99.5	85	115				
Silver	5.44	0.250	5.000	0	109	85	115				

Sample ID: **CCB-28580A**	SampType: **CCB**	Units: **µg/L**	Prep Date: **6/8/2020**	RunNo: **59671**
Client ID: **CCB**	Batch ID: **28580**		Analysis Date: **6/8/2020**	SeqNo: **1193777**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	2.50									
Selenium	ND	5.00									
Silver	ND	0.250									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 200.8

Sample ID: **MB-28580** SampType: **MBLK** Units: **µg/L** Prep Date: **6/8/2020** RunNo: **59671**
Client ID: **MBLKW** Batch ID: **28580** Analysis Date: **6/8/2020** SeqNo: **1193778**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	2.50									
Selenium	ND	5.00									
Silver	ND	0.250									

Sample ID: **LCS-28580** SampType: **LCS** Units: **µg/L** Prep Date: **6/8/2020** RunNo: **59671**
Client ID: **LCSW** Batch ID: **28580** Analysis Date: **6/8/2020** SeqNo: **1193779**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	104	2.50	100.0	0	104	85	115				
Selenium	10.1	5.00	10.00	0	101	85	115				
Silver	5.49	0.250	5.000	0	110	85	115				

Sample ID: **2006087-001CDUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/8/2020** RunNo: **59671**
Client ID: **BATCH** Batch ID: **28580** Analysis Date: **6/8/2020** SeqNo: **1193781**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	4.05	2.50						4.523	11.0	30	
Selenium	ND	5.00						0		30	
Silver	ND	0.250						0		30	

Sample ID: **2006087-001CMSD** SampType: **MSD** Units: **µg/L** Prep Date: **6/8/2020** RunNo: **59671**
Client ID: **BATCH** Batch ID: **28580** Analysis Date: **6/8/2020** SeqNo: **1193783**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	501	2.50	500.0	4.523	99.4	70	130	531.6	5.87	30	
Selenium	49.1	5.00	50.00	0	98.2	70	130	49.89	1.60	30	
Silver	26.1	0.250	25.00	0	104	70	130	29.78	13.3	30	

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 200.8

Sample ID: CCV-28580B	SampType: CCV	Units: µg/L	Prep Date: 6/8/2020	RunNo: 59671
Client ID: CCV	Batch ID: 28580		Analysis Date: 6/8/2020	SeqNo: 1193788

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	101	2.50	100.0	0	101	85	115				
Selenium	24.7	5.00	25.00	0	99.0	85	115				
Silver	5.66	0.250	5.000	0	113	85	115				

Sample ID: CCB-28580B	SampType: CCB	Units: µg/L	Prep Date: 6/8/2020	RunNo: 59671
Client ID: CCB	Batch ID: 28580		Analysis Date: 6/8/2020	SeqNo: 1193789

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	2.50									
Selenium	ND	5.00									
Silver	ND	0.250									

Sample ID: 2006087-001CMS	SampType: MS	Units: µg/L	Prep Date: 6/8/2020	RunNo: 59671
Client ID: BATCH	Batch ID: 28580		Analysis Date: 6/8/2020	SeqNo: 1193898

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	532	2.50	500.0	4.523	105	70	130				
Selenium	49.9	5.00	50.00	0	99.8	70	130				

Sample ID: CCV-28580C1	SampType: CCV	Units: µg/L	Prep Date: 6/8/2020	RunNo: 59671
Client ID: CCV	Batch ID: 28580		Analysis Date: 6/8/2020	SeqNo: 1193901

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	106	2.50	100.0	0	106	85	115				
Selenium	24.9	5.00	25.00	0	99.7	85	115				
Silver	6.23	0.250	5.000	0	125	85	115				S

NOTES:
S - Outlying spike recovery observed (high bias). Detections will be qualified with a Q.

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 200.8

Sample ID: CCB-28580C	SampType: CCB			Units: µg/L		Prep Date: 6/8/2020			RunNo: 59671		
Client ID: CCB	Batch ID: 28580					Analysis Date: 6/8/2020			SeqNo: 1193903		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	2.50									
Selenium	ND	5.00									
Silver	ND	0.250									

Sample ID: CCV-28580D	SampType: CCV			Units: µg/L		Prep Date: 6/8/2020			RunNo: 59671		
Client ID: CCV	Batch ID: 28580					Analysis Date: 6/8/2020			SeqNo: 1193988		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	112	2.50	100.0	0	112	85	115				
Selenium	25.6	5.00	25.00	0	103	85	115				
Silver	6.43	0.250	5.000	0	129	85	115				S

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID: CCB-28580D	SampType: CCB			Units: µg/L		Prep Date: 6/8/2020			RunNo: 59671		
Client ID: CCB	Batch ID: 28580					Analysis Date: 6/8/2020			SeqNo: 1193989		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	2.50									
Selenium	ND	5.00									
Silver	ND	0.250									

Sample ID: ICB-28580A	SampType: ICB			Units: µg/L		Prep Date: 6/9/2020			RunNo: 59671		
Client ID: ICB	Batch ID: 28580					Analysis Date: 6/9/2020			SeqNo: 1194300		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	2.50									
Selenium	ND	5.00									
Silver	ND	0.250									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 200.8

Sample ID: **ICV-28580A**	SampType: **ICV**			Units: **µg/L**		Prep Date: **6/9/2020**		RunNo: **59671**		
Client ID: **ICV**	Batch ID: **28580**					Analysis Date: **6/9/2020**		SeqNo: **1194302**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	100	2.50	100.0	0	100	90	110				
Selenium	24.4	5.00	25.00	0	97.5	90	110				
Silver	4.97	0.250	5.000	0	99.5	90	110				

Sample ID: **2006087-001CMS**	SampType: **MS**			Units: **µg/L**		Prep Date: **6/8/2020**		RunNo: **59671**		
Client ID: **BATCH**	Batch ID: **28580**					Analysis Date: **6/9/2020**		SeqNo: **1194303**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	22.7	0.250	25.00	0	90.8	70	130				

Sample ID: **CCV-28580E**	SampType: **CCV**			Units: **µg/L**		Prep Date: **6/9/2020**		RunNo: **59671**		
Client ID: **CCV**	Batch ID: **28580**					Analysis Date: **6/9/2020**		SeqNo: **1194305**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	102	2.50	100.0	0	102	85	115				
Selenium	24.7	5.00	25.00	0	98.9	85	115				
Silver	4.80	0.250	5.000	0	96.0	85	115				

Sample ID: **CCB-28580E**	SampType: **CCB**			Units: **µg/L**		Prep Date: **6/9/2020**		RunNo: **59671**		
Client ID: **CCB**	Batch ID: **28580**					Analysis Date: **6/9/2020**		SeqNo: **1194306**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	2.50									
Selenium	ND	5.00									
Silver	ND	0.250									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Mercury by EPA Method 245.1

Sample ID: ICB-28625	SampType: ICB			Units: µg/L		Prep Date: 6/11/2020			RunNo: 59776	
Client ID: ICB	Batch ID: 28625					Analysis Date: 6/11/2020			SeqNo: 1196238	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.100									

Sample ID: ICV-28625	SampType: ICV			Units: µg/L		Prep Date: 6/11/2020			RunNo: 59776	
Client ID: ICV	Batch ID: 28625					Analysis Date: 6/11/2020			SeqNo: 1196240	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.40	0.100	2.500	0	96.0	95	105				

Sample ID: MB-28625	SampType: MBLK			Units: µg/L		Prep Date: 6/10/2020			RunNo: 59776	
Client ID: MBLKW	Batch ID: 28625					Analysis Date: 6/11/2020			SeqNo: 1196241	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.100									

Sample ID: LCS-28625	SampType: LCS			Units: µg/L		Prep Date: 6/10/2020			RunNo: 59776	
Client ID: LCSW	Batch ID: 28625					Analysis Date: 6/11/2020			SeqNo: 1196242	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.26	0.100	2.500	0	90.4	85	115				

Sample ID: 2006085-001BDUP	SampType: DUP			Units: µg/L		Prep Date: 6/10/2020			RunNo: 59776	
Client ID: GW-B1-0603	Batch ID: 28625					Analysis Date: 6/11/2020			SeqNo: 1196244	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.100						0		20	

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Mercury by EPA Method 245.1

Sample ID: **2006085-001BMS** SampType: **MS** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59776**
Client ID: **GW-B1-0603** Batch ID: **28625** Analysis Date: **6/11/2020** SeqNo: **1196245**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.17	0.100	2.500	0.05900	44.4	70	130				S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **2006085-001BMSD** SampType: **MSD** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59776**
Client ID: **GW-B1-0603** Batch ID: **28625** Analysis Date: **6/11/2020** SeqNo: **1196246**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	1.15	0.100	2.500	0.05900	43.6	70	130	1.170	1.72	20	S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **CCV-28625A** SampType: **CCV** Units: **µg/L** Prep Date: **6/11/2020** RunNo: **59776**
Client ID: **CCV** Batch ID: **28625** Analysis Date: **6/11/2020** SeqNo: **1196251**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.32	0.100	2.500	0	92.8	90	110				

Sample ID: **CCB-28625A** SampType: **CCB** Units: **µg/L** Prep Date: **6/11/2020** RunNo: **59776**
Client ID: **CCB** Batch ID: **28625** Analysis Date: **6/11/2020** SeqNo: **1196252**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.100									

Sample ID: **CCV-28625B** SampType: **CCV** Units: **µg/L** Prep Date: **6/11/2020** RunNo: **59776**
Client ID: **CCV** Batch ID: **28625** Analysis Date: **6/11/2020** SeqNo: **1196263**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	2.56	0.100	2.500	0	102	90	110				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Mercury by EPA Method 245.1

Sample ID: **CCB-28625B** SampType: **CCB** Units: **µg/L** Prep Date: **6/11/2020** RunNo: **59776**
Client ID: **CCB** Batch ID: **28625** Analysis Date: **6/11/2020** SeqNo: **1196264**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.100									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: ICB-28586	SampType: ICB	Units: µg/L	Prep Date: 6/9/2020	RunNo: 59700
Client ID: ICB	Batch ID: 28586		Analysis Date: 6/9/2020	SeqNo: 1194518

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Sample ID: ICV-28586	SampType: ICV	Units: µg/L	Prep Date: 6/9/2020	RunNo: 59700
Client ID: ICV	Batch ID: 28586		Analysis Date: 6/9/2020	SeqNo: 1194520

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	100	5.00	100.0	0	100	90	110				
Selenium	24.4	5.00	25.00	0	97.5	90	110				
Silver	4.97	1.00	5.000	0	99.5	90	110				

Sample ID: CCV-28586A	SampType: CCV	Units: µg/L	Prep Date: 6/9/2020	RunNo: 59700
Client ID: CCV	Batch ID: 28586		Analysis Date: 6/9/2020	SeqNo: 1194523

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	106	5.00	100.0	0	106	90	110				
Selenium	24.3	5.00	25.00	0	97.2	90	110				
Silver	4.98	1.00	5.000	0	99.7	90	110				

Sample ID: CCB-28586A	SampType: CCB	Units: µg/L	Prep Date: 6/9/2020	RunNo: 59700
Client ID: CCB	Batch ID: 28586		Analysis Date: 6/9/2020	SeqNo: 1194525

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **MB-28586**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **6/8/2020**	RunNo: **59700**
Client ID: **MBLKS**	Batch ID: **28586**		Analysis Date: **6/9/2020**	SeqNo: **1194527**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	0.385									
Selenium	ND	0.385									
Silver	ND	0.0769									

Sample ID: **LCS-28586**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **6/8/2020**	RunNo: **59700**
Client ID: **LCSS**	Batch ID: **28586**		Analysis Date: **6/9/2020**	SeqNo: **1194529**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	44.5	0.397	39.68	0	112	80	120				
Selenium	3.81	0.397	3.968	0	96.0	80	120				
Silver	10.2	0.0794	9.921	0	102	80	120				

Sample ID: **2006058-016ADUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **6/8/2020**	RunNo: **59700**
Client ID: **BATCH**	Batch ID: **28586**		Analysis Date: **6/9/2020**	SeqNo: **1194533**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	79.2	0.404						83.97	5.84	20	
Selenium	1.49	0.404						1.579	5.48	20	
Silver	ND	0.0809						0.1057	41.9	20	

Sample ID: **2006058-016AMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **6/8/2020**	RunNo: **59700**
Client ID: **BATCH**	Batch ID: **28586**		Analysis Date: **6/9/2020**	SeqNo: **1194537**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	127	0.407	40.74	83.97	106	75	125				
Selenium	5.17	0.407	4.074	1.579	88.1	75	125				
Silver	8.79	0.0815	10.19	0.1057	85.2	75	125				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **2006058-016AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **6/8/2020** RunNo: **59700**
Client ID: **BATCH** Batch ID: **28586** Analysis Date: **6/9/2020** SeqNo: **1194539**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	126	0.426	42.64	83.97	97.7	75	125	127.0	1.07	20	
Selenium	5.77	0.426	4.264	1.579	98.3	75	125	5.169	11.0	20	
Silver	8.96	0.0853	10.66	0.1057	83.1	75	125	8.788	1.99	20	

Sample ID: **CCV-28586B** SampType: **CCV** Units: **µg/L** Prep Date: **6/9/2020** RunNo: **59700**
Client ID: **CCV** Batch ID: **28586** Analysis Date: **6/9/2020** SeqNo: **1194545**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	108	5.00	100.0	0	108	90	110				
Selenium	25.9	5.00	25.00	0	103	90	110				
Silver	5.10	1.00	5.000	0	102	90	110				

Sample ID: **CCB-28586B** SampType: **CCB** Units: **µg/L** Prep Date: **6/9/2020** RunNo: **59700**
Client ID: **CCB** Batch ID: **28586** Analysis Date: **6/9/2020** SeqNo: **1194546**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Sample ID: **CCV-28586C** SampType: **CCV** Units: **µg/L** Prep Date: **6/9/2020** RunNo: **59700**
Client ID: **CCV** Batch ID: **28586** Analysis Date: **6/9/2020** SeqNo: **1194758**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	109	5.00	100.0	0	109	90	110				
Selenium	25.3	5.00	25.00	0	101	90	110				
Silver	5.42	1.00	5.000	0	108	90	110				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: CCB-28586C	SampType: CCB	Units: µg/L	Prep Date: 6/9/2020	RunNo: 59700
Client ID: CCB	Batch ID: 28586		Analysis Date: 6/9/2020	SeqNo: 1194759

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Sample ID: CCV-28586D	SampType: CCV	Units: µg/L	Prep Date: 6/9/2020	RunNo: 59700
Client ID: CCV	Batch ID: 28586		Analysis Date: 6/9/2020	SeqNo: 1194767

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	112	5.00	100.0	0	112	90	110				S
Selenium	24.7	5.00	25.00	0	98.7	90	110				
Silver	5.43	1.00	5.000	0	109	90	110				

Sample ID: CCB-28586D	SampType: CCB	Units: µg/L	Prep Date: 6/9/2020	RunNo: 59700
Client ID: CCB	Batch ID: 28586		Analysis Date: 6/9/2020	SeqNo: 1194768

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Sample ID: ICB-28586A	SampType: ICB	Units: µg/L	Prep Date: 6/10/2020	RunNo: 59700
Client ID: ICB	Batch ID: 28586		Analysis Date: 6/10/2020	SeqNo: 1195074

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **ICB-28613**	SampType: **ICB**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59768**
Client ID: **ICB**	Batch ID: **28613**		Analysis Date: **6/10/2020**	SeqNo: **1195992**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Sample ID: **ICB-28613**	SampType: **ICB**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59866**
Client ID: **ICB**	Batch ID: **28613**		Analysis Date: **6/10/2020**	SeqNo: **1198269**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	ND	1.00									

Sample ID: **ICV-28586A**	SampType: **ICV**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59700**
Client ID: **ICV**	Batch ID: **28586**		Analysis Date: **6/10/2020**	SeqNo: **1195076**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	99.8	5.00	100.0	0	99.8	90	110				
Selenium	23.4	5.00	25.00	0	93.5	90	110				
Silver	5.06	1.00	5.000	0	101	90	110				

Sample ID: **ICV-28613**	SampType: **ICV**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59768**
Client ID: **ICV**	Batch ID: **28613**		Analysis Date: **6/10/2020**	SeqNo: **1195994**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	99.8	5.00	100.0	0	99.8	90	110				
Selenium	23.4	5.00	25.00	0	93.5	90	110				
Silver	4.99	1.00	5.000	0	99.8	90	110				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: ICV-28613	SampType: ICV	Units: µg/L	Prep Date: 6/10/2020	RunNo: 59866
Client ID: ICV	Batch ID: 28613		Analysis Date: 6/10/2020	SeqNo: 1198271

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	5.06	1.00	5.000	0	101	90	110				

Sample ID: CCV-28586E	SampType: CCV	Units: µg/L	Prep Date: 6/10/2020	RunNo: 59700
Client ID: CCV	Batch ID: 28586		Analysis Date: 6/10/2020	SeqNo: 1195085

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	101	5.00	100.0	0	101	90	110				
Selenium	25.0	5.00	25.00	0	99.8	90	110				
Silver	5.16	1.00	5.000	0	103	90	110				

Sample ID: CCB-28586E	SampType: CCB	Units: µg/L	Prep Date: 6/10/2020	RunNo: 59700
Client ID: CCB	Batch ID: 28586		Analysis Date: 6/10/2020	SeqNo: 1195086

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Sample ID: CCV-28586F	SampType: CCV	Units: µg/L	Prep Date: 6/10/2020	RunNo: 59700
Client ID: CCV	Batch ID: 28586		Analysis Date: 6/10/2020	SeqNo: 1195968

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	109	5.00	100.0	0	109	90	110				
Selenium	24.9	5.00	25.00	0	99.6	90	110				
Silver	6.18	1.00	5.000	0	124	90	110				S

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **CCB-28586F** SampType: **CCB** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59700**
Client ID: **CCB** Batch ID: **28586** Analysis Date: **6/10/2020** SeqNo: **1195969**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Sample ID: **CCV-28586G** SampType: **CCV** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59700**
Client ID: **CCV** Batch ID: **28586** Analysis Date: **6/10/2020** SeqNo: **1195971**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	108	5.00	100.0	0	108	90	110				
Selenium	24.8	5.00	25.00	0	99.2	90	110				
Silver	5.96	1.00	5.000	0	119	90	110				S

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID: **CCV-28613A** SampType: **CCV** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59768**
Client ID: **CCV** Batch ID: **28613** Analysis Date: **6/10/2020** SeqNo: **1195997**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	108	5.00	100.0	0	108	90	110				
Selenium	24.8	5.00	25.00	0	99.2	90	110				
Silver	5.09	1.00	5.000	0	102	90	110				

Sample ID: **CCV-28613A** SampType: **CCV** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59866**
Client ID: **CCV** Batch ID: **28613** Analysis Date: **6/10/2020** SeqNo: **1198274**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	5.96	1.00	5.000	0	119	90	110				S

NOTES:
S - Outlying spike recovery observed (high bias). Detections will be qualified with a *.

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **CCB-28586G**	SampType: **CCB**			Units: **µg/L**		Prep Date: **6/10/2020**		RunNo: **59700**	
Client ID: **CCB**	Batch ID: **28586**					Analysis Date: **6/10/2020**		SeqNo: **1195972**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Sample ID: **CCB-28613A**	SampType: **CCB**			Units: **µg/L**		Prep Date: **6/10/2020**		RunNo: **59768**	
Client ID: **CCB**	Batch ID: **28613**					Analysis Date: **6/10/2020**		SeqNo: **1195998**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Sample ID: **CCB-28613A**	SampType: **CCB**			Units: **µg/L**		Prep Date: **6/10/2020**		RunNo: **59866**	
Client ID: **CCB**	Batch ID: **28613**					Analysis Date: **6/10/2020**		SeqNo: **1198275**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	ND	1.00									

Sample ID: **MB-28613**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **6/10/2020**		RunNo: **59768**	
Client ID: **MBLKS**	Batch ID: **28613**					Analysis Date: **6/10/2020**		SeqNo: **1195999**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	0.370									
Selenium	ND	0.370									
Silver	ND	0.0741									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **MB-28613**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **6/10/2020**	RunNo: **59866**
Client ID: **MBLKS**	Batch ID: **28613**		Analysis Date: **6/10/2020**	SeqNo: **1198276**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	ND	0.0741									

Sample ID: **LCS-28613**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **6/10/2020**	RunNo: **59768**
Client ID: **LCSS**	Batch ID: **28613**		Analysis Date: **6/10/2020**	SeqNo: **1196000**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	43.0	0.368	36.76	0	117	80	120				
Selenium	3.69	0.368	3.676	0	100	80	120				
Silver	8.07	0.0735	9.191	0	87.8	80	120				

Sample ID: **LCS-28613**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **6/10/2020**	RunNo: **59866**
Client ID: **LCSS**	Batch ID: **28613**		Analysis Date: **6/10/2020**	SeqNo: **1198277**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	11.2	0.0735	9.191	0	122	80	120				S

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID: **2006085-010ADUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **6/10/2020**	RunNo: **59768**
Client ID: **S-B3-2-3-0603**	Batch ID: **28613**		Analysis Date: **6/10/2020**	SeqNo: **1196002**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	36.9	0.428						56.74	42.4	20	R
Selenium	0.724	0.428						0.7990	9.85	20	
Silver	ND	0.0856						0.2565	163	20	R

NOTES:
R - High RPD observed. The method is in control as indicated by the LCS.

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **2006085-010ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **6/10/2020** RunNo: **59866**
Client ID: **S-B3-2-3-0603** Batch ID: **28613** Analysis Date: **6/10/2020** SeqNo: **1198279**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	ND	0.0856						0		20	

Sample ID: **2006085-010AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **6/10/2020** RunNo: **59768**
Client ID: **S-B3-2-3-0603** Batch ID: **28613** Analysis Date: **6/10/2020** SeqNo: **1196004**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	110	0.415	41.46	56.74	129	75	125				S
Selenium	5.10	0.415	4.146	0.7990	104	75	125				
Silver	7.60	0.0829	10.37	0.2565	70.8	75	125				S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **2006085-010AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **6/10/2020** RunNo: **59866**
Client ID: **S-B3-2-3-0603** Batch ID: **28613** Analysis Date: **6/10/2020** SeqNo: **1198281**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	12.8	0.0829	10.37	0.07470	122	75	125				E

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: **2006085-010AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **6/10/2020** RunNo: **59768**
Client ID: **S-B3-2-3-0603** Batch ID: **28613** Analysis Date: **6/10/2020** SeqNo: **1196005**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	139	0.411	41.15	56.74	200	75	125	110.2	23.1	20	RS
Selenium	5.08	0.411	4.115	0.7990	104	75	125	5.097	0.347	20	
Silver	7.80	0.0823	10.29	0.2565	73.4	75	125	7.596	2.71	20	S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.
R - High RPD observed. The method is in control as indicated by the LCS.

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **2006085-010AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **6/10/2020** RunNo: **59866**
Client ID: **S-B3-2-3-0603** Batch ID: **28613** Analysis Date: **6/10/2020** SeqNo: **1198282**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	10.3	0.0823	10.29	0.07470	99.6	75	125	12.77	21.2	20	ER

NOTES:
R - High RPD observed. The method is in control as indicated by the LCS.
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: **2006085-010APDS** SampType: **PDS** Units: **mg/Kg-dry** Prep Date: **6/10/2020** RunNo: **59768**
Client ID: **S-B3-2-3-0603** Batch ID: **28613** Analysis Date: **6/10/2020** SeqNo: **1196006**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	248	0.421	50.0	135	113	75	125				
Silver	1.60	0.0842	2.11	0.256	63.8	75	125				S

NOTES:
S - Spike recovery indicates a possible matrix effect. The method is in control as indicated by the Laboratory Control Sample (LCS).

Sample ID: **CCV-28613B** SampType: **CCV** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59768**
Client ID: **CCV** Batch ID: **28613** Analysis Date: **6/10/2020** SeqNo: **1196009**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	104	5.00	100.0	0	104	90	110				
Selenium	24.4	5.00	25.00	0	97.8	90	110				
Silver	5.15	1.00	5.000	0	103	90	110				

Sample ID: **CCV-28613B** SampType: **CCV** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59866**
Client ID: **CCV** Batch ID: **28613** Analysis Date: **6/10/2020** SeqNo: **1198286**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	6.12	1.00	5.000	0	122	90	110				S

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **CCB-28613B**	SampType: **CCB**			Units: **µg/L**		Prep Date: **6/10/2020**		RunNo: **59768**	
Client ID: **CCB**	Batch ID: **28613**					Analysis Date: **6/10/2020**		SeqNo: **1196010**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Sample ID: **CCB-28613B**	SampType: **CCB**			Units: **µg/L**		Prep Date: **6/10/2020**		RunNo: **59866**	
Client ID: **CCB**	Batch ID: **28613**					Analysis Date: **6/10/2020**		SeqNo: **1198287**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	ND	1.00									

Sample ID: **CCV-28613C**	SampType: **CCV**			Units: **µg/L**		Prep Date: **6/10/2020**		RunNo: **59768**	
Client ID: **CCV**	Batch ID: **28613**					Analysis Date: **6/10/2020**		SeqNo: **1196021**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	99.7	5.00	100.0	0	99.7	90	110				
Selenium	25.4	5.00	25.00	0	102	90	110				
Silver	4.77	1.00	5.000	0	95.3	90	110				

Sample ID: **CCB-28613C**	SampType: **CCB**			Units: **µg/L**		Prep Date: **6/10/2020**		RunNo: **59768**	
Client ID: **CCB**	Batch ID: **28613**					Analysis Date: **6/10/2020**		SeqNo: **1196022**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **CCV-28613D**	SampType: **CCV**			Units: **µg/L**		Prep Date: **6/10/2020**			RunNo: **59768**	
Client ID: **CCV**	Batch ID: **28613**					Analysis Date: **6/10/2020**			SeqNo: **1196030**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	103	5.00	100.0	0	103	90	110				
Selenium	25.3	5.00	25.00	0	101	90	110				
Silver	5.11	1.00	5.000	0	102	90	110				

Sample ID: **CCB-28613D**	SampType: **CCB**			Units: **µg/L**		Prep Date: **6/10/2020**			RunNo: **59768**	
Client ID: **CCB**	Batch ID: **28613**					Analysis Date: **6/10/2020**			SeqNo: **1196031**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	5.00									
Selenium	ND	5.00									
Silver	ND	1.00									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **ARO-CCV-28677A** SampType: **CCV** Units: **mg/Kg** Prep Date: **6/23/2020** RunNo: **60093**
Client ID: **CCV** Batch ID: **28677** Analysis Date: **6/23/2020** SeqNo: **1203096**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	174	10.0	200.0	0	86.9	80	120				Q
Aromatic Hydrocarbon (C10-C12)	96.2	10.0	100.0	0	96.2	80	120				
Aromatic Hydrocarbon (C12-C16)	99.2	10.0	100.0	0	99.2	80	120				
Aromatic Hydrocarbon (C16-C21)	102	10.0	100.0	0	102	80	120				
Aromatic Hydrocarbon (C21-C34)	108	10.0	100.0	0	108	80	120				
Surr: 1-Chlorooctadecane	39.9		40.00		99.8	60	140				
Surr: o-Terphenyl	39.7		40.00		99.3	60	140				

NOTES:
Q - Indicates a hydrocarbon range where the low calibration point read back at a level outside the acceptance criteria (+- 20%)

Sample ID: **MB-28677** SampType: **MBLK** Units: **mg/Kg** Prep Date: **6/16/2020** RunNo: **60093**
Client ID: **MBLKS** Batch ID: **28677** Analysis Date: **6/23/2020** SeqNo: **1203100**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	10.0									*Q
Aromatic Hydrocarbon (C10-C12)	ND	10.0									
Aromatic Hydrocarbon (C12-C16)	ND	10.0									
Aromatic Hydrocarbon (C16-C21)	ND	10.0									
Aromatic Hydrocarbon (C21-C34)	ND	10.0									
Surr: o-Terphenyl	79.8		100.0		79.8	60	140				

NOTES:
Q - Indicates a hydrocarbon range where the low calibration point read back at a level outside the acceptance criteria (+- 20%)
* - Flagged value is not within established control limits.

Sample ID: **LCS-28677** SampType: **LCS** Units: **mg/Kg** Prep Date: **6/16/2020** RunNo: **60093**
Client ID: **LCSS** Batch ID: **28677** Analysis Date: **6/23/2020** SeqNo: **1203099**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	89.4	10.0	250.0	0	35.7	70	130				SQ
Aromatic Hydrocarbon (C10-C12)	88.2	10.0	125.0	0	70.6	70	130				
Aromatic Hydrocarbon (C12-C16)	99.5	10.0	125.0	0	79.6	70	130				
Aromatic Hydrocarbon (C16-C21)	124	10.0	125.0	0	99.1	70	130				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCS-28677**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **6/16/2020**	RunNo: **60093**
Client ID: **LCSS**	Batch ID: **28677**		Analysis Date: **6/23/2020**	SeqNo: **1203099**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C21-C34)	115	10.0	125.0	0	92.3	70	130				
Surr: o-Terphenyl	77.8		100.0		77.8	60	140				

NOTES:
S - Outlying spike recovery observed (low bias). Samples will be qualified with a *.
Q - Indicates a hydrocarbon range where the low calibration point read back at a level outside the acceptance criteria (+- 20%)

Sample ID: **2006085-009ADUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **6/16/2020**	RunNo: **60093**
Client ID: **S-B2-2-4-0603**	Batch ID: **28677**		Analysis Date: **6/23/2020**	SeqNo: **1203098**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	12.2						22.57	140	25	R*Q
Aromatic Hydrocarbon (C10-C12)	53.0	12.2						72.88	31.7	25	R
Aromatic Hydrocarbon (C12-C16)	404	12.2						540.5	28.8	25	R
Aromatic Hydrocarbon (C16-C21)	751	12.2						957.6	24.1	25	
Aromatic Hydrocarbon (C21-C34)	179	12.2						315.9	55.6	25	R
Surr: o-Terphenyl	84.8		121.9		69.6	60	140		0		

NOTES:
R - High RPD due to suspected sample inhomogeneity.
Q - Indicates a hydrocarbon range where the low calibration point read back at a level outside the acceptance criteria (+- 20%)
* - Flagged value is not within established control limits.

Sample ID: **2006085-009AMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **6/16/2020**	RunNo: **60093**
Client ID: **S-B2-2-4-0603**	Batch ID: **28677**		Analysis Date: **6/23/2020**	SeqNo: **1203101**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	120	11.6	290.0	22.57	33.7	70	130				SQ
Aromatic Hydrocarbon (C10-C12)	139	11.6	145.0	72.88	45.6	70	130				S
Aromatic Hydrocarbon (C12-C16)	507	11.6	145.0	540.5	-23.1	70	130				S
Aromatic Hydrocarbon (C16-C21)	833	11.6	145.0	957.6	-85.9	70	130				S
Aromatic Hydrocarbon (C21-C34)	298	11.6	145.0	315.9	-12.6	70	130				S
Surr: o-Terphenyl	76.7		116.0		66.1	60	140				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **2006085-009AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **6/16/2020** RunNo: **60093**
Client ID: **S-B2-2-4-0603** Batch ID: **28677** Analysis Date: **6/23/2020** SeqNo: **1203101**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.
S - Outlying spike recovery observed (low bias).
Q - Indicates a hydrocarbon range where the low calibration point read back at a level outside the acceptance criteria (+- 20%)

Sample ID: **2006085-009AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **6/16/2020** RunNo: **60093**
Client ID: **S-B2-2-4-0603** Batch ID: **28677** Analysis Date: **6/23/2020** SeqNo: **1203102**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	103	13.1	326.3	22.57	24.8	70	130	120.3	15.2	30	SQ
Aromatic Hydrocarbon (C10-C12)	91.5	13.1	163.2	72.88	11.4	70	130	139.0	41.2	30	RS
Aromatic Hydrocarbon (C12-C16)	235	13.1	163.2	540.5	-187	70	130	507.0	73.3	30	RS
Aromatic Hydrocarbon (C16-C21)	373	13.1	163.2	957.6	-358	70	130	833.0	76.2	30	RS
Aromatic Hydrocarbon (C21-C34)	218	13.1	163.2	315.9	-59.7	70	130	297.6	30.7	30	RS
Surr: o-Terphenyl	67.4		130.5		51.6	60	140		0		S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.
R - High RPD due to suspected sample inhomogeneity.
Q - Indicates a hydrocarbon range where the low calibration point read back at a level outside the acceptance criteria (+- 20%)
S - Outlying surrogate recovery(ies) observed.

Sample ID: **ARO-CCV-28677B** SampType: **CCV** Units: **mg/Kg** Prep Date: **6/23/2020** RunNo: **60093**
Client ID: **CCV** Batch ID: **28677** Analysis Date: **6/23/2020** SeqNo: **1203097**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	163	10.0	200.0	0	81.6	80	120				Q
Aromatic Hydrocarbon (C10-C12)	94.0	10.0	100.0	0	94.0	80	120				
Aromatic Hydrocarbon (C12-C16)	95.6	10.0	100.0	0	95.6	80	120				
Aromatic Hydrocarbon (C16-C21)	99.3	10.0	100.0	0	99.3	80	120				
Aromatic Hydrocarbon (C21-C34)	110	10.0	100.0	0	110	80	120				
Surr: 1-Chlorooctadecane	35.0		40.00		87.4	60	140				
Surr: o-Terphenyl	35.6		40.00		89.0	60	140				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **ARO-CCV-28677B** SampType: **CCV** Units: **mg/Kg** Prep Date: **6/23/2020** RunNo: **60093**
Client ID: **CCV** Batch ID: **28677** Analysis Date: **6/23/2020** SeqNo: **1203097**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
Q - Indicates a hydrocarbon range where the low calibration point read back at a level outside the acceptance criteria (+- 20%)

Sample ID: **ALI-CCV-28677A** SampType: **CCV** Units: **mg/Kg** Prep Date: **6/23/2020** RunNo: **60093**
Client ID: **CCV** Batch ID: **28677** Analysis Date: **6/23/2020** SeqNo: **1203105**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	176	20.0	200.0	0	88.2	80	120				
Aliphatic Hydrocarbon (C10-C12)	90.7	10.0	100.0	0	90.7	80	120				
Aliphatic Hydrocarbon (C12-C16)	105	10.0	100.0	0	105	80	120				
Aliphatic Hydrocarbon (C16-C21)	84.4	10.0	100.0	0	84.4	80	120				
Aliphatic Hydrocarbon (C21-C34)	108	10.0	100.0	0	108	80	120				
Surr: 1-Chlorooctadecane	34.6		40.00		86.6	60	140				
Surr: o-Terphenyl	35.0		40.00		87.5	60	140				

Sample ID: **MB-28677** SampType: **MBLK** Units: **mg/Kg** Prep Date: **6/16/2020** RunNo: **60093**
Client ID: **MBLKS** Batch ID: **28677** Analysis Date: **6/23/2020** SeqNo: **1203109**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	20.0									*
Aliphatic Hydrocarbon (C10-C12)	ND	10.0									*
Aliphatic Hydrocarbon (C12-C16)	ND	10.0									
Aliphatic Hydrocarbon (C16-C21)	ND	10.0									
Aliphatic Hydrocarbon (C21-C34)	ND	10.0									
Surr: 1-Chlorooctadecane	74.8		100.0		74.8	60	140				

NOTES:
* - Flagged value is not within established control limits.

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCS-28677** SampType: **LCS** Units: **mg/Kg** Prep Date: **6/16/2020** RunNo: **60093**
Client ID: **LCSS** Batch ID: **28677** Analysis Date: **6/23/2020** SeqNo: **1203108**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	74.7	20.0	250.0	0	29.9	70	130				S
Aliphatic Hydrocarbon (C10-C12)	65.7	10.0	125.0	0	52.5	70	130				S
Aliphatic Hydrocarbon (C12-C16)	110	10.0	125.0	0	88.1	70	130				
Aliphatic Hydrocarbon (C16-C21)	109	10.0	125.0	0	87.5	70	130				
Aliphatic Hydrocarbon (C21-C34)	147	10.0	125.0	0	117	70	130				
Surr: 1-Chlorooctadecane	78.0		100.0		78.0	60	140				

NOTES:
S - Outlying spike recovery observed (low bias). Samples will be qualified with a *.

Sample ID: **2006085-009ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **6/16/2020** RunNo: **60093**
Client ID: **S-B2-2-4-0603** Batch ID: **28677** Analysis Date: **6/24/2020** SeqNo: **1203107**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	27.9	24.4						52.32	61.0	25	R*
Aliphatic Hydrocarbon (C10-C12)	222	12.2						383.2	53.2	25	R*
Aliphatic Hydrocarbon (C12-C16)	1,250	12.2						1,902	41.2	25	RE
Aliphatic Hydrocarbon (C16-C21)	1,000	12.2						1,477	38.2	25	R
Aliphatic Hydrocarbon (C21-C34)	1,280	12.2						1,954	41.9	25	RE
Surr: 1-Chlorooctadecane	84.6		121.9		69.4	60	140		0		

NOTES:
R - High RPD due to high analyte concentration. In this range, high RPD's may be expected.
E - Estimated value. The amount exceeds the linear working range of the instrument.
* - Flagged value is not within established control limits.

Sample ID: **2006085-009AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **6/16/2020** RunNo: **60093**
Client ID: **S-B2-2-4-0603** Batch ID: **28677** Analysis Date: **6/24/2020** SeqNo: **1203110**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	115	23.2	290.0	52.32	21.7	70	130				S
Aliphatic Hydrocarbon (C10-C12)	355	11.6	145.0	383.2	-19.7	70	130				S
Aliphatic Hydrocarbon (C12-C16)	1,630	11.6	145.0	1,902	-190	70	130				SE
Aliphatic Hydrocarbon (C16-C21)	1,300	11.6	145.0	1,477	-120	70	130				SE

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **2006085-009AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **6/16/2020** RunNo: **60093**
Client ID: **S-B2-2-4-0603** Batch ID: **28677** Analysis Date: **6/24/2020** SeqNo: **1203110**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C21-C34)	1,190	11.6	145.0	1,954	-527	70	130				SE
Surr: 1-Chlorooctadecane	76.7		116.0		66.1	60	140				

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: **ALI-CCV-28677B** SampType: **CCV** Units: **mg/Kg** Prep Date: **6/24/2020** RunNo: **60093**
Client ID: **CCV** Batch ID: **28677** Analysis Date: **6/24/2020** SeqNo: **1203106**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	183	20.0	200.0	0	91.5	80	120				
Aliphatic Hydrocarbon (C10-C12)	94.7	10.0	100.0	0	94.7	80	120				
Aliphatic Hydrocarbon (C12-C16)	103	10.0	100.0	0	103	80	120				
Aliphatic Hydrocarbon (C16-C21)	88.2	10.0	100.0	0	88.2	80	120				
Aliphatic Hydrocarbon (C21-C34)	115	10.0	100.0	0	115	80	120				
Surr: 1-Chlorooctadecane	35.4		40.00		88.6	60	140				
Surr: o-Terphenyl	35.5		40.00		88.6	60	140				

Sample ID: **ALI-CCV-28677C** SampType: **CCV** Units: **mg/Kg** Prep Date: **6/24/2020** RunNo: **60093**
Client ID: **CCV** Batch ID: **28677** Analysis Date: **6/24/2020** SeqNo: **1203230**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	194	20.0	200.0	0	96.8	80	120				
Aliphatic Hydrocarbon (C10-C12)	88.2	10.0	100.0	0	88.2	80	120				
Aliphatic Hydrocarbon (C12-C16)	93.1	10.0	100.0	0	93.1	80	120				
Aliphatic Hydrocarbon (C16-C21)	95.8	10.0	100.0	0	95.8	80	120				
Aliphatic Hydrocarbon (C21-C34)	110	10.0	100.0	0	110	80	120				
Surr: 1-Chlorooctadecane	36.9		40.00		92.3	60	140				
Surr: o-Terphenyl	37.4		40.00		93.4	60	140				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **2006085-009AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **6/16/2020** RunNo: **60093**
Client ID: **S-B2-2-4-0603** Batch ID: **28677** Analysis Date: **6/24/2020** SeqNo: **1203233**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	97.6	26.1	326.3	52.32	13.9	70	130	115.2	16.5	30	S
Aliphatic Hydrocarbon (C10-C12)	169	13.1	163.2	383.2	-131	70	130	354.5	70.7	30	RS
Aliphatic Hydrocarbon (C12-C16)	617	13.1	163.2	1,902	-788	70	130	1,627	90.0	30	RS
Aliphatic Hydrocarbon (C16-C21)	529	13.1	163.2	1,477	-581	70	130	1,303	84.5	30	RS
Aliphatic Hydrocarbon (C21-C34)	732	13.1	163.2	1,954	-749	70	130	1,189	47.6	30	RS
Surr: 1-Chlorooctadecane	75.4		130.5		57.7	60	140		0		S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.
S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.
R - High RPD due to high analyte concentration. In this range, high RPD's may be expected.

Sample ID: **ALI-CCV-28677D** SampType: **CCV** Units: **mg/Kg** Prep Date: **6/24/2020** RunNo: **60093**
Client ID: **CCV** Batch ID: **28677** Analysis Date: **6/24/2020** SeqNo: **1203231**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	196	20.0	200.0	0	98.2	80	120				
Aliphatic Hydrocarbon (C10-C12)	100	10.0	100.0	0	100	80	120				
Aliphatic Hydrocarbon (C12-C16)	101	10.0	100.0	0	101	80	120				
Aliphatic Hydrocarbon (C16-C21)	101	10.0	100.0	0	101	80	120				
Aliphatic Hydrocarbon (C21-C34)	111	10.0	100.0	0	111	80	120				
Surr: 1-Chlorooctadecane	39.0		40.00		97.4	60	140				
Surr: o-Terphenyl	38.0		40.00		95.1	60	140				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **PAH ICB**	SampType: **ICB**	Units: **µg/L**	Prep Date: **6/4/2020**	RunNo: **59660**
Client ID: **ICB**	Batch ID: **28581**		Analysis Date: **6/4/2020**	SeqNo: **1193487**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	40.0									
2-Methylnaphthalene	ND	40.0									
1-Methylnaphthalene	ND	40.0									
Acenaphthylene	ND	40.0									
Acenaphthene	ND	40.0									
Fluorene	ND	40.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	40.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	40.0									
Benzo(k)fluoranthene	ND	40.0									
Benzo(a)pyrene	ND	40.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	40.0									
Surr: 2-Fluorobiphenyl	652		500.0		130	50.4	142				
Surr: Terphenyl-d14 (surr)	634		500.0		127	48.8	157				

Sample ID: **PAH ICV**	SampType: **ICV**	Units: **µg/L**	Prep Date: **6/4/2020**	RunNo: **59660**
Client ID: **ICV**	Batch ID: **28581**		Analysis Date: **6/4/2020**	SeqNo: **1193488**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	999	40.0	1,000	0	99.9	70	130				
2-Methylnaphthalene	1,010	40.0	1,000	0	101	70	130				
1-Methylnaphthalene	1,000	40.0	1,000	0	100	70	130				
Acenaphthylene	982	40.0	1,000	0	98.2	70	130				
Acenaphthene	996	40.0	1,000	0	99.6	70	130				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **PAH ICV**	SampType: **ICV**	Units: **µg/L**	Prep Date: **6/4/2020**	RunNo: **59660**
Client ID: **ICV**	Batch ID: **28581**		Analysis Date: **6/4/2020**	SeqNo: **1193488**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	1,020	40.0	1,000	0	102	70	130				
Phenanthrene	1,050	40.0	1,000	0	105	70	130				
Anthracene	1,010	40.0	1,000	0	101	70	130				
Fluoranthene	992	40.0	1,000	0	99.2	70	130				
Pyrene	1,000	40.0	1,000	0	100	70	130				
Benz(a)anthracene	1,060	40.0	1,000	0	106	70	130				
Chrysene	1,060	40.0	1,000	0	106	70	130				
Benzo(b)fluoranthene	1,130	40.0	1,000	0	113	70	130				
Benzo(k)fluoranthene	1,030	40.0	1,000	0	103	70	130				
Benzo(a)pyrene	1,070	40.0	1,000	0	107	70	130				
Indeno(1,2,3-cd)pyrene	1,040	40.0	1,000	0	104	70	130				
Dibenz(a,h)anthracene	1,040	40.0	1,000	0	104	70	130				
Benzo(g,h,i)perylene	1,040	40.0	1,000	0	104	70	130				
Surr: 2-Fluorobiphenyl	682		500.0		136	69.5	150				
Surr: Terphenyl-d14 (surr)	694		500.0		139	71.6	145				

Sample ID: **CCV-28581**	SampType: **CCV**	Units: **µg/L**	Prep Date: **6/8/2020**	RunNo: **59681**
Client ID: **CCV**	Batch ID: **28581**		Analysis Date: **6/8/2020**	SeqNo: **1193943**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	894	40.0	1,000	0	89.4	80	120				
2-Methylnaphthalene	892	40.0	1,000	0	89.2	80	120				
1-Methylnaphthalene	901	40.0	1,000	0	90.1	80	120				
Acenaphthylene	861	40.0	1,000	0	86.1	80	120				
Acenaphthene	874	40.0	1,000	0	87.4	80	120				
Fluorene	900	40.0	1,000	0	90.0	80	120				
Phenanthrene	947	40.0	1,000	0	94.7	80	120				
Anthracene	898	40.0	1,000	0	89.8	80	120				
Fluoranthene	906	40.0	1,000	0	90.6	80	120				
Pyrene	910	40.0	1,000	0	91.0	80	120				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **CCV-28581** SampType: **CCV** Units: **µg/L** Prep Date: **6/8/2020** RunNo: **59681**
Client ID: **CCV** Batch ID: **28581** Analysis Date: **6/8/2020** SeqNo: **1193943**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	958	40.0	1,000	0	95.8	80	120				
Chrysene	947	40.0	1,000	0	94.7	80	120				
Benzo(b)fluoranthene	927	40.0	1,000	0	92.7	80	120				
Benzo(k)fluoranthene	980	40.0	1,000	0	98.0	80	120				
Benzo(a)pyrene	925	40.0	1,000	0	92.5	80	120				
Indeno(1,2,3-cd)pyrene	979	40.0	1,000	0	97.9	80	120				
Dibenz(a,h)anthracene	1,010	40.0	1,000	0	101	80	120				
Benzo(g,h,i)perylene	945	40.0	1,000	0	94.5	80	120				
Surr: 2-Fluorobiphenyl	434		500.0		86.8	69.5	150				
Surr: Terphenyl-d14 (surr)	437		500.0		87.4	71.6	145				

Sample ID: **MB-28581** SampType: **MBLK** Units: **µg/Kg** Prep Date: **6/8/2020** RunNo: **59681**
Client ID: **MBLKS** Batch ID: **28581** Analysis Date: **6/8/2020** SeqNo: **1193944**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	40.0									
2-Methylnaphthalene	ND	40.0									
1-Methylnaphthalene	ND	40.0									
Acenaphthylene	ND	40.0									
Acenaphthene	ND	40.0									
Fluorene	ND	40.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	40.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	40.0									
Benzo(k)fluoranthene	ND	40.0									
Benzo(a)pyrene	ND	40.0									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **MB-28581**	SampType: **MBLK**	Units: **µg/Kg**	Prep Date: **6/8/2020**	RunNo: **59681**
Client ID: **MBLKS**	Batch ID: **28581**		Analysis Date: **6/8/2020**	SeqNo: **1193944**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	40.0									
Surr: 2-Fluorobiphenyl	286		500.0		57.3	6.91	127				
Surr: Terphenyl-d14 (surr)	477		500.0		95.3	32.9	153				

Sample ID: **LCS-28581**	SampType: **LCS**	Units: **µg/Kg**	Prep Date: **6/8/2020**	RunNo: **59681**
Client ID: **LCSS**	Batch ID: **28581**		Analysis Date: **6/8/2020**	SeqNo: **1193945**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	597	40.0	1,000	0	59.7	47.3	136				
2-Methylnaphthalene	615	40.0	1,000	0	61.5	48.6	142				
1-Methylnaphthalene	610	40.0	1,000	0	61.0	51	140				
Acenaphthylene	603	40.0	1,000	0	60.3	47.5	137				
Acenaphthene	615	40.0	1,000	0	61.5	49.1	138				
Fluorene	629	40.0	1,000	0	62.9	49.3	137				
Phenanthrene	650	40.0	1,000	0	65.0	45.5	139				
Anthracene	621	40.0	1,000	0	62.1	44	139				
Fluoranthene	632	40.0	1,000	0	63.2	48.7	144				
Pyrene	644	40.0	1,000	0	64.4	47.9	143				
Benz(a)anthracene	685	40.0	1,000	0	68.5	49.8	143				
Chrysene	665	40.0	1,000	0	66.5	47.1	144				
Benzo(b)fluoranthene	694	40.0	1,000	0	69.4	44.6	150				
Benzo(k)fluoranthene	656	40.0	1,000	0	65.6	47.5	148				
Benzo(a)pyrene	646	40.0	1,000	0	64.6	45	149				
Indeno(1,2,3-cd)pyrene	678	40.0	1,000	0	67.8	41.4	146				
Dibenz(a,h)anthracene	705	40.0	1,000	0	70.5	43.4	145				
Benzo(g,h,i)perylene	660	40.0	1,000	0	66.0	42.7	144				
Surr: 2-Fluorobiphenyl	347		500.0		69.3	6.91	127				
Surr: Terphenyl-d14 (surr)	421		500.0		84.1	32.9	153				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **LCS-28581**	SampType: **LCS**			Units: **µg/Kg**		Prep Date: **6/8/2020**			RunNo: **59681**		
Client ID: **LCSS**	Batch ID: **28581**					Analysis Date: **6/8/2020**			SeqNo: **1193945**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **2006084-005ADUP**	SampType: **DUP**			Units: **µg/Kg-dry**		Prep Date: **6/8/2020**			RunNo: **59681**		
Client ID: **BATCH**	Batch ID: **28581**					Analysis Date: **6/8/2020**			SeqNo: **1194351**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	42.6						0		30	
2-Methylnaphthalene	ND	42.6						0		30	
1-Methylnaphthalene	ND	42.6						0		30	
Acenaphthylene	ND	42.6						0		30	
Acenaphthene	ND	42.6						0		30	
Fluorene	ND	42.6						0		30	
Phenanthrene	ND	42.6						0		30	
Anthracene	ND	42.6						0		30	
Fluoranthene	ND	42.6						0		30	
Pyrene	ND	42.6						0		30	
Benz(a)anthracene	ND	42.6						0		30	
Chrysene	ND	42.6						0		30	
Benzo(b)fluoranthene	ND	42.6						0		30	
Benzo(k)fluoranthene	ND	42.6						0		30	
Benzo(a)pyrene	ND	42.6						0		30	
Indeno(1,2,3-cd)pyrene	ND	42.6						0		30	
Dibenz(a,h)anthracene	ND	42.6						0		30	
Benzo(g,h,i)perylene	ND	42.6						0		30	
Surr: 2-Fluorobiphenyl	267		533.0		50.0	6.91	127		0		
Surr: Terphenyl-d14 (surr)	640		533.0		120	32.9	153		0		

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2006084-005AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **6/8/2020** RunNo: **59681**
Client ID: **BATCH** Batch ID: **28581** Analysis Date: **6/8/2020** SeqNo: **1194353**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	764	43.5	1,086	0	70.3	33	123				
2-Methylnaphthalene	855	43.5	1,086	0	78.7	38.9	128				
1-Methylnaphthalene	849	43.5	1,086	0	78.1	36.2	129				
Acenaphthylene	867	43.5	1,086	0	79.8	39	132				
Acenaphthene	873	43.5	1,086	0	80.3	39.5	124				
Fluorene	907	43.5	1,086	0	83.5	38.5	128				
Phenanthrene	948	43.5	1,086	0	87.3	34.1	130				
Anthracene	917	43.5	1,086	0	84.4	38.8	128				
Fluoranthene	926	43.5	1,086	0	85.3	38.6	136				
Pyrene	935	43.5	1,086	0	86.0	37.8	134				
Benz(a)anthracene	1,020	43.5	1,086	0	94.2	35.9	142				
Chrysene	946	43.5	1,086	0	87.0	36.7	131				
Benzo(b)fluoranthene	993	43.5	1,086	0	91.4	35	141				
Benzo(k)fluoranthene	987	43.5	1,086	0	90.8	35.9	136				
Benzo(a)pyrene	1,000	43.5	1,086	0	92.5	31.2	142				
Indeno(1,2,3-cd)pyrene	981	43.5	1,086	0	90.3	29.1	133				
Dibenz(a,h)anthracene	1,020	43.5	1,086	0	93.9	31.3	132				
Benzo(g,h,i)perylene	926	43.5	1,086	0	85.3	30.2	128				
Surr: 2-Fluorobiphenyl	529		543.2		97.3	6.91	127				
Surr: Terphenyl-d14 (surr)	625		543.2		115	32.9	153				

Sample ID: **2006084-005AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **6/8/2020** RunNo: **59681**
Client ID: **BATCH** Batch ID: **28581** Analysis Date: **6/8/2020** SeqNo: **1194354**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	740	39.2	979.6	0	75.6	33	123	763.8	3.14	30	
2-Methylnaphthalene	798	39.2	979.6	0	81.5	38.9	128	855.2	6.91	30	
1-Methylnaphthalene	791	39.2	979.6	0	80.7	36.2	129	849.1	7.11	30	
Acenaphthylene	791	39.2	979.6	0	80.7	39	132	866.5	9.15	30	
Acenaphthene	798	39.2	979.6	0	81.5	39.5	124	872.5	8.88	30	

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2006084-005AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **6/8/2020** RunNo: **59681**
Client ID: **BATCH** Batch ID: **28581** Analysis Date: **6/8/2020** SeqNo: **1194354**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	832	39.2	979.6	0	85.0	38.5	128	906.7	8.53	30	
Phenanthrene	871	39.2	979.6	0	88.9	34.1	130	948.0	8.43	30	
Anthracene	842	39.2	979.6	0	86.0	38.8	128	916.9	8.48	30	
Fluoranthene	846	39.2	979.6	0	86.4	38.6	136	926.5	9.07	30	
Pyrene	862	39.2	979.6	0	88.0	37.8	134	934.7	8.05	30	
Benz(a)anthracene	952	39.2	979.6	0	97.1	35.9	142	1,023	7.26	30	
Chrysene	892	39.2	979.6	0	91.1	36.7	131	945.8	5.81	30	
Benzo(b)fluoranthene	979	39.2	979.6	0	99.9	35	141	993.3	1.49	30	
Benzo(k)fluoranthene	859	39.2	979.6	0	87.7	35.9	136	986.7	13.8	30	
Benzo(a)pyrene	911	39.2	979.6	0	93.0	31.2	142	1,005	9.78	30	
Indeno(1,2,3-cd)pyrene	897	39.2	979.6	0	91.6	29.1	133	980.6	8.86	30	
Dibenz(a,h)anthracene	931	39.2	979.6	0	95.0	31.3	132	1,020	9.19	30	
Benzo(g,h,i)perylene	843	39.2	979.6	0	86.0	30.2	128	926.4	9.46	30	
Surr: 2-Fluorobiphenyl	438		489.8		89.5	6.91	127		0		
Surr: Terphenyl-d14 (surr)	577		489.8		118	32.9	153		0		

Sample ID: **QCS-28581A** SampType: **QCS** Units: **µg/L** Prep Date: **6/8/2020** RunNo: **59681**
Client ID: **BATCH** Batch ID: **28581** Analysis Date: **6/8/2020** SeqNo: **1194355**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	893	40.0	1,000	0	89.3	50	150				
2-Methylnaphthalene	900	40.0	1,000	0	90.0	50	150				
1-Methylnaphthalene	907	40.0	1,000	0	90.7	50	150				
Acenaphthylene	865	40.0	1,000	0	86.5	50	150				
Acenaphthene	877	40.0	1,000	0	87.7	50	150				
Fluorene	892	40.0	1,000	0	89.2	50	150				
Phenanthrene	933	40.0	1,000	0	93.3	50	150				
Anthracene	904	40.0	1,000	0	90.4	50	150				
Fluoranthene	909	40.0	1,000	0	90.9	50	150				
Pyrene	916	40.0	1,000	0	91.6	50	150				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **QCS-28581A** SampType: **QCS** Units: **µg/L** Prep Date: **6/8/2020** RunNo: **59681**
Client ID: **BATCH** Batch ID: **28581** Analysis Date: **6/8/2020** SeqNo: **1194355**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	1,010	40.0	1,000	0	101	50	150				
Chrysene	928	40.0	1,000	0	92.8	50	150				
Benzo(b)fluoranthene	935	40.0	1,000	0	93.5	50	150				
Benzo(k)fluoranthene	988	40.0	1,000	0	98.8	50	150				
Benzo(a)pyrene	981	40.0	1,000	0	98.1	50	150				
Indeno(1,2,3-cd)pyrene	954	40.0	1,000	0	95.4	50	150				
Dibenz(a,h)anthracene	992	40.0	1,000	0	99.2	50	150				
Benzo(g,h,i)perylene	894	40.0	1,000	0	89.4	50	150				
Surr: 2-Fluorobiphenyl	434		500.0		86.8	50	150				
Surr: Terphenyl-d14 (surr)	458		500.0		91.6	50	150				

Sample ID: **CCV-28581B** SampType: **CCV** Units: **µg/L** Prep Date: **6/8/2020** RunNo: **59681**
Client ID: **CCV** Batch ID: **28581** Analysis Date: **6/8/2020** SeqNo: **1194356**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	885	40.0	1,000	0	88.5	80	120				
2-Methylnaphthalene	898	40.0	1,000	0	89.8	80	120				
1-Methylnaphthalene	900	40.0	1,000	0	90.0	80	120				
Acenaphthylene	867	40.0	1,000	0	86.7	80	120				
Acenaphthene	869	40.0	1,000	0	86.9	80	120				
Fluorene	889	40.0	1,000	0	88.9	80	120				
Phenanthrene	923	40.0	1,000	0	92.3	80	120				
Anthracene	888	40.0	1,000	0	88.8	80	120				
Fluoranthene	904	40.0	1,000	0	90.4	80	120				
Pyrene	911	40.0	1,000	0	91.1	80	120				
Benz(a)anthracene	1,010	40.0	1,000	0	101	80	120				
Chrysene	924	40.0	1,000	0	92.4	80	120				
Benzo(b)fluoranthene	965	40.0	1,000	0	96.5	80	120				
Benzo(k)fluoranthene	955	40.0	1,000	0	95.5	80	120				
Benzo(a)pyrene	950	40.0	1,000	0	95.0	80	120				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **CCV-28581B**	SampType: **CCV**	Units: **µg/L**	Prep Date: **6/8/2020**	RunNo: **59681**
Client ID: **CCV**	Batch ID: **28581**		Analysis Date: **6/8/2020**	SeqNo: **1194356**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	956	40.0	1,000	0	95.6	80	120				
Dibenz(a,h)anthracene	998	40.0	1,000	0	99.8	80	120				
Benzo(g,h,i)perylene	893	40.0	1,000	0	89.3	80	120				
Surr: 2-Fluorobiphenyl	433		500.0		86.6	69.5	150				
Surr: Terphenyl-d14 (surr)	460		500.0		91.9	71.6	145				

Sample ID: **QCS-28581B**	SampType: **QCS**	Units: **µg/L**	Prep Date: **6/8/2020**	RunNo: **59681**
Client ID: **BATCH**	Batch ID: **28581**		Analysis Date: **6/8/2020**	SeqNo: **1194370**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	889	40.0	1,000	0	88.9	50	150				
2-Methylnaphthalene	906	40.0	1,000	0	90.6	50	150				
1-Methylnaphthalene	912	40.0	1,000	0	91.2	50	150				
Acenaphthylene	894	40.0	1,000	0	89.4	50	150				
Acenaphthene	894	40.0	1,000	0	89.4	50	150				
Fluorene	914	40.0	1,000	0	91.4	50	150				
Phenanthrene	925	40.0	1,000	0	92.5	50	150				
Anthracene	914	40.0	1,000	0	91.4	50	150				
Fluoranthene	943	40.0	1,000	0	94.3	50	150				
Pyrene	947	40.0	1,000	0	94.7	50	150				
Benz(a)anthracene	984	40.0	1,000	0	98.4	50	150				
Chrysene	905	40.0	1,000	0	90.5	50	150				
Benzo(b)fluoranthene	798	40.0	1,000	0	79.8	50	150				
Benzo(k)fluoranthene	746	40.0	1,000	0	74.6	50	150				
Benzo(a)pyrene	688	40.0	1,000	0	68.8	50	150				
Indeno(1,2,3-cd)pyrene	573	40.0	1,000	0	57.3	50	150				
Dibenz(a,h)anthracene	628	40.0	1,000	0	62.8	50	150				
Benzo(g,h,i)perylene	452	40.0	1,000	0	45.2	50	150				S
Surr: 2-Fluorobiphenyl	440		500.0		87.9	50	150				
Surr: Terphenyl-d14 (surr)	473		500.0		94.6	50	150				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **QCS-28581B**	SampType: **QCS**			Units: **µg/L**		Prep Date: **6/8/2020**			RunNo: **59681**		
Client ID: **BATCH**	Batch ID: **28581**					Analysis Date: **6/8/2020**			SeqNo: **1194370**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery observed (low bias). Samples will be qualified with a Q.

Sample ID: **CCV-28581C**	SampType: **CCV**			Units: **µg/L**		Prep Date: **6/9/2020**			RunNo: **59681**		
Client ID: **CCV**	Batch ID: **28581**					Analysis Date: **6/9/2020**			SeqNo: **1194371**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	894	40.0	1,000	0	89.4	80	120				
2-Methylnaphthalene	900	40.0	1,000	0	90.0	80	120				
1-Methylnaphthalene	908	40.0	1,000	0	90.8	80	120				
Acenaphthylene	871	40.0	1,000	0	87.1	80	120				
Acenaphthene	882	40.0	1,000	0	88.2	80	120				
Fluorene	895	40.0	1,000	0	89.5	80	120				
Phenanthrene	939	40.0	1,000	0	93.9	80	120				
Anthracene	879	40.0	1,000	0	87.9	80	120				
Fluoranthene	870	40.0	1,000	0	87.0	80	120				
Pyrene	866	40.0	1,000	0	86.6	80	120				
Benz(a)anthracene	593	40.0	1,000	0	59.3	80	120				S
Chrysene	930	40.0	1,000	0	93.0	80	120				
Benzo(b)fluoranthene	764	40.0	1,000	0	76.4	80	120				S
Benzo(k)fluoranthene	663	40.0	1,000	0	66.3	80	120				S
Benzo(a)pyrene	585	40.0	1,000	0	58.5	80	120				S
Indeno(1,2,3-cd)pyrene	605	40.0	1,000	0	60.5	80	120				SI
Dibenz(a,h)anthracene	599	40.0	1,000	0	59.9	80	120				SI
Benzo(g,h,i)perylene	616	40.0	1,000	0	61.6	80	120				SI
Surr: 2-Fluorobiphenyl	438		500.0		87.7	69.5	150				
Surr: Terphenyl-d14 (surr)	410		500.0		82.0	71.6	145				

NOTES:
S - Outlying spike recovery observed (low bias). Samples will be qualified with a Q.
I - Indicates an analyte with an internal standard that does not meet established acceptance criteria.

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **QCS-28581C**	SampType: **QCS**	Units: **µg/L**	Prep Date: **6/9/2020**	RunNo: **59681**
Client ID: **BATCH**	Batch ID: **28581**		Analysis Date: **6/9/2020**	SeqNo: **1194373**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	884	40.0	1,000	0	88.4	50	150				
2-Methylnaphthalene	890	40.0	1,000	0	89.0	50	150				
1-Methylnaphthalene	901	40.0	1,000	0	90.1	50	150				
Acenaphthylene	860	40.0	1,000	0	86.0	50	150				
Acenaphthene	874	40.0	1,000	0	87.4	50	150				
Fluorene	884	40.0	1,000	0	88.4	50	150				
Phenanthrene	923	40.0	1,000	0	92.3	50	150				
Anthracene	865	40.0	1,000	0	86.5	50	150				
Fluoranthene	866	40.0	1,000	0	86.6	50	150				
Pyrene	859	40.0	1,000	0	85.9	50	150				
Benz(a)anthracene	609	40.0	1,000	0	60.9	50	150				
Chrysene	911	40.0	1,000	0	91.1	50	150				
Benzo(b)fluoranthene	763	40.0	1,000	0	76.3	50	150				
Benzo(k)fluoranthene	680	40.0	1,000	0	68.0	50	150				
Benzo(a)pyrene	654	40.0	1,000	0	65.4	50	150				
Indeno(1,2,3-cd)pyrene	694	40.0	1,000	0	69.4	50	150				
Dibenz(a,h)anthracene	683	40.0	1,000	0	68.3	50	150				
Benzo(g,h,i)perylene	724	40.0	1,000	0	72.4	50	150				
Surr: 2-Fluorobiphenyl	434		500.0		86.9	50	150				
Surr: Terphenyl-d14 (surr)	415		500.0		82.9	50	150				

Sample ID: **PAH ICV**	SampType: **ICV**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59735**
Client ID: **ICV**	Batch ID: **28595**		Analysis Date: **6/10/2020**	SeqNo: **1195467**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	894	40.0	1,000	0	89.4	70	130				
2-Methylnaphthalene	893	40.0	1,000	0	89.3	70	130				
1-Methylnaphthalene	888	40.0	1,000	0	88.8	70	130				
Acenaphthylene	868	40.0	1,000	0	86.8	70	130				
Acenaphthene	885	40.0	1,000	0	88.5	70	130				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **PAH ICV** SampType: **ICV** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59735**
Client ID: **ICV** Batch ID: **28595** Analysis Date: **6/10/2020** SeqNo: **1195467**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	882	40.0	1,000	0	88.2	70	130				
Phenanthrene	888	40.0	1,000	0	88.8	70	130				
Anthracene	840	40.0	1,000	0	84.0	70	130				
Fluoranthene	822	40.0	1,000	0	82.2	70	130				
Pyrene	834	40.0	1,000	0	83.4	70	130				
Benz(a)anthracene	895	40.0	1,000	0	89.5	70	130				
Chrysene	974	40.0	1,000	0	97.4	70	130				
Benzo(b)fluoranthene	975	40.0	1,000	0	97.5	70	130				
Benzo(k)fluoranthene	929	40.0	1,000	0	92.9	70	130				
Benzo(a)pyrene	942	40.0	1,000	0	94.2	70	130				
Indeno(1,2,3-cd)pyrene	967	40.0	1,000	0	96.7	70	130				
Dibenz(a,h)anthracene	1,020	40.0	1,000	0	102	70	130				
Benzo(g,h,i)perylene	976	40.0	1,000	0	97.6	70	130				
Surr: 2-Fluorobiphenyl	557		500.0		111	69.5	150				
Surr: Terphenyl-d14 (surr)	517		500.0		103	71.6	145				

Sample ID: **PAH ICB** SampType: **ICB** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59735**
Client ID: **ICB** Batch ID: **28595** Analysis Date: **6/10/2020** SeqNo: **1195468**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	40.0									
2-Methylnaphthalene	ND	40.0									
1-Methylnaphthalene	ND	40.0									
Acenaphthylene	ND	40.0									
Acenaphthene	ND	40.0									
Fluorene	ND	40.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **PAH ICB**	SampType: **ICB**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59735**
Client ID: **ICB**	Batch ID: **28595**		Analysis Date: **6/10/2020**	SeqNo: **1195468**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	ND	40.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	40.0									
Benzo(k)fluoranthene	ND	40.0									
Benzo(a)pyrene	ND	40.0									
Indeno(1,2,3-cd)pyrene	81.5	40.0									
Dibenz(a,h)anthracene	103	40.0									
Benzo(g,h,i)perylene	68.2	40.0									
Surr: 2-Fluorobiphenyl	500		500.0		100	50.4	142				
Surr: Terphenyl-d14 (surr)	457		500.0		91.5	48.8	157				

Sample ID: **CCV-28595**	SampType: **CCV**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59735**
Client ID: **CCV**	Batch ID: **28595**		Analysis Date: **6/10/2020**	SeqNo: **1195469**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	947	40.0	1,000	0	94.7	80	120				
2-Methylnaphthalene	954	40.0	1,000	0	95.4	80	120				
1-Methylnaphthalene	967	40.0	1,000	0	96.7	80	120				
Acenaphthylene	934	40.0	1,000	0	93.4	80	120				
Acenaphthene	950	40.0	1,000	0	95.0	80	120				
Fluorene	959	40.0	1,000	0	95.9	80	120				
Phenanthrene	984	40.0	1,000	0	98.4	80	120				
Anthracene	935	40.0	1,000	0	93.5	80	120				
Fluoranthene	924	40.0	1,000	0	92.4	80	120				
Pyrene	936	40.0	1,000	0	93.6	80	120				
Benz(a)anthracene	1,020	40.0	1,000	0	102	80	120				
Chrysene	994	40.0	1,000	0	99.4	80	120				
Benzo(b)fluoranthene	1,080	40.0	1,000	0	108	80	120				
Benzo(k)fluoranthene	884	40.0	1,000	0	88.4	80	120				
Benzo(a)pyrene	1,010	40.0	1,000	0	101	80	120				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **CCV-28595**	SampType: **CCV**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59735**
Client ID: **CCV**	Batch ID: **28595**		Analysis Date: **6/10/2020**	SeqNo: **1195469**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	1,010	40.0	1,000	0	101	80	120				
Dibenz(a,h)anthracene	1,110	40.0	1,000	0	111	80	120				
Benzo(g,h,i)perylene	1,010	40.0	1,000	0	101	80	120				
Surr: 2-Fluorobiphenyl	472		500.0		94.4	69.5	150				
Surr: Terphenyl-d14 (surr)	458		500.0		91.6	71.6	145				

Sample ID: **LCS-28595**	SampType: **LCS**	Units: **µg/Kg**	Prep Date: **6/9/2020**	RunNo: **59735**
Client ID: **LCSS**	Batch ID: **28595**		Analysis Date: **6/10/2020**	SeqNo: **1195471**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	808	40.0	1,000	0	80.8	47.3	136				
2-Methylnaphthalene	819	40.0	1,000	0	81.9	48.6	142				
1-Methylnaphthalene	820	40.0	1,000	0	82.0	51	140				
Acenaphthylene	807	40.0	1,000	0	80.7	47.5	137				
Acenaphthene	828	40.0	1,000	0	82.8	49.1	138				
Fluorene	840	40.0	1,000	0	84.0	49.3	137				
Phenanthrene	856	40.0	1,000	0	85.6	45.5	139				
Anthracene	801	40.0	1,000	0	80.1	44	139				
Fluoranthene	797	40.0	1,000	0	79.7	48.7	144				
Pyrene	815	40.0	1,000	0	81.5	47.9	143				
Benz(a)anthracene	871	40.0	1,000	0	87.1	49.8	143				
Chrysene	861	40.0	1,000	0	86.1	47.1	144				
Benzo(b)fluoranthene	928	40.0	1,000	0	92.8	44.6	150				
Benzo(k)fluoranthene	819	40.0	1,000	0	81.9	47.5	148				
Benzo(a)pyrene	865	40.0	1,000	0	86.5	45	149				
Indeno(1,2,3-cd)pyrene	865	40.0	1,000	0	86.5	41.4	146				
Dibenz(a,h)anthracene	878	40.0	1,000	0	87.8	43.4	145				
Benzo(g,h,i)perylene	879	40.0	1,000	0	87.9	42.7	144				
Surr: 2-Fluorobiphenyl	504		500.0		101	6.91	127				
Surr: Terphenyl-d14 (surr)	599		500.0		120	32.9	153				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **LCS-28595**	SampType: **LCS**			Units: **µg/Kg**		Prep Date: **6/9/2020**			RunNo: **59735**		
Client ID: **LCSS**	Batch ID: **28595**					Analysis Date: **6/10/2020**			SeqNo: **1195471**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **2006123-002ADUP**	SampType: **DUP**			Units: **µg/Kg-dry**		Prep Date: **6/9/2020**			RunNo: **59735**		
Client ID: **BATCH**	Batch ID: **28595**					Analysis Date: **6/11/2020**			SeqNo: **1195551**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	44.7						0		30	
2-Methylnaphthalene	ND	44.7						0		30	
1-Methylnaphthalene	ND	44.7						0		30	
Acenaphthylene	ND	44.7						0		30	
Acenaphthene	ND	44.7						0		30	
Fluorene	ND	44.7						0		30	
Phenanthrene	ND	44.7						0		30	
Anthracene	ND	44.7						0		30	
Fluoranthene	ND	44.7						0		30	
Pyrene	ND	44.7						0		30	
Benz(a)anthracene	ND	44.7						0		30	
Chrysene	ND	44.7						0		30	
Benzo(b)fluoranthene	ND	44.7						0		30	
Benzo(k)fluoranthene	ND	44.7						0		30	
Benzo(a)pyrene	ND	44.7						0		30	
Indeno(1,2,3-cd)pyrene	ND	44.7						0		30	
Dibenz(a,h)anthracene	ND	44.7						0		30	
Benzo(g,h,i)perylene	ND	44.7						0		30	
Surr: 2-Fluorobiphenyl	892		1,116		79.9	6.91	127		0		
Surr: Terphenyl-d14 (surr)	1,230		1,116		110	32.9	153		0		

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2006123-002AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **6/9/2020** RunNo: **59735**
Client ID: **BATCH** Batch ID: **28595** Analysis Date: **6/11/2020** SeqNo: **1195552**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	814	45.1	1,129	0	72.1	33	123				
2-Methylnaphthalene	845	45.1	1,129	0	74.9	38.9	128				
1-Methylnaphthalene	853	45.1	1,129	0	75.5	36.2	129				
Acenaphthylene	858	45.1	1,129	0	76.0	39	132				
Acenaphthene	867	45.1	1,129	0	76.8	39.5	124				
Fluorene	874	45.1	1,129	0	77.4	38.5	128				
Phenanthrene	883	45.1	1,129	0	78.2	34.1	130				
Anthracene	856	45.1	1,129	0	75.8	38.8	128				
Fluoranthene	880	45.1	1,129	0	77.9	38.6	136				
Pyrene	894	45.1	1,129	8.740	78.4	37.8	134				
Benz(a)anthracene	1,050	45.1	1,129	0	93.1	35.9	142				
Chrysene	885	45.1	1,129	0	78.4	36.7	131				
Benzo(b)fluoranthene	1,130	45.1	1,129	0	99.9	35	141				
Benzo(k)fluoranthene	868	45.1	1,129	0	76.9	35.9	136				
Benzo(a)pyrene	985	45.1	1,129	0	87.3	31.2	142				
Indeno(1,2,3-cd)pyrene	932	45.1	1,129	0	82.5	29.1	133				
Dibenz(a,h)anthracene	922	45.1	1,129	0	81.7	31.3	132				
Benzo(g,h,i)perylene	1,030	45.1	1,129	0	90.8	30.2	128				
Surr: 2-Fluorobiphenyl	504		564.3		89.4	6.91	127				
Surr: Terphenyl-d14 (surr)	629		564.3		111	32.9	153				

Sample ID: **2006123-002AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **6/9/2020** RunNo: **59735**
Client ID: **BATCH** Batch ID: **28595** Analysis Date: **6/11/2020** SeqNo: **1195553**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	656	39.1	977.4	0	67.1	33	123	814.3	21.6	30	
2-Methylnaphthalene	698	39.1	977.4	0	71.4	38.9	128	845.3	19.1	30	
1-Methylnaphthalene	705	39.1	977.4	0	72.1	36.2	129	852.7	19.0	30	
Acenaphthylene	713	39.1	977.4	0	73.0	39	132	858.0	18.5	30	
Acenaphthene	723	39.1	977.4	0	74.0	39.5	124	866.7	18.1	30	

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2006123-002AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **6/9/2020** RunNo: **59735**
Client ID: **BATCH** Batch ID: **28595** Analysis Date: **6/11/2020** SeqNo: **1195553**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	728	39.1	977.4	0	74.5	38.5	128	874.2	18.2	30	
Phenanthrene	742	39.1	977.4	0	75.9	34.1	130	882.9	17.4	30	
Anthracene	722	39.1	977.4	0	73.9	38.8	128	855.7	16.9	30	
Fluoranthene	727	39.1	977.4	0	74.4	38.6	136	879.5	18.9	30	
Pyrene	753	39.1	977.4	8.740	76.2	37.8	134	894.1	17.1	30	
Benz(a)anthracene	907	39.1	977.4	0	92.8	35.9	142	1,051	14.7	30	
Chrysene	737	39.1	977.4	0	75.4	36.7	131	884.5	18.2	30	
Benzo(b)fluoranthene	957	39.1	977.4	0	97.9	35	141	1,128	16.5	30	
Benzo(k)fluoranthene	780	39.1	977.4	0	79.9	35.9	136	868.2	10.6	30	
Benzo(a)pyrene	873	39.1	977.4	0	89.3	31.2	142	985.1	12.1	30	
Indeno(1,2,3-cd)pyrene	823	39.1	977.4	0	84.2	29.1	133	931.6	12.4	30	
Dibenz(a,h)anthracene	807	39.1	977.4	0	82.6	31.3	132	921.6	13.3	30	
Benzo(g,h,i)perylene	920	39.1	977.4	0	94.1	30.2	128	1,025	10.9	30	
Surr: 2-Fluorobiphenyl	424		488.7		86.7	6.91	127		0		
Surr: Terphenyl-d14 (surr)	523		488.7		107	32.9	153		0		

Sample ID: **MB-28595** SampType: **MBLK** Units: **µg/Kg** Prep Date: **6/9/2020** RunNo: **59735**
Client ID: **MBLKS** Batch ID: **28595** Analysis Date: **6/11/2020** SeqNo: **1195556**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	40.0									
2-Methylnaphthalene	ND	40.0									
1-Methylnaphthalene	ND	40.0									
Acenaphthylene	ND	40.0									
Acenaphthene	ND	40.0									
Fluorene	ND	40.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **MB-28595**	SampType: **MBLK**	Units: **µg/Kg**	Prep Date: **6/9/2020**	RunNo: **59735**
Client ID: **MBLKS**	Batch ID: **28595**		Analysis Date: **6/11/2020**	SeqNo: **1195556**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	ND	40.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	40.0									
Benzo(k)fluoranthene	ND	40.0									
Benzo(a)pyrene	ND	40.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	40.0									
Surr: 2-Fluorobiphenyl	902		1,000		90.2	6.91	127				
Surr: Terphenyl-d14 (surr)	1,280		1,000		128	32.9	153				

Sample ID: **QCS-28595**	SampType: **QCS**	Units: **µg/L**	Prep Date: **6/11/2020**	RunNo: **59735**
Client ID: **BATCH**	Batch ID: **28595**		Analysis Date: **6/11/2020**	SeqNo: **1195559**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	958	40.0	1,000	0	95.8	50	150				
2-Methylnaphthalene	971	40.0	1,000	0	97.1	50	150				
1-Methylnaphthalene	992	40.0	1,000	0	99.2	50	150				
Acenaphthylene	974	40.0	1,000	0	97.4	50	150				
Acenaphthene	981	40.0	1,000	0	98.1	50	150				
Fluorene	988	40.0	1,000	0	98.8	50	150				
Phenanthrene	976	40.0	1,000	0	97.6	50	150				
Anthracene	952	40.0	1,000	0	95.2	50	150				
Fluoranthene	981	40.0	1,000	0	98.1	50	150				
Pyrene	993	40.0	1,000	0	99.3	50	150				
Benz(a)anthracene	1,210	40.0	1,000	0	121	50	150				
Chrysene	1,020	40.0	1,000	0	102	50	150				
Benzo(b)fluoranthene	1,110	40.0	1,000	0	111	50	150				
Benzo(k)fluoranthene	1,150	40.0	1,000	0	115	50	150				
Benzo(a)pyrene	1,130	40.0	1,000	0	113	50	150				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **QCS-28595** SampType: **QCS** Units: **µg/L** Prep Date: **6/11/2020** RunNo: **59735**
Client ID: **BATCH** Batch ID: **28595** Analysis Date: **6/11/2020** SeqNo: **1195559**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	1,030	40.0	1,000	0	103	50	150				
Dibenz(a,h)anthracene	1,030	40.0	1,000	0	103	50	150				
Benzo(g,h,i)perylene	1,060	40.0	1,000	0	106	50	150				
Surr: 2-Fluorobiphenyl	484		500.0		96.8	50	150				
Surr: Terphenyl-d14 (surr)	475		500.0		95.0	50	150				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **CAL MIDPOINT** SampType: **CCV** Units: **µg/L** Prep Date: **6/3/2020** RunNo: **59807**
Client ID: **CCV** Batch ID: **28605** Analysis Date: **6/3/2020** SeqNo: **1196792**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	966	100	1,000	0	96.6	80	120				
Bis(2-chloroethyl) ether	959	100	1,000	0	95.9	80	120				
2-Chlorophenol	976	100	1,000	0	97.6	80	120				
1,3-Dichlorobenzene	1,010	75.0	1,000	0	101	80	120				
1,4-Dichlorobenzene	925	75.0	1,000	0	92.5	80	120				
1,2-Dichlorobenzene	945	75.0	1,000	0	94.5	80	120				
Benzyl alcohol	970	100	1,000	0	97.0	80	120				
2-Methylphenol (o-cresol)	1,010	100	1,000	0	101	80	120				
Hexachloroethane	1,070	100	1,000	0	107	80	120				
N-Nitrosodi-n-propylamine	978	100	1,000	0	97.8	80	120				
3&4-Methylphenol (m, p-cresol)	979	100	1,000	0	97.9	80	120				
Nitrobenzene	992	100	1,000	0	99.2	80	120				
Isophorone	981	100	1,000	0	98.1	80	120				
2-Nitrophenol	1,020	100	1,000	0	102	80	120				
2,4-Dimethylphenol	964	100	1,000	0	96.4	80	120				
Bis(2-chloroethoxy)methane	955	75.0	1,000	0	95.5	80	120				
2,4-Dichlorophenol	982	100	1,000	0	98.2	80	120				
1,2,4-Trichlorobenzene	971	75.0	1,000	0	97.1	80	120				
Naphthalene	1,030	50.0	1,000	0	103	80	120				
4-Chloroaniline	985	75.0	1,000	0	98.5	80	120				
Hexachlorobutadiene	1,020	75.0	1,000	0	102	80	120				
4-Chloro-3-methylphenol	950	200	1,000	0	95.0	80	120				
2-Methylnaphthalene	967	50.0	1,000	0	96.7	80	120				
1-Methylnaphthalene	967	50.0	1,000	0	96.7	80	120				
Hexachlorocyclopentadiene	965	100	1,000	0	96.5	80	120				
2,4,6-Trichlorophenol	1,050	100	1,000	0	105	80	120				
2,4,5-Trichlorophenol	952	100	1,000	0	95.2	80	120				
2-Chloronaphthalene	964	75.0	1,000	0	96.4	80	120				
2-Nitroaniline	990	100	1,000	0	99.0	80	120				
Acenaphthene	1,090	50.0	1,000	0	109	80	120				
Dimethylphthalate	977	100	1,000	0	97.7	80	120				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **CAL MIDPOINT** SampType: **CCV** Units: **µg/L** Prep Date: **6/3/2020** RunNo: **59807**
Client ID: **CCV** Batch ID: **28605** Analysis Date: **6/3/2020** SeqNo: **1196792**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,6-Dinitrotoluene	893	100	1,000	0	89.3	80	120				
Acenaphthylene	986	50.0	1,000	0	98.6	80	120				
2,4-Dinitrophenol	2,020	525	2,000	0	101	80	120				
Dibenzofuran	951	75.0	1,000	0	95.1	80	120				
2,4-Dinitrotoluene	1,000	100	1,000	0	100	80	120				
4-Nitrophenol	978	500	1,000	0	97.8	80	120				
Fluorene	1,010	50.0	1,000	0	101	80	120				
4-Chlorophenyl phenyl ether	871	75.0	1,000	0	87.1	80	120				
Diethylphthalate	1,010	100	1,000	0	101	80	120				
4,6-Dinitro-2-methylphenol	1,050	200	1,000	0	105	80	120				
4-Bromophenyl phenyl ether	1,020	75.0	1,000	0	102	80	120				
Hexachlorobenzene	1,000	75.0	1,000	0	100	80	120				
Pentachlorophenol	943	100	1,000	0	94.3	80	120				
Phenanthrene	968	50.0	1,000	0	96.8	80	120				
Anthracene	1,010	50.0	1,000	0	101	80	120				
Carbazole	981	75.0	1,000	0	98.1	80	120				
Di-n-butylphthalate	1,010	100	1,000	0	101	80	120				
Fluoranthene	1,010	50.0	1,000	0	101	80	120				
Pyrene	1,050	50.0	1,000	0	105	80	120				
Butyl Benzylphthalate	995	100	1,000	0	99.5	80	120				
bis(2-Ethylhexyl)adipate	985	100	1,000	0	98.5	80	120				
Benz(a)anthracene	989	50.0	1,000	0	98.9	80	120				
Chrysene	1,000	50.0	1,000	0	100	80	120				
bis (2-Ethylhexyl) phthalate	983	100	1,000	0	98.3	80	120				
Di-n-octyl phthalate	1,030	100	1,000	0	103	80	120				
Benzo(b)fluoranthene	1,010	50.0	1,000	0	101	80	120				
Benzo(k)fluoranthene	962	50.0	1,000	0	96.2	80	120				
Benzo(a)pyrene	1,010	50.0	1,000	0	101	80	120				
Indeno(1,2,3-cd)pyrene	986	50.0	1,000	0	98.6	80	120				
Dibenz(a,h)anthracene	1,020	50.0	1,000	0	102	80	120				
Benzo(g,h,i)perylene	1,000	50.0	1,000	0	100	80	120				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **CAL MIDPOINT** SampType: **CCV** Units: **µg/L** Prep Date: **6/3/2020** RunNo: **59807**
Client ID: **CCV** Batch ID: **28605** Analysis Date: **6/3/2020** SeqNo: **1196792**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	1,060		1,000		106	65.9	141				
Surr: 2-Fluorobiphenyl	485		500.0		97.1	73.1	130				
Surr: Nitrobenzene-d5	485		500.0		96.9	77.9	122				
Surr: Phenol-d6	884		1,000		88.4	78.9	117				
Surr: p-Terphenyl	494		500.0		98.9	71.7	131				

Sample ID: **SEMI ICB** SampType: **ICB** Units: **µg/L** Prep Date: **6/3/2020** RunNo: **59585**
Client ID: **ICB** Batch ID: **28605** Analysis Date: **6/3/2020** SeqNo: **1191657**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	ND	100									
Bis(2-chloroethyl) ether	ND	100									
2-Chlorophenol	ND	100									
1,3-Dichlorobenzene	ND	75.0									
1,4-Dichlorobenzene	ND	75.0									
1,2-Dichlorobenzene	ND	75.0									
Benzyl alcohol	ND	100									
2-Methylphenol (o-cresol)	ND	100									
Hexachloroethane	ND	100									
N-Nitrosodi-n-propylamine	ND	100									
3&4-Methylphenol (m, p-cresol)	ND	100									
Nitrobenzene	ND	100									
Isophorone	ND	100									
2-Nitrophenol	ND	100									
2,4-Dimethylphenol	ND	100									
Bis(2-chloroethoxy)methane	ND	75.0									
2,4-Dichlorophenol	ND	100									
1,2,4-Trichlorobenzene	ND	75.0									
Naphthalene	ND	50.0									
4-Chloroaniline	ND	75.0									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **SEMI ICB** SampType: **ICB** Units: **µg/L** Prep Date: **6/3/2020** RunNo: **59585**
Client ID: **ICB** Batch ID: **28605** Analysis Date: **6/3/2020** SeqNo: **1191657**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachlorobutadiene	ND	75.0									
4-Chloro-3-methylphenol	ND	200									
2-Methylnaphthalene	ND	50.0									
1-Methylnaphthalene	ND	50.0									
Hexachlorocyclopentadiene	ND	100									
2,4,6-Trichlorophenol	ND	100									
2,4,5-Trichlorophenol	ND	100									
2-Chloronaphthalene	ND	75.0									
2-Nitroaniline	ND	100									
Acenaphthene	ND	50.0									
Dimethylphthalate	ND	100									
2,6-Dinitrotoluene	ND	100									
Acenaphthylene	ND	50.0									
2,4-Dinitrophenol	ND	525									
Dibenzofuran	ND	75.0									
2,4-Dinitrotoluene	ND	100									
4-Nitrophenol	ND	500									
Fluorene	ND	50.0									
4-Chlorophenyl phenyl ether	ND	75.0									
Diethylphthalate	ND	100									
4,6-Dinitro-2-methylphenol	ND	200									
4-Bromophenyl phenyl ether	ND	75.0									
Hexachlorobenzene	ND	75.0									
Pentachlorophenol	ND	100									
Phenanthrene	ND	50.0									
Anthracene	ND	50.0									
Carbazole	ND	75.0									
Di-n-butylphthalate	ND	100									
Fluoranthene	ND	50.0									
Pyrene	ND	50.0									
Butyl Benzylphthalate	ND	100									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **SEMI ICB** SampType: **ICB** Units: **µg/L** Prep Date: **6/3/2020** RunNo: **59585**
Client ID: **ICB** Batch ID: **28605** Analysis Date: **6/3/2020** SeqNo: **1191657**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
bis(2-Ethylhexyl)adipate	ND	100									
Benz(a)anthracene	ND	50.0									
Chrysene	ND	50.0									
bis (2-Ethylhexyl) phthalate	ND	100									
Di-n-octyl phthalate	ND	100									
Benzo(b)fluoranthene	ND	50.0									
Benzo(k)fluoranthene	ND	50.0									
Benzo(a)pyrene	ND	50.0									
Indeno(1,2,3-cd)pyrene	ND	50.0									
Dibenz(a,h)anthracene	ND	50.0									
Benzo(g,h,i)perylene	ND	50.0									
Surr: 2,4,6-Tribromophenol	1,290		1,000		129	10	164				
Surr: 2-Fluorobiphenyl	658		500.0		132	15.1	147				
Surr: Nitrobenzene-d5	658		500.0		132	5	148				
Surr: Phenol-d6	1,230		1,000		123	12.1	141				
Surr: p-Terphenyl	707		500.0		141	20.8	159				

Sample ID: **SEMI ICV** SampType: **ICV** Units: **µg/L** Prep Date: **6/3/2020** RunNo: **59585**
Client ID: **ICV** Batch ID: **28605** Analysis Date: **6/3/2020** SeqNo: **1191658**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	983	100	1,000	0	98.3	70	130				
Bis(2-chloroethyl) ether	972	100	1,000	0	97.2	70	130				
2-Chlorophenol	988	100	1,000	0	98.8	70	130				
1,3-Dichlorobenzene	945	75.0	1,000	0	94.5	70	130				
1,4-Dichlorobenzene	908	75.0	1,000	0	90.8	70	130				
1,2-Dichlorobenzene	986	75.0	1,000	0	98.6	70	130				
Benzyl alcohol	1,080	100	1,000	0	108	70	130				
2-Methylphenol (o-cresol)	1,000	100	1,000	0	100	70	130				
Hexachloroethane	942	100	1,000	0	94.2	70	130				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **SEMI ICV** SampType: **ICV** Units: **µg/L** Prep Date: **6/3/2020** RunNo: **59585**
Client ID: **ICV** Batch ID: **28605** Analysis Date: **6/3/2020** SeqNo: **1191658**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
N-Nitrosodi-n-propylamine	1,040	100	1,000	0	104	70	130				
3&4-Methylphenol (m, p-cresol)	989	100	1,000	0	98.9	70	130				
Nitrobenzene	970	100	1,000	0	97.0	70	130				
Isophorone	997	100	1,000	0	99.7	70	130				
2-Nitrophenol	1,060	100	1,000	0	106	70	130				
2,4-Dimethylphenol	1,060	100	1,000	0	106	70	130				
Bis(2-chloroethoxy)methane	978	75.0	1,000	0	97.8	70	130				
2,4-Dichlorophenol	1,020	100	1,000	0	102	70	130				
1,2,4-Trichlorobenzene	968	75.0	1,000	0	96.8	70	130				
Naphthalene	1,030	50.0	1,000	0	103	70	130				
4-Chloroaniline	1,050	75.0	1,000	0	105	70	130				
Hexachlorobutadiene	1,010	75.0	1,000	0	101	70	130				
4-Chloro-3-methylphenol	1,030	200	1,000	0	103	70	130				
2-Methylnaphthalene	980	50.0	1,000	0	98.0	70	130				
1-Methylnaphthalene	1,020	50.0	1,000	0	102	70	130				
Hexachlorocyclopentadiene	1,100	100	1,000	0	110	70	130				
2,4,6-Trichlorophenol	1,010	100	1,000	0	101	70	130				
2,4,5-Trichlorophenol	1,010	100	1,000	0	101	70	130				
2-Chloronaphthalene	1,050	75.0	1,000	0	105	70	130				
2-Nitroaniline	1,050	100	1,000	0	105	70	130				
Acenaphthene	1,040	50.0	1,000	0	104	70	130				
Dimethylphthalate	1,070	100	1,000	0	107	70	130				
2,6-Dinitrotoluene	1,090	100	1,000	0	109	70	130				
Acenaphthylene	1,000	50.0	1,000	0	100	70	130				
2,4-Dinitrophenol	2,260	525	2,000	0	113	70	130				
Dibenzofuran	981	75.0	1,000	0	98.1	70	130				
2,4-Dinitrotoluene	1,060	100	1,000	0	106	70	130				
4-Nitrophenol	1,110	500	1,000	0	111	70	130				
Fluorene	1,030	50.0	1,000	0	103	70	130				
4-Chlorophenyl phenyl ether	1,040	75.0	1,000	0	104	70	130				
Diethylphthalate	1,030	100	1,000	0	103	70	130				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **SEMI ICV** SampType: **ICV** Units: **µg/L** Prep Date: **6/3/2020** RunNo: **59585**
Client ID: **ICV** Batch ID: **28605** Analysis Date: **6/3/2020** SeqNo: **1191658**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4,6-Dinitro-2-methylphenol	1,040	200	1,000	0	104	70	130				
4-Bromophenyl phenyl ether	1,010	75.0	1,000	0	101	70	130				
Hexachlorobenzene	1,060	75.0	1,000	0	106	70	130				
Pentachlorophenol	996	100	1,000	0	99.6	70	130				
Phenanthrene	1,030	50.0	1,000	0	103	70	130				
Anthracene	1,050	50.0	1,000	0	105	70	130				
Carbazole	1,040	75.0	1,000	0	104	70	130				
Di-n-butylphthalate	1,030	100	1,000	0	103	70	130				
Fluoranthene	1,010	50.0	1,000	0	101	70	130				
Pyrene	1,000	50.0	1,000	0	100	70	130				
Butyl Benzylphthalate	1,020	100	1,000	0	102	70	130				
bis(2-Ethylhexyl)adipate	1,060	100	1,000	0	106	70	130				
Benz(a)anthracene	1,040	50.0	1,000	0	104	70	130				
Chrysene	1,010	50.0	1,000	0	101	70	130				
bis (2-Ethylhexyl) phthalate	1,050	100	1,000	0	105	70	130				
Di-n-octyl phthalate	1,050	100	1,000	0	105	70	130				
Benzo(b)fluoranthene	937	50.0	1,000	0	93.7	70	130				
Benzo(k)fluoranthene	1,170	50.0	1,000	0	117	70	130				
Benzo(a)pyrene	1,010	50.0	1,000	0	101	70	130				
Indeno(1,2,3-cd)pyrene	1,040	50.0	1,000	0	104	70	130				
Dibenz(a,h)anthracene	1,070	50.0	1,000	0	107	70	130				
Benzo(g,h,i)perylene	1,090	50.0	1,000	0	109	70	130				
Surr: 2,4,6-Tribromophenol	1,490		1,000		149	65.9	141				S
Surr: 2-Fluorobiphenyl	714		500.0		143	73.1	130				S
Surr: Nitrobenzene-d5	683		500.0		137	77.9	122				S
Surr: Phenol-d6	1,310		1,000		131	78.9	117				S
Surr: p-Terphenyl	732		500.0		146	71.7	131				S

NOTES:
S - Outlying surrogate recovery(ies) observed.

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **CCV-28605** SampType: **CCV** Units: **µg/L** Prep Date: **6/12/2020** RunNo: **59807**
Client ID: **CCV** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196781**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	914	100	1,000	0	91.4	80	120				
Bis(2-chloroethyl) ether	899	100	1,000	0	89.9	80	120				
2-Chlorophenol	879	100	1,000	0	87.9	80	120				
1,3-Dichlorobenzene	939	75.0	1,000	0	93.9	80	120				
1,4-Dichlorobenzene	936	75.0	1,000	0	93.6	80	120				
1,2-Dichlorobenzene	909	75.0	1,000	0	90.9	80	120				
Benzyl alcohol	713	100	1,000	0	71.3	80	120				S
2-Methylphenol (o-cresol)	871	100	1,000	0	87.1	80	120				
Hexachloroethane	1,000	100	1,000	0	100	80	120				
N-Nitrosodi-n-propylamine	944	100	1,000	0	94.4	80	120				
3&4-Methylphenol (m, p-cresol)	840	100	1,000	0	84.0	80	120				
Nitrobenzene	880	100	1,000	0	88.0	80	120				
Isophorone	879	100	1,000	0	87.9	80	120				
2-Nitrophenol	887	100	1,000	0	88.7	80	120				
2,4-Dimethylphenol	927	100	1,000	0	92.7	80	120				
Bis(2-chloroethoxy)methane	882	75.0	1,000	0	88.2	80	120				
2,4-Dichlorophenol	845	100	1,000	0	84.5	80	120				
1,2,4-Trichlorobenzene	970	75.0	1,000	0	97.0	80	120				
Naphthalene	881	50.0	1,000	0	88.1	80	120				
4-Chloroaniline	833	75.0	1,000	0	83.3	80	120				
Hexachlorobutadiene	880	75.0	1,000	0	88.0	80	120				
4-Chloro-3-methylphenol	920	200	1,000	0	92.0	80	120				
2-Methylnaphthalene	881	50.0	1,000	0	88.1	80	120				
1-Methylnaphthalene	920	50.0	1,000	0	92.0	80	120				
Hexachlorocyclopentadiene	966	100	1,000	0	96.6	80	120				
2,4,6-Trichlorophenol	900	100	1,000	0	90.0	80	120				
2,4,5-Trichlorophenol	877	100	1,000	0	87.7	80	120				
2-Chloronaphthalene	973	75.0	1,000	0	97.3	80	120				
2-Nitroaniline	894	100	1,000	0	89.4	80	120				
Acenaphthene	956	50.0	1,000	0	95.6	80	120				
Dimethylphthalate	883	100	1,000	0	88.3	80	120				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **CCV-28605** SampType: **CCV** Units: **µg/L** Prep Date: **6/12/2020** RunNo: **59807**
Client ID: **CCV** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196781**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,6-Dinitrotoluene	870	100	1,000	0	87.0	80	120				
Acenaphthylene	922	50.0	1,000	0	92.2	80	120				
2,4-Dinitrophenol	1,800	525	2,000	0	90.1	80	120				
Dibenzofuran	850	75.0	1,000	0	85.0	80	120				
2,4-Dinitrotoluene	854	100	1,000	0	85.4	80	120				
4-Nitrophenol	800	500	1,000	0	80.0	80	120				
Fluorene	890	50.0	1,000	0	89.0	80	120				
4-Chlorophenyl phenyl ether	823	75.0	1,000	0	82.3	80	120				
Diethylphthalate	893	100	1,000	0	89.3	80	120				
4,6-Dinitro-2-methylphenol	939	200	1,000	0	93.9	80	120				
4-Bromophenyl phenyl ether	905	75.0	1,000	0	90.5	80	120				
Hexachlorobenzene	884	75.0	1,000	0	88.4	80	120				
Pentachlorophenol	947	100	1,000	0	94.7	80	120				
Phenanthrene	934	50.0	1,000	0	93.4	80	120				
Anthracene	909	50.0	1,000	0	90.9	80	120				
Carbazole	909	75.0	1,000	0	90.9	80	120				
Di-n-butylphthalate	928	100	1,000	0	92.8	80	120				
Fluoranthene	952	50.0	1,000	0	95.2	80	120				
Pyrene	938	50.0	1,000	0	93.8	80	120				
Butyl Benzylphthalate	936	100	1,000	0	93.6	80	120				
bis(2-Ethylhexyl)adipate	942	100	1,000	0	94.2	80	120				
Benz(a)anthracene	922	50.0	1,000	0	92.2	80	120				
Chrysene	927	50.0	1,000	0	92.7	80	120				
bis (2-Ethylhexyl) phthalate	885	100	1,000	0	88.5	80	120				
Di-n-octyl phthalate	897	100	1,000	0	89.7	80	120				
Benzo(b)fluoranthene	980	50.0	1,000	0	98.0	80	120				
Benzo(k)fluoranthene	862	50.0	1,000	0	86.2	80	120				
Benzo(a)pyrene	925	50.0	1,000	0	92.5	80	120				
Indeno(1,2,3-cd)pyrene	959	50.0	1,000	0	95.9	80	120				
Dibenz(a,h)anthracene	1,040	50.0	1,000	0	104	80	120				
Benzo(g,h,i)perylene	943	50.0	1,000	0	94.3	80	120				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **CCV-28605** SampType: **CCV** Units: **µg/L** Prep Date: **6/12/2020** RunNo: **59807**
Client ID: **CCV** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196781**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	1,040		1,000		104	65.9	141				
Surr: 2-Fluorobiphenyl	486		500.0		97.1	73.1	130				
Surr: Nitrobenzene-d5	515		500.0		103	77.9	122				
Surr: Phenol-d6	968		1,000		96.8	78.9	117				
Surr: p-Terphenyl	483		500.0		96.5	71.7	131				

NOTES:
S - Outlying spike recovery observed (low bias). Samples will be qualified with a Q.
S - Outlying QC recoveries were observed. More than 80% of the target analytes were within method acceptance criteria.

Sample ID: **MB-28605** SampType: **MBLK** Units: **µg/Kg** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **MBLKS** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196782**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	ND	100									
Bis(2-chloroethyl) ether	ND	100									
2-Chlorophenol	ND	100									
1,3-Dichlorobenzene	ND	75.0									
1,4-Dichlorobenzene	ND	75.0									
1,2-Dichlorobenzene	ND	75.0									
Benzyl alcohol	ND	100									Q
2-Methylphenol (o-cresol)	ND	100									
Hexachloroethane	ND	100									
N-Nitrosodi-n-propylamine	ND	100									
3&4-Methylphenol (m, p-cresol)	ND	100									
Nitrobenzene	ND	100									
Isophorone	ND	100									
2-Nitrophenol	ND	100									
2,4-Dimethylphenol	ND	100									
Bis(2-chloroethoxy)methane	ND	75.0									
2,4-Dichlorophenol	ND	100									
1,2,4-Trichlorobenzene	ND	75.0									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **MB-28605** SampType: **MBLK** Units: **µg/Kg** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **MBLKS** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196782**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	50.0									
4-Chloroaniline	ND	75.0									
Hexachlorobutadiene	ND	75.0									
4-Chloro-3-methylphenol	ND	200									
2-Methylnaphthalene	ND	50.0									
1-Methylnaphthalene	ND	50.0									
Hexachlorocyclopentadiene	ND	100									
2,4,6-Trichlorophenol	ND	100									
2,4,5-Trichlorophenol	ND	100									
2-Chloronaphthalene	ND	75.0									
2-Nitroaniline	ND	100									
Acenaphthene	ND	50.0									
Dimethylphthalate	ND	100									
2,6-Dinitrotoluene	ND	100									
Acenaphthylene	ND	50.0									
2,4-Dinitrophenol	ND	525									
Dibenzofuran	ND	75.0									
2,4-Dinitrotoluene	ND	100									
4-Nitrophenol	ND	500									
Fluorene	ND	50.0									
4-Chlorophenyl phenyl ether	ND	75.0									
Diethylphthalate	ND	100									
4,6-Dinitro-2-methylphenol	ND	200									
4-Bromophenyl phenyl ether	ND	75.0									
Hexachlorobenzene	ND	75.0									
Pentachlorophenol	ND	100									
Phenanthrene	ND	50.0									
Anthracene	ND	50.0									
Carbazole	ND	75.0									
Di-n-butylphthalate	ND	100									
Fluoranthene	ND	50.0									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **MB-28605** SampType: **MBLK** Units: **µg/Kg** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **MBLKS** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196782**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pyrene	ND	50.0									
Butyl Benzylphthalate	ND	100									
bis(2-Ethylhexyl)adipate	ND	100									
Benz(a)anthracene	ND	50.0									
Chrysene	ND	50.0									
bis (2-Ethylhexyl) phthalate	ND	100									
Di-n-octyl phthalate	ND	100									
Benzo(b)fluoranthene	ND	50.0									
Benzo(k)fluoranthene	ND	50.0									
Benzo(a)pyrene	ND	50.0									
Indeno(1,2,3-cd)pyrene	ND	50.0									
Dibenz(a,h)anthracene	ND	50.0									
Benzo(g,h,i)perylene	ND	50.0									
Surr: 2,4,6-Tribromophenol	693		1,000		69.3	5	139				
Surr: 2-Fluorobiphenyl	381		500.0		76.2	5	131				
Surr: Nitrobenzene-d5	205		500.0		41.0	5	123				
Surr: Phenol-d6	923		1,000		92.3	5	129				
Surr: p-Terphenyl	676		500.0		135	13.8	140				

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: **LCS-28605** SampType: **LCS** Units: **µg/Kg** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **LCSS** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196783**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	771	100	1,000	0	77.1	36	137				
Bis(2-chloroethyl) ether	737	100	1,000	0	73.7	39	132				
2-Chlorophenol	732	100	1,000	0	73.2	44.1	138				
1,3-Dichlorobenzene	675	75.0	1,000	0	67.5	43.9	123				
1,4-Dichlorobenzene	697	75.0	1,000	0	69.7	48	120				
1,2-Dichlorobenzene	698	75.0	1,000	0	69.8	44.9	124				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **LCS-28605** SampType: **LCS** Units: **µg/Kg** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **LCSS** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196783**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzyl alcohol	591	100	1,000	0	59.1	5	190				
2-Methylphenol (o-cresol)	746	100	1,000	0	74.6	39.8	136				
Hexachloroethane	704	100	1,000	0	70.4	37.2	129				
N-Nitrosodi-n-propylamine	815	100	1,000	0	81.5	37.6	146				
3&4-Methylphenol (m, p-cresol)	718	100	1,000	0	71.8	45.4	133				
Nitrobenzene	709	100	1,000	0	70.9	36.4	135				
Isophorone	779	100	1,000	0	77.9	42.2	138				
2-Nitrophenol	752	100	1,000	0	75.2	57.6	133				
2,4-Dimethylphenol	785	100	1,000	0	78.5	45.5	129				
Bis(2-chloroethoxy)methane	726	75.0	1,000	0	72.6	44.7	135				
2,4-Dichlorophenol	740	100	1,000	0	74.0	50.2	140				
1,2,4-Trichlorobenzene	773	75.0	1,000	0	77.3	47.6	136				
Naphthalene	790	50.0	1,000	0	79.0	48	138				
4-Chloroaniline	655	75.0	1,000	0	65.5	48.5	127				
Hexachlorobutadiene	730	75.0	1,000	0	73.0	44.6	137				
4-Chloro-3-methylphenol	705	200	1,000	0	70.5	44.1	149				
2-Methylnaphthalene	716	50.0	1,000	0	71.6	50.1	137				
1-Methylnaphthalene	728	50.0	1,000	0	72.8	53.8	129				
Hexachlorocyclopentadiene	719	100	1,000	0	71.9	6.89	161				
2,4,6-Trichlorophenol	593	100	1,000	0	59.3	48.1	137				
2,4,5-Trichlorophenol	760	100	1,000	0	76.0	45.8	146				
2-Chloronaphthalene	760	75.0	1,000	0	76.0	49.7	140				
2-Nitroaniline	711	100	1,000	0	71.1	46.3	141				
Acenaphthene	769	50.0	1,000	0	76.9	51.1	139				
Dimethylphthalate	769	100	1,000	0	76.9	56	129				
2,6-Dinitrotoluene	767	100	1,000	0	76.7	61	137				
Acenaphthylene	760	50.0	1,000	0	76.0	49.6	134				
2,4-Dinitrophenol	371	525	2,000	0	18.5	5	80.3				
Dibenzofuran	734	75.0	1,000	0	73.4	50.4	141				
2,4-Dinitrotoluene	789	100	1,000	0	78.9	61.8	134				
4-Nitrophenol	520	500	1,000	0	52.0	23	137				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **LCS-28605** SampType: **LCS** Units: **µg/Kg** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **LCSS** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196783**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	805	50.0	1,000	0	80.5	49.6	142				
4-Chlorophenyl phenyl ether	791	75.0	1,000	0	79.1	52.5	137				
Diethylphthalate	797	100	1,000	0	79.7	57.7	135				
4,6-Dinitro-2-methylphenol	323	200	1,000	0	32.3	5	103				
4-Bromophenyl phenyl ether	703	75.0	1,000	0	70.3	48.2	141				
Hexachlorobenzene	784	75.0	1,000	0	78.4	54.1	136				
Pentachlorophenol	180	100	1,000	0	18.0	5	140				
Phenanthrene	780	50.0	1,000	0	78.0	51.5	135				
Anthracene	805	50.0	1,000	0	80.5	46.6	137				
Carbazole	770	75.0	1,000	0	77.0	48.2	136				
Di-n-butylphthalate	785	100	1,000	0	78.5	58.6	131				
Fluoranthene	795	50.0	1,000	0	79.5	48.7	133				
Pyrene	814	50.0	1,000	0	81.4	48.8	134				
Butyl Benzylphthalate	768	100	1,000	0	76.8	49.4	147				
bis(2-Ethylhexyl)adipate	757	100	1,000	0	75.7	45.5	151				
Benz(a)anthracene	770	50.0	1,000	0	77.0	55.6	134				
Chrysene	794	50.0	1,000	0	79.4	47.4	144				
bis (2-Ethylhexyl) phthalate	716	100	1,000	0	71.6	49.4	152				
Di-n-octyl phthalate	752	100	1,000	0	75.2	45.5	148				
Benzo(b)fluoranthene	805	50.0	1,000	0	80.5	44.7	150				
Benzo(k)fluoranthene	894	50.0	1,000	0	89.4	44.3	143				
Benzo(a)pyrene	766	50.0	1,000	0	76.6	60.5	136				
Indeno(1,2,3-cd)pyrene	810	50.0	1,000	0	81.0	49.5	141				
Dibenz(a,h)anthracene	884	50.0	1,000	0	88.4	48.7	138				
Benzo(g,h,i)perylene	870	50.0	1,000	0	87.0	51.4	137				
Surr: 2,4,6-Tribromophenol	1,150		1,000		115	5	139				
Surr: 2-Fluorobiphenyl	492		500.0		98.5	5	131				
Surr: Nitrobenzene-d5	322		500.0		64.4	5	123				
Surr: Phenol-d6	938		1,000		93.8	5	129				
Surr: p-Terphenyl	687		500.0		137	13.8	140				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **2006085-015ADUP** SampType: **DUP** Units: **µg/Kg-dry** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **S-B6-3-4-0603** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196787**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	ND	116						0		50	
Bis(2-chloroethyl) ether	ND	116						0		50	
2-Chlorophenol	ND	116						0		50	
1,3-Dichlorobenzene	ND	87.1						0		50	
1,4-Dichlorobenzene	ND	87.1						0		50	
1,2-Dichlorobenzene	ND	87.1						0		50	
Benzyl alcohol	ND	116						0		50	Q
2-Methylphenol (o-cresol)	ND	116						0		50	
Hexachloroethane	ND	116						0		50	
N-Nitrosodi-n-propylamine	153	116						0	200	50	
3&4-Methylphenol (m, p-cresol)	ND	116						0		50	
Nitrobenzene	ND	116						0		50	
Isophorone	ND	116						0		50	
2-Nitrophenol	ND	116						0		50	
2,4-Dimethylphenol	ND	116						0		50	
Bis(2-chloroethoxy)methane	ND	87.1						0		50	
2,4-Dichlorophenol	ND	116						0		50	
1,2,4-Trichlorobenzene	ND	87.1						0		50	
Naphthalene	286	58.1						315.7	9.70	50	
4-Chloroaniline	ND	87.1						0		50	
Hexachlorobutadiene	ND	87.1						0		50	
4-Chloro-3-methylphenol	ND	232						0		50	
2-Methylnaphthalene	102	58.1						135.3	27.7	50	
1-Methylnaphthalene	75.2	58.1						69.43	8.04	50	
Hexachlorocyclopentadiene	ND	116						0		50	
2,4,6-Trichlorophenol	ND	116						0		50	
2,4,5-Trichlorophenol	ND	116						0		50	
2-Chloronaphthalene	ND	87.1						0		50	
2-Nitroaniline	ND	116						0		50	
Acenaphthene	ND	58.1						0		50	
Dimethylphthalate	ND	116						0		50	

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **2006085-015ADUP** SampType: **DUP** Units: **µg/Kg-dry** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **S-B6-3-4-0603** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196787**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,6-Dinitrotoluene	ND	116						0		50	
Acenaphthylene	ND	58.1						0		50	
2,4-Dinitrophenol	ND	610						0		50	
Dibenzofuran	ND	87.1						0		50	
2,4-Dinitrotoluene	ND	116						0		50	
4-Nitrophenol	ND	581						0		50	
Fluorene	ND	58.1						0		50	
4-Chlorophenyl phenyl ether	ND	87.1						0		50	
Diethylphthalate	ND	116						0		50	
4,6-Dinitro-2-methylphenol	ND	232						0		50	
4-Bromophenyl phenyl ether	ND	87.1						0		50	
Hexachlorobenzene	ND	87.1						0		50	
Pentachlorophenol	ND	116						0		50	
Phenanthrene	75.5	58.1						77.29	2.36	50	
Anthracene	ND	58.1						0		50	
Carbazole	ND	87.1						0		50	
Di-n-butylphthalate	ND	116						0		50	
Fluoranthene	88.0	58.1						80.13	9.34	50	
Pyrene	78.8	58.1						75.56	4.19	50	
Butyl Benzylphthalate	ND	116						0		50	
bis(2-Ethylhexyl)adipate	ND	116						0		50	
Benz(a)anthracene	ND	58.1						0		50	
Chrysene	71.7	58.1						0	200	50	
bis (2-Ethylhexyl) phthalate	ND	116						0		50	
Di-n-octyl phthalate	ND	116						0		50	
Benzo(b)fluoranthene	92.1	58.1						107.1	15.1	50	
Benzo(k)fluoranthene	ND	58.1						0		50	
Benzo(a)pyrene	ND	58.1						0		50	
Indeno(1,2,3-cd)pyrene	ND	58.1						65.26	24.9	50	
Dibenz(a,h)anthracene	ND	58.1						0		50	
Benzo(g,h,i)perylene	83.8	58.1						82.81	1.24	50	

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **2006085-015ADUP** SampType: **DUP** Units: **µg/Kg-dry** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **S-B6-3-4-0603** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196787**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	1,210		1,162		104	5	139		0		
Surr: 2-Fluorobiphenyl	541		580.9		93.1	5	131		0		
Surr: Nitrobenzene-d5	429		580.9		73.8	5	123		0		
Surr: Phenol-d6	891		1,162		76.7	5	129		0		
Surr: p-Terphenyl	654		580.9		113	13.8	140		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: **2006085-015AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **S-B6-3-4-0603** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196788**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	563	98.0	979.7	0	57.5	27	113				
Bis(2-chloroethyl) ether	586	98.0	979.7	0	59.8	19.7	113				
2-Chlorophenol	542	98.0	979.7	0	55.4	24.7	118				
1,3-Dichlorobenzene	474	73.5	979.7	0	48.4	20.6	99.9				
1,4-Dichlorobenzene	383	73.5	979.7	0	39.1	22.6	101				
1,2-Dichlorobenzene	451	73.5	979.7	0	46.0	26.2	103				
Benzyl alcohol	391	98.0	979.7	0	39.9	5	169				
2-Methylphenol (o-cresol)	587	98.0	979.7	0	59.9	23.3	122				
Hexachloroethane	441	98.0	979.7	0	45.0	16.9	100				
N-Nitrosodi-n-propylamine	627	98.0	979.7	0	64.0	25.6	131				
3&4-Methylphenol (m, p-cresol)	502	98.0	979.7	0	51.2	27.9	118				
Nitrobenzene	532	98.0	979.7	0	54.3	23	121				
Isophorone	603	98.0	979.7	0	61.5	26.8	128				
2-Nitrophenol	535	98.0	979.7	100.3	44.3	34.6	130				
2,4-Dimethylphenol	427	98.0	979.7	0	43.6	13.4	129				
Bis(2-chloroethoxy)methane	549	73.5	979.7	0	56.1	30.3	119				
2,4-Dichlorophenol	545	98.0	979.7	0	55.7	27	133				
1,2,4-Trichlorobenzene	544	73.5	979.7	0	55.6	32.1	120				
Naphthalene	630	49.0	979.7	315.7	32.1	24.7	126				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **2006085-015AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **S-B6-3-4-0603** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196788**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chloroaniline	438	73.5	979.7	0	44.8	10.9	114				
Hexachlorobutadiene	534	73.5	979.7	0	54.5	32.4	113				
4-Chloro-3-methylphenol	555	196	979.7	0	56.7	28.7	135				
2-Methylnaphthalene	601	49.0	979.7	135.3	47.5	31.1	125				
1-Methylnaphthalene	578	49.0	979.7	69.43	51.9	29.6	125				
Hexachlorocyclopentadiene	440	98.0	979.7	0	44.9	5	117				
2,4,6-Trichlorophenol	526	98.0	979.7	0	53.7	31	125				
2,4,5-Trichlorophenol	546	98.0	979.7	0	55.7	28.7	130				
2-Chloronaphthalene	585	73.5	979.7	0	59.8	37.2	121				
2-Nitroaniline	548	98.0	979.7	0	55.9	19.5	145				
Acenaphthene	588	49.0	979.7	0	60.1	34.2	128				
Dimethylphthalate	613	98.0	979.7	0	62.5	25.5	125				
2,6-Dinitrotoluene	666	98.0	979.7	0	68.0	41.4	127				
Acenaphthylene	604	49.0	979.7	0	61.6	34.5	121				
2,4-Dinitrophenol	148	514	1,959	0	7.55	5	74.3				
Dibenzofuran	565	73.5	979.7	0	57.6	30.8	128				
2,4-Dinitrotoluene	521	98.0	979.7	0	53.2	35.8	132				
4-Nitrophenol	407	490	979.7	0	41.6	5	152				
Fluorene	591	49.0	979.7	0	60.3	34.4	127				
4-Chlorophenyl phenyl ether	545	73.5	979.7	0	55.7	37.4	121				
Diethylphthalate	630	98.0	979.7	0	64.3	36	131				
4,6-Dinitro-2-methylphenol	215	196	979.7	0	22.0	5	109				
4-Bromophenyl phenyl ether	589	73.5	979.7	0	60.1	36.7	121				
Hexachlorobenzene	580	73.5	979.7	0	59.2	34.4	127				
Pentachlorophenol	441	98.0	979.7	0	45.1	5	149				
Phenanthrene	616	49.0	979.7	77.29	55.0	30.6	128				
Anthracene	621	49.0	979.7	28.09	60.5	30.5	124				
Carbazole	572	73.5	979.7	0	58.4	28.8	128				
Di-n-butylphthalate	640	98.0	979.7	0	65.3	36.1	132				
Fluoranthene	622	49.0	979.7	80.13	55.3	30.9	125				
Pyrene	623	49.0	979.7	75.56	55.9	31	125				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **2006085-015AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **S-B6-3-4-0603** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196788**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Butyl Benzylphthalate	679	98.0	979.7	0	69.3	35.1	138				
bis(2-Ethylhexyl)adipate	679	98.0	979.7	0	69.3	36.5	136				
Benz(a)anthracene	614	49.0	979.7	0	62.7	18.4	142				
Chrysene	582	49.0	979.7	0	59.4	27.4	134				
bis (2-Ethylhexyl) phthalate	611	98.0	979.7	0	62.4	38.6	144				
Di-n-octyl phthalate	660	98.0	979.7	0	67.3	37.1	145				
Benzo(b)fluoranthene	655	49.0	979.7	107.1	55.9	33.5	134				
Benzo(k)fluoranthene	638	49.0	979.7	46.67	60.3	14	133				
Benzo(a)pyrene	584	49.0	979.7	0	59.6	28.9	142				
Indeno(1,2,3-cd)pyrene	605	49.0	979.7	65.26	55.1	25.6	130				
Dibenz(a,h)anthracene	684	49.0	979.7	0	69.8	27.9	126				
Benzo(g,h,i)perylene	633	49.0	979.7	82.81	56.1	23.9	125				
Surr: 2,4,6-Tribromophenol	928		979.7		94.7	5	139				
Surr: 2-Fluorobiphenyl	397		489.8		81.1	5	131				
Surr: Nitrobenzene-d5	333		489.8		67.9	5	123				
Surr: Phenol-d6	764		979.7		78.0	5	129				
Surr: p-Terphenyl	502		489.8		102	13.8	140				

Sample ID: **2006085-015AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **S-B6-3-4-0603** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196789**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	637	107	1,074	0	59.3	27	113	563.4	12.3	50	
Bis(2-chloroethyl) ether	640	107	1,074	0	59.5	19.7	113	586.3	8.70	50	
2-Chlorophenol	619	107	1,074	0	57.6	24.7	118	542.3	13.2	50	
1,3-Dichlorobenzene	539	80.6	1,074	0	50.2	20.6	99.9	473.9	12.8	50	
1,4-Dichlorobenzene	530	80.6	1,074	0	49.4	22.6	101	383.1	32.2	50	R
1,2-Dichlorobenzene	573	80.6	1,074	0	53.3	26.2	103	450.9	23.8	50	
Benzyl alcohol	391	107	1,074	0	36.4	5	169	391.1	0.0911	50	
2-Methylphenol (o-cresol)	609	107	1,074	0	56.7	23.3	122	587.2	3.60	50	

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **2006085-015AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **S-B6-3-4-0603** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196789**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloroethane	566	107	1,074	0	52.7	16.9	100	441.3	24.7	50	R
N-Nitrosodi-n-propylamine	812	107	1,074	0	75.6	25.6	131	627.0	25.8	50	
3&4-Methylphenol (m, p-cresol)	605	107	1,074	0	56.3	27.9	118	502.0	18.5	50	
Nitrobenzene	590	107	1,074	0	54.9	23	121	531.8	10.3	50	
Isophorone	706	107	1,074	0	65.7	26.8	128	602.7	15.7	50	
2-Nitrophenol	664	107	1,074	100.3	52.5	34.6	130	534.6	21.6	50	R
2,4-Dimethylphenol	464	107	1,074	0	43.2	13.4	129	426.8	8.44	50	
Bis(2-chloroethoxy)methane	671	80.6	1,074	0	62.4	30.3	119	549.2	19.9	50	
2,4-Dichlorophenol	628	107	1,074	0	58.5	27	133	545.4	14.1	50	
1,2,4-Trichlorobenzene	719	80.6	1,074	0	66.9	32.1	120	544.3	27.6	50	
Naphthalene	820	53.7	1,074	315.7	46.9	24.7	126	629.9	26.2	50	
4-Chloroaniline	443	80.6	1,074	0	41.3	10.9	114	438.4	1.13	50	
Hexachlorobutadiene	615	80.6	1,074	0	57.2	32.4	113	534.1	14.0	50	
4-Chloro-3-methylphenol	671	215	1,074	0	62.5	28.7	135	555.5	18.9	50	
2-Methylnaphthalene	733	53.7	1,074	135.3	55.6	31.1	125	600.9	19.8	50	
1-Methylnaphthalene	704	53.7	1,074	69.43	59.1	29.6	125	577.6	19.7	50	
Hexachlorocyclopentadiene	550	107	1,074	0	51.2	5	117	439.6	22.3	50	R
2,4,6-Trichlorophenol	616	107	1,074	0	57.4	31	125	525.7	15.9	50	
2,4,5-Trichlorophenol	535	107	1,074	0	49.8	28.7	130	545.9	2.00	50	
2-Chloronaphthalene	684	80.6	1,074	0	63.7	37.2	121	585.5	15.5	50	
2-Nitroaniline	636	107	1,074	0	59.2	19.5	145	547.8	14.9	50	
Acenaphthene	671	53.7	1,074	0	62.4	34.2	128	588.4	13.1	50	
Dimethylphthalate	733	107	1,074	0	68.3	25.5	125	612.8	17.9	50	
2,6-Dinitrotoluene	759	107	1,074	0	70.7	41.4	127	666.0	13.1	50	
Acenaphthylene	723	53.7	1,074	0	67.3	34.5	121	604.0	18.0	50	
2,4-Dinitrophenol	676	564	2,148	0	31.5	5	74.3	147.9	128	50	
Dibenzofuran	713	80.6	1,074	0	66.4	30.8	128	564.6	23.2	50	
2,4-Dinitrotoluene	820	107	1,074	0	76.3	35.8	132	521.0	44.5	50	R
4-Nitrophenol	675	537	1,074	0	62.8	5	152	407.1	49.5	50	
Fluorene	757	53.7	1,074	0	70.5	34.4	127	591.2	24.6	50	
4-Chlorophenyl phenyl ether	703	80.6	1,074	0	65.4	37.4	121	545.5	25.2	50	

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **2006085-015AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **6/9/2020** RunNo: **59807**
Client ID: **S-B6-3-4-0603** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196789**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diethylphthalate	793	107	1,074	0	73.8	36	131	629.9	22.9	50	
4,6-Dinitro-2-methylphenol	707	215	1,074	0	65.8	5	109	215.3	107	50	R
4-Bromophenyl phenyl ether	759	80.6	1,074	0	70.7	36.7	121	589.1	25.2	50	
Hexachlorobenzene	758	80.6	1,074	0	70.6	34.4	127	580.4	26.6	50	
Pentachlorophenol	513	107	1,074	0	47.8	5	149	441.5	15.1	50	
Phenanthrene	794	53.7	1,074	77.29	66.8	30.6	128	616.1	25.3	50	
Anthracene	823	53.7	1,074	28.09	74.0	30.5	124	621.3	27.9	50	
Carbazole	806	80.6	1,074	0	75.0	28.8	128	571.7	34.0	50	
Di-n-butylphthalate	807	107	1,074	0	75.2	36.1	132	639.6	23.2	50	
Fluoranthene	846	53.7	1,074	80.13	71.3	30.9	125	622.3	30.5	50	
Pyrene	838	53.7	1,074	75.56	71.0	31	125	622.8	29.4	50	
Butyl Benzylphthalate	900	107	1,074	0	83.8	35.1	138	678.6	28.1	50	
bis(2-Ethylhexyl)adipate	948	107	1,074	0	88.2	36.5	136	679.3	33.0	50	
Benz(a)anthracene	795	53.7	1,074	0	74.0	18.4	142	614.1	25.7	50	
Chrysene	765	53.7	1,074	0	71.2	27.4	134	581.7	27.3	50	
bis (2-Ethylhexyl) phthalate	798	107	1,074	0	74.3	38.6	144	611.1	26.5	50	
Di-n-octyl phthalate	865	107	1,074	0	80.5	37.1	145	659.6	27.0	50	
Benzo(b)fluoranthene	811	53.7	1,074	107.1	65.5	33.5	134	654.6	21.3	50	
Benzo(k)fluoranthene	679	53.7	1,074	46.67	58.9	14	133	637.6	6.28	50	
Benzo(a)pyrene	758	53.7	1,074	0	70.6	28.9	142	584.2	25.9	50	
Indeno(1,2,3-cd)pyrene	673	53.7	1,074	65.26	56.6	25.6	130	605.3	10.6	50	
Dibenz(a,h)anthracene	785	53.7	1,074	0	73.1	27.9	126	684.1	13.8	50	
Benzo(g,h,i)perylene	713	53.7	1,074	82.81	58.7	23.9	125	632.6	12.0	50	
Surr: 2,4,6-Tribromophenol	1,150		1,074		107	5	139		0		
Surr: 2-Fluorobiphenyl	484		537.1		90.1	5	131		0		
Surr: Nitrobenzene-d5	436		537.1		81.2	5	123		0		
Surr: Phenol-d6	915		1,074		85.2	5	129		0		
Surr: p-Terphenyl	633		537.1		118	13.8	140		0		

NOTES:
R - High RPD observed, spike recovery is within range.

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **QCS-28605** SampType: **QCS** Units: **µg/L** Prep Date: **6/12/2020** RunNo: **59807**
Client ID: **BATCH** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196791**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	893	100	1,000	0	89.3	50	150				
Bis(2-chloroethyl) ether	969	100	1,000	0	96.9	50	150				
2-Chlorophenol	884	100	1,000	0	88.4	50	150				
1,3-Dichlorobenzene	932	75.0	1,000	0	93.2	50	150				
1,4-Dichlorobenzene	919	75.0	1,000	0	91.9	50	150				
1,2-Dichlorobenzene	854	75.0	1,000	0	85.4	50	150				
Benzyl alcohol	615	100	1,000	0	61.5	50	150				
2-Methylphenol (o-cresol)	974	100	1,000	0	97.4	50	150				
Hexachloroethane	969	100	1,000	0	96.9	50	150				
N-Nitrosodi-n-propylamine	950	100	1,000	0	95.0	50	150				
3&4-Methylphenol (m, p-cresol)	866	100	1,000	0	86.6	50	150				
Nitrobenzene	862	100	1,000	0	86.2	50	150				
Isophorone	922	100	1,000	0	92.2	50	150				
2-Nitrophenol	989	100	1,000	0	98.9	50	150				
2,4-Dimethylphenol	929	100	1,000	0	92.9	50	150				
Bis(2-chloroethoxy)methane	887	75.0	1,000	0	88.7	50	150				
2,4-Dichlorophenol	979	100	1,000	0	97.9	50	150				
1,2,4-Trichlorobenzene	891	75.0	1,000	0	89.1	50	150				
Naphthalene	892	50.0	1,000	0	89.2	50	150				
4-Chloroaniline	793	75.0	1,000	0	79.3	50	150				
Hexachlorobutadiene	897	75.0	1,000	0	89.7	50	150				
4-Chloro-3-methylphenol	904	200	1,000	0	90.4	50	150				
2-Methylnaphthalene	917	50.0	1,000	0	91.7	50	150				
1-Methylnaphthalene	924	50.0	1,000	0	92.4	50	150				
Hexachlorocyclopentadiene	692	100	1,000	0	69.2	50	150				
2,4,6-Trichlorophenol	870	100	1,000	0	87.0	50	150				
2,4,5-Trichlorophenol	917	100	1,000	0	91.7	50	150				
2-Chloronaphthalene	957	75.0	1,000	0	95.7	50	150				
2-Nitroaniline	939	100	1,000	0	93.9	50	150				
Acenaphthene	902	50.0	1,000	0	90.2	50	150				
Dimethylphthalate	969	100	1,000	0	96.9	50	150				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **QCS-28605** SampType: **QCS** Units: **µg/L** Prep Date: **6/12/2020** RunNo: **59807**
Client ID: **BATCH** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196791**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,6-Dinitrotoluene	878	100	1,000	0	87.8	50	150				
Acenaphthylene	917	50.0	1,000	0	91.7	50	150				
2,4-Dinitrophenol	1,020	525	2,000	0	51.2	50	150				
Dibenzofuran	867	75.0	1,000	0	86.7	50	150				
2,4-Dinitrotoluene	1,020	100	1,000	0	102	50	150				
4-Nitrophenol	735	500	1,000	0	73.5	50	150				
Fluorene	921	50.0	1,000	0	92.1	50	150				
4-Chlorophenyl phenyl ether	877	75.0	1,000	0	87.7	50	150				
Diethylphthalate	941	100	1,000	0	94.1	50	150				
4,6-Dinitro-2-methylphenol	680	200	1,000	0	68.0	50	150				
4-Bromophenyl phenyl ether	931	75.0	1,000	0	93.1	50	150				
Hexachlorobenzene	971	75.0	1,000	0	97.1	50	150				
Pentachlorophenol	907	100	1,000	0	90.7	50	150				
Phenanthrene	955	50.0	1,000	0	95.5	50	150				
Anthracene	930	50.0	1,000	0	93.0	50	150				
Carbazole	931	75.0	1,000	0	93.1	50	150				
Di-n-butylphthalate	958	100	1,000	0	95.8	50	150				
Fluoranthene	967	50.0	1,000	0	96.7	50	150				
Pyrene	986	50.0	1,000	0	98.6	50	150				
Butyl Benzylphthalate	981	100	1,000	0	98.1	50	150				
bis(2-Ethylhexyl)adipate	1,030	100	1,000	0	103	50	150				
Benz(a)anthracene	943	50.0	1,000	0	94.3	50	150				
Chrysene	969	50.0	1,000	0	96.9	50	150				
bis (2-Ethylhexyl) phthalate	978	100	1,000	0	97.8	50	150				
Di-n-octyl phthalate	1,030	100	1,000	0	103	50	150				
Benzo(b)fluoranthene	1,020	50.0	1,000	0	102	50	150				
Benzo(k)fluoranthene	935	50.0	1,000	0	93.5	50	150				
Benzo(a)pyrene	982	50.0	1,000	0	98.2	50	150				
Indeno(1,2,3-cd)pyrene	971	50.0	1,000	0	97.1	50	150				
Dibenz(a,h)anthracene	1,040	50.0	1,000	0	104	50	150				
Benzo(g,h,i)perylene	916	50.0	1,000	0	91.6	50	150				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **QCS-28605** SampType: **QCS** Units: **µg/L** Prep Date: **6/12/2020** RunNo: **59807**
Client ID: **BATCH** Batch ID: **28605** Analysis Date: **6/12/2020** SeqNo: **1196791**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	1,070		1,000		107	50	150				
Surr: 2-Fluorobiphenyl	433		500.0		86.6	50	150				
Surr: Nitrobenzene-d5	435		500.0		87.0	50	150				
Surr: Phenol-d6	914		1,000		91.4	50	150				
Surr: p-Terphenyl	463		500.0		92.5	50	150				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **CCV-28620**	SampType: **CCV**	Units: **µg/L**	Prep Date: **6/15/2020**	RunNo: **59939**
Client ID: **CCV**	Batch ID: **28620**		Analysis Date: **6/15/2020**	SeqNo: **1199701**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	909	2.00	1,000	0	90.9	80	120				
2-Chlorophenol	880	1.00	1,000	0	88.0	80	120				
1,3-Dichlorobenzene	950	1.00	1,000	0	95.0	80	120				
1,4-Dichlorobenzene	858	1.00	1,000	0	85.8	80	120				
1,2-Dichlorobenzene	866	1.00	1,000	0	86.6	80	120				
Benzyl alcohol	315	1.00	1,000	0	31.5	80	120				S
Bis(2-chloroethyl) ether	920	2.00	1,000	0	92.0	80	120				
2-Methylphenol (o-cresol)	865	1.00	1,000	0	86.5	80	120				
Hexachloroethane	984	1.00	1,000	0	98.4	80	120				
N-Nitrosodi-n-propylamine	1,060	1.00	1,000	0	106	80	120				
3&4-Methylphenol (m, p-cresol)	769	1.00	1,000	0	76.9	80	120				S
Nitrobenzene	850	2.00	1,000	0	85.0	80	120				
Isophorone	882	1.00	1,000	0	88.2	80	120				
2-Nitrophenol	984	2.00	1,000	0	98.4	80	120				
2,4-Dimethylphenol	883	1.00	1,000	0	88.3	80	120				
Bis(2-chloroethoxy)methane	870	1.00	1,000	0	87.0	80	120				
2,4-Dichlorophenol	888	2.00	1,000	0	88.8	80	120				
1,2,4-Trichlorobenzene	904	1.00	1,000	0	90.4	80	120				
Naphthalene	917	0.500	1,000	0	91.7	80	120				
4-Chloroaniline	839	5.00	1,000	0	83.9	80	120				
Hexachlorobutadiene	894	1.00	1,000	0	89.4	80	120				
4-Chloro-3-methylphenol	925	5.00	1,000	0	92.5	80	120				
2-Methylnaphthalene	920	0.500	1,000	0	92.0	80	120				
1-Methylnaphthalene	896	0.500	1,000	0	89.6	80	120				
Hexachlorocyclopentadiene	1,010	1.00	1,000	0	101	80	120				
2,4,6-Trichlorophenol	842	2.00	1,000	0	84.2	80	120				
2,4,5-Trichlorophenol	862	2.00	1,000	0	86.2	80	120				
2-Chloronaphthalene	907	1.00	1,000	0	90.7	80	120				
2-Nitroaniline	911	5.00	1,000	0	91.1	80	120				
Acenaphthene	866	0.500	1,000	0	86.6	80	120				
Dimethylphthalate	994	1.00	1,000	0	99.4	80	120				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **CCV-28620**	SampType: **CCV**			Units: **µg/L**		Prep Date: **6/15/2020**		RunNo: **59939**			
Client ID: **CCV**	Batch ID: **28620**					Analysis Date: **6/15/2020**		SeqNo: **1199701**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,6-Dinitrotoluene	836	1.00	1,000	0	83.6	80	120				
Acenaphthylene	911	0.500	1,000	0	91.1	80	120				
2,4-Dinitrophenol	2,200	2.00	2,000	0	110	80	120				
Dibenzofuran	859	1.00	1,000	0	85.9	80	120				
2,4-Dinitrotoluene	914	1.00	1,000	0	91.4	80	120				
4-Nitrophenol	713	5.00	1,000	0	71.3	80	120				S
Fluorene	872	0.500	1,000	0	87.2	80	120				
4-Chlorophenyl phenyl ether	806	1.00	1,000	0	80.6	80	120				
Diethylphthalate	896	1.00	1,000	0	89.6	80	120				
4,6-Dinitro-2-methylphenol	1,150	5.00	1,000	0	115	80	120				
4-Bromophenyl phenyl ether	903	1.00	1,000	0	90.3	80	120				
Hexachlorobenzene	879	1.00	1,000	0	87.9	80	120				
Pentachlorophenol	836	2.00	1,000	0	83.6	80	120				
Phenanthrene	907	0.500	1,000	0	90.7	80	120				
Anthracene	938	0.500	1,000	0	93.8	80	120				
Carbazole	913	5.00	1,000	0	91.3	80	120				
Di-n-butyl phthalate	933	1.00	1,000	0	93.3	80	120				
Fluoranthene	934	0.500	1,000	0	93.4	80	120				
Pyrene	960	0.500	1,000	0	96.0	80	120				
Benzyl Butylphthalate	972	1.00	1,000	0	97.2	80	120				
bis(2-Ethylhexyl)adipate	1,020	1.00	1,000	0	102	80	120				
Benz(a)anthracene	900	0.500	1,000	0	90.0	80	120				
Chrysene	909	0.500	1,000	0	90.9	80	120				
Bis(2-ethylhexyl) phthalate	902	1.00	1,000	0	90.2	80	120				
Di-n-octyl phthalate	957	1.00	1,000	0	95.7	80	120				
Benzo(b)fluoranthene	865	0.500	1,000	0	86.5	80	120				
Benzo(k)fluoranthene	932	0.500	1,000	0	93.2	80	120				
Benzo(a)pyrene	962	0.500	1,000	0	96.2	80	120				
Indeno(1,2,3-cd)pyrene	941	0.500	1,000	0	94.1	80	120				
Dibenz(a,h)anthracene	1,000	0.500	1,000	0	100	80	120				
Benzo(g,h,i)perylene	861	0.500	1,000	0	86.1	80	120				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **CCV-28620**	SampType: **CCV**	Units: **µg/L**	Prep Date: **6/15/2020**	RunNo: **59939**
Client ID: **CCV**	Batch ID: **28620**		Analysis Date: **6/15/2020**	SeqNo: **1199701**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	1,060		1,000		106	64.4	148				
Surr: 2-Fluorobiphenyl	475		500.0		94.9	83.8	122				
Surr: Nitrobenzene-d5	521		500.0		104	78.1	122				
Surr: Phenol-d6	930		1,000		93.0	72.7	127				
Surr: p-Terphenyl	465		500.0		92.9	77.2	127				

NOTES:
S - Outlying spike recovery observed (low bias). Samples will be qualified with a Q .
S - Outlying QC recoveries were observed. More than 80% of the target analytes were within method acceptance criteria.

Sample ID: **MB-28620**	SampType: **MBLK**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59939**
Client ID: **MBLKW**	Batch ID: **28620**		Analysis Date: **6/15/2020**	SeqNo: **1199702**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	ND	1.99									
2-Chlorophenol	ND	0.996									
1,3-Dichlorobenzene	ND	0.996									
1,4-Dichlorobenzene	ND	0.996									
1,2-Dichlorobenzene	ND	0.996									
Benzyl alcohol	ND	0.996									Q
Bis(2-chloroethyl) ether	ND	1.99									
2-Methylphenol (o-cresol)	ND	0.996									
Hexachloroethane	ND	0.996									
N-Nitrosodi-n-propylamine	ND	0.996									
3&4-Methylphenol (m, p-cresol)	ND	0.996									Q
Nitrobenzene	ND	1.99									
Isophorone	ND	0.996									
2-Nitrophenol	ND	1.99									
2,4-Dimethylphenol	ND	0.996									
Bis(2-chloroethoxy)methane	ND	0.996									
2,4-Dichlorophenol	ND	1.99									
1,2,4-Trichlorobenzene	ND	0.996									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **MB-28620**	SampType: **MBLK**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59939**
Client ID: **MBLKW**	Batch ID: **28620**		Analysis Date: **6/15/2020**	SeqNo: **1199702**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	0.498									
4-Chloroaniline	ND	4.98									
Hexachlorobutadiene	ND	0.996									
4-Chloro-3-methylphenol	ND	4.98									
2-Methylnaphthalene	ND	0.498									
1-Methylnaphthalene	ND	0.498									
Hexachlorocyclopentadiene	ND	0.996									
2,4,6-Trichlorophenol	ND	1.99									
2,4,5-Trichlorophenol	ND	1.99									
2-Chloronaphthalene	ND	0.996									
2-Nitroaniline	ND	4.98									
Acenaphthene	ND	0.498									
Dimethylphthalate	ND	0.996									
2,6-Dinitrotoluene	ND	0.996									
Acenaphthylene	ND	0.498									
2,4-Dinitrophenol	ND	1.99									
Dibenzofuran	ND	0.996									
2,4-Dinitrotoluene	ND	0.996									
4-Nitrophenol	ND	4.98									Q*
Fluorene	ND	0.498									
4-Chlorophenyl phenyl ether	ND	0.996									
Diethylphthalate	ND	0.996									
4,6-Dinitro-2-methylphenol	ND	4.98									
4-Bromophenyl phenyl ether	ND	0.996									
Hexachlorobenzene	ND	0.996									
Pentachlorophenol	ND	1.99									
Phenanthrene	ND	0.498									
Anthracene	ND	0.498									
Carbazole	ND	4.98									
Di-n-butyl phthalate	ND	0.996									
Fluoranthene	ND	0.498									

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **MB-28620**	SampType: **MBLK**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59939**
Client ID: **MBLKW**	Batch ID: **28620**		Analysis Date: **6/15/2020**	SeqNo: **1199702**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pyrene	ND	0.498									
Benzyl Butylphthalate	ND	0.996									
bis(2-Ethylhexyl)adipate	ND	0.996									
Benz(a)anthracene	ND	0.498									
Chrysene	ND	0.498									
Bis(2-ethylhexyl) phthalate	ND	0.996									
Di-n-octyl phthalate	ND	0.996									
Benzo(b)fluoranthene	ND	0.498									
Benzo(k)fluoranthene	ND	0.498									
Benzo(a)pyrene	ND	0.498									
Indeno(1,2,3-cd)pyrene	ND	0.498									
Dibenz(a,h)anthracene	ND	0.498									
Benzo(g,h,i)perylene	ND	0.498									
Surr: 2,4,6-Tribromophenol	4.73		3.983		119	24.7	176				
Surr: 2-Fluorobiphenyl	2.25		1.991		113	54.8	148				
Surr: Nitrobenzene-d5	1.91		1.991		95.8	40.8	151				
Surr: Phenol-d6	1.32		3.983		33.1	5	116				
Surr: p-Terphenyl	2.85		1.991		143	51.7	162				

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
* - Flagged value is not within established control limits.

Sample ID: **LCS-28620**	SampType: **LCS**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59939**
Client ID: **LCSW**	Batch ID: **28620**		Analysis Date: **6/15/2020**	SeqNo: **1199703**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	1.06	1.98	3.969	0	26.7	13.5	49				
2-Chlorophenol	2.26	0.992	3.969	0	56.8	35.1	95.1				
1,3-Dichlorobenzene	2.56	0.992	3.969	0	64.6	44.7	96.2				
1,4-Dichlorobenzene	2.57	0.992	3.969	0	64.7	43.5	98.6				
1,2-Dichlorobenzene	2.62	0.992	3.969	0	65.9	45.1	101				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **LCS-28620** SampType: **LCS** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59939**
Client ID: **LCSW** Batch ID: **28620** Analysis Date: **6/15/2020** SeqNo: **1199703**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzyl alcohol	1.13	0.992	3.969	0	28.5	5	110				
Bis(2-chloroethyl) ether	3.01	1.98	3.969	0	75.7	39.6	122				
2-Methylphenol (o-cresol)	2.21	0.992	3.969	0	55.6	23.8	98.2				
Hexachloroethane	2.69	0.992	3.969	0	67.8	39	101				
N-Nitrosodi-n-propylamine	3.30	0.992	3.969	0	83.0	48.5	135				
3&4-Methylphenol (m, p-cresol)	1.90	0.992	3.969	0	47.8	21	87.2				
Nitrobenzene	2.86	1.98	3.969	0	72.1	47.7	123				
Isophorone	3.24	0.992	3.969	0	81.7	51.7	134				
2-Nitrophenol	2.87	1.98	3.969	0	72.3	38.5	124				
2,4-Dimethylphenol	2.99	0.992	3.969	0	75.3	39.2	114				
Bis(2-chloroethoxy)methane	3.04	0.992	3.969	0	76.5	49	128				
2,4-Dichlorophenol	2.77	1.98	3.969	0	69.7	38.3	124				
1,2,4-Trichlorobenzene	2.77	0.992	3.969	0	69.8	45	108				
Naphthalene	2.98	0.496	3.969	0	75.0	49.5	113				
4-Chloroaniline	2.49	4.96	3.969	0	62.6	35.7	117				
Hexachlorobutadiene	2.62	0.992	3.969	0	66.0	37	108				
4-Chloro-3-methylphenol	2.84	4.96	3.969	0	71.4	40.9	119				
2-Methylnaphthalene	3.04	0.496	3.969	0	76.5	49.1	118				
1-Methylnaphthalene	3.08	0.496	3.969	0	77.7	47.3	119				
Hexachlorocyclopentadiene	3.25	0.992	3.969	0	82.0	10.5	137				
2,4,6-Trichlorophenol	3.24	1.98	3.969	0	81.6	35.4	134				
2,4,5-Trichlorophenol	3.09	1.98	3.969	0	78.0	34.6	133				
2-Chloronaphthalene	3.21	0.992	3.969	0	80.9	50	119				
2-Nitroaniline	3.10	4.96	3.969	0	78.0	60.2	137				
Acenaphthene	3.31	0.496	3.969	0	83.4	48.7	127				
Dimethylphthalate	3.45	0.992	3.969	0	86.8	46.1	140				
2,6-Dinitrotoluene	3.52	0.992	3.969	0	88.6	61.9	136				
Acenaphthylene	3.28	0.496	3.969	0	82.6	50.1	124				
2,4-Dinitrophenol	5.61	1.98	7.937	0	70.7	5	120				
Dibenzofuran	3.16	0.992	3.969	0	79.7	52.9	129				
2,4-Dinitrotoluene	3.38	0.992	3.969	0	85.1	59.1	139				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **LCS-28620** SampType: **LCS** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59939**
Client ID: **LCSW** Batch ID: **28620** Analysis Date: **6/15/2020** SeqNo: **1199703**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Nitrophenol	0.979	4.96	3.969	0	24.7	48.3	123				S
Fluorene	3.55	0.496	3.969	0	89.6	53.6	132				
4-Chlorophenyl phenyl ether	3.25	0.992	3.969	0	81.9	50.2	131				
Diethylphthalate	3.57	0.992	3.969	0	90.0	57.4	139				
4,6-Dinitro-2-methylphenol	3.78	4.96	3.969	0	95.3	5	161				
4-Bromophenyl phenyl ether	3.45	0.992	3.969	0	86.9	46	136				
Hexachlorobenzene	3.56	0.992	3.969	0	89.7	42.1	138				
Pentachlorophenol	3.18	1.98	3.969	0	80.0	5	163				
Phenanthrene	3.48	0.496	3.969	0	87.7	56.8	130				
Anthracene	3.37	0.496	3.969	0	84.9	43.2	130				
Carbazole	3.64	4.96	3.969	0	91.8	53.2	141				
Di-n-butyl phthalate	3.55	0.992	3.969	0	89.5	53.1	155				
Fluoranthene	3.59	0.496	3.969	0	90.5	49.9	138				
Pyrene	3.61	0.496	3.969	0	91.0	48.5	139				
Benzyl Butylphthalate	3.71	0.992	3.969	0	93.4	52.7	157				
bis(2-Ethylhexyl)adipate	3.08	0.992	3.969	0	77.6	37.2	142				
Benz(a)anthracene	3.58	0.496	3.969	0	90.2	47.6	141				
Chrysene	3.46	0.496	3.969	0	87.2	52.5	135				
Bis(2-ethylhexyl) phthalate	2.61	0.992	3.969	0	65.9	43.2	136				
Di-n-octyl phthalate	2.70	0.992	3.969	0	68.1	30.9	146				
Benzo(b)fluoranthene	3.26	0.496	3.969	0	82.0	43.5	146				
Benzo(k)fluoranthene	3.31	0.496	3.969	0	83.3	47.8	132				
Benzo(a)pyrene	3.02	0.496	3.969	0	76.2	41.5	137				
Indeno(1,2,3-cd)pyrene	2.98	0.496	3.969	0	75.0	46.6	125				
Dibenz(a,h)anthracene	3.09	0.496	3.969	0	77.9	45.1	124				
Benzo(g,h,i)perylene	2.98	0.496	3.969	0	75.0	40	131				
Surr: 2,4,6-Tribromophenol	6.10		3.969		154	24.7	176				
Surr: 2-Fluorobiphenyl	2.62		1.984		132	54.8	148				
Surr: Nitrobenzene-d5	2.27		1.984		114	40.8	151				
Surr: Phenol-d6	1.36		3.969		34.3	5	116				
Surr: p-Terphenyl	3.04		1.984		153	51.7	162				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **LCS-28620** SampType: **LCS** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59939**
Client ID: **LCSW** Batch ID: **28620** Analysis Date: **6/15/2020** SeqNo: **1199703**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery observed (low bias). Samples will be qualified with a *.

Sample ID: **LCSD-28620** SampType: **LCSD** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59939**
Client ID: **LCSW02** Batch ID: **28620** Analysis Date: **6/15/2020** SeqNo: **1199704**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	1.01	1.97	3.948	0	25.6	13.5	49	1.058	4.41	30	
2-Chlorophenol	2.36	0.987	3.948	0	59.7	35.1	95.1	2.256	4.46	30	
1,3-Dichlorobenzene	2.73	0.987	3.948	0	69.1	44.7	96.2	2.564	6.14	30	
1,4-Dichlorobenzene	2.49	0.987	3.948	0	63.1	43.5	98.6	2.567	3.04	30	
1,2-Dichlorobenzene	2.65	0.987	3.948	0	67.1	45.1	101	2.616	1.20	30	
Benzyl alcohol	1.36	0.987	3.948	0	34.4	5	110	1.132	18.1	30	
Bis(2-chloroethyl) ether	3.03	1.97	3.948	0	76.8	39.6	122	3.006	0.835	30	
2-Methylphenol (o-cresol)	2.06	0.987	3.948	0	52.3	23.8	98.2	2.207	6.70	30	
Hexachloroethane	2.80	0.987	3.948	0	71.0	39	101	2.690	4.09	30	
N-Nitrosodi-n-propylamine	3.19	0.987	3.948	0	80.9	48.5	135	3.295	3.10	30	
3&4-Methylphenol (m, p-cresol)	1.81	0.987	3.948	0	45.9	21	87.2	1.897	4.65	30	
Nitrobenzene	3.00	1.97	3.948	0	76.0	47.7	123	2.862	4.74	30	
Isophorone	3.20	0.987	3.948	0	81.1	51.7	134	3.241	1.21	30	
2-Nitrophenol	2.78	1.97	3.948	0	70.4	38.5	124	2.867	3.16	30	
2,4-Dimethylphenol	3.01	0.987	3.948	0	76.1	39.2	114	2.987	0.630	30	
Bis(2-chloroethoxy)methane	3.07	0.987	3.948	0	77.8	49	128	3.037	1.12	30	
2,4-Dichlorophenol	2.73	1.97	3.948	0	69.1	38.3	124	2.765	1.34	30	
1,2,4-Trichlorobenzene	2.74	0.987	3.948	0	69.3	45	108	2.769	1.21	30	
Naphthalene	2.98	0.493	3.948	0	75.5	49.5	113	2.976	0.135	30	
4-Chloroaniline	2.34	4.93	3.948	0	59.3	35.7	117	2.486	6.07	30	
Hexachlorobutadiene	2.56	0.987	3.948	0	64.7	37	108	2.621	2.53	30	
4-Chloro-3-methylphenol	2.92	4.93	3.948	0	74.0	40.9	119	2.836	2.98	30	
2-Methylnaphthalene	2.98	0.493	3.948	0	75.6	49.1	118	3.036	1.71	30	
1-Methylnaphthalene	2.89	0.493	3.948	0	73.1	47.3	119	3.083	6.55	30	

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **LCSD-28620** SampType: **LCSD** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59939**
Client ID: **LCSW02** Batch ID: **28620** Analysis Date: **6/15/2020** SeqNo: **1199704**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachlorocyclopentadiene	3.20	0.987	3.948	0	81.2	10.5	137	3.255	1.57	30	
2,4,6-Trichlorophenol	2.89	1.97	3.948	0	73.3	35.4	134	3.239	11.2	30	
2,4,5-Trichlorophenol	3.04	1.97	3.948	0	77.0	34.6	133	3.095	1.79	30	
2-Chloronaphthalene	3.12	0.987	3.948	0	78.9	50	119	3.209	2.95	30	
2-Nitroaniline	3.17	4.93	3.948	0	80.2	60.2	137	3.097	2.21	30	
Acenaphthene	3.19	0.493	3.948	0	80.8	48.7	127	3.310	3.67	30	
Dimethylphthalate	3.23	0.987	3.948	0	81.9	46.1	140	3.446	6.35	30	
2,6-Dinitrotoluene	3.17	0.987	3.948	0	80.3	61.9	136	3.516	10.3	30	
Acenaphthylene	3.11	0.493	3.948	0	78.8	50.1	124	3.277	5.16	30	
2,4-Dinitrophenol	3.89	1.97	7.896	0	49.3	5	120	5.614	36.2	30	
Dibenzofuran	3.01	0.987	3.948	0	76.2	52.9	129	3.163	4.97	30	
2,4-Dinitrotoluene	3.20	0.987	3.948	0	81.0	59.1	139	3.378	5.46	30	
4-Nitrophenol	0.808	4.93	3.948	0	20.5	48.3	123	0.9793	19.1	30	S
Fluorene	3.12	0.493	3.948	0	79.0	53.6	132	3.554	13.0	30	
4-Chlorophenyl phenyl ether	3.12	0.987	3.948	0	78.9	50.2	131	3.250	4.23	30	
Diethylphthalate	3.11	0.987	3.948	0	78.8	57.4	139	3.571	13.8	30	
4,6-Dinitro-2-methylphenol	3.10	4.93	3.948	0	78.4	5	161	3.782	20.0	30	
4-Bromophenyl phenyl ether	3.09	0.987	3.948	0	78.2	46	136	3.450	11.1	30	
Hexachlorobenzene	3.25	0.987	3.948	0	82.4	42.1	138	3.559	9.04	30	
Pentachlorophenol	2.69	1.97	3.948	0	68.2	5	163	3.177	16.5	30	
Phenanthrene	3.05	0.493	3.948	0	77.3	56.8	130	3.482	13.2	30	
Anthracene	2.90	0.493	3.948	0	73.5	43.2	130	3.368	14.9	30	
Carbazole	2.99	4.93	3.948	0	75.8	53.2	141	3.644	19.7	30	
Di-n-butyl phthalate	3.17	0.987	3.948	0	80.4	53.1	155	3.553	11.3	30	
Fluoranthene	3.10	0.493	3.948	0	78.6	49.9	138	3.593	14.6	30	
Pyrene	3.20	0.493	3.948	0	81.1	48.5	139	3.611	12.0	30	
Benzyl Butylphthalate	3.19	0.987	3.948	0	80.8	52.7	157	3.706	15.0	30	
bis(2-Ethylhexyl)adipate	2.48	0.987	3.948	0	62.7	37.2	142	3.078	21.7	30	
Benz(a)anthracene	3.04	0.493	3.948	0	77.1	47.6	141	3.579	16.2	30	
Chrysene	3.10	0.493	3.948	0	78.6	52.5	135	3.461	10.9	30	
Bis(2-ethylhexyl) phthalate	2.42	0.987	3.948	0	61.4	43.2	136	2.614	7.54	30	

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **LCSD-28620**	SampType: **LCSD**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59939**
Client ID: **LCSW02**	Batch ID: **28620**		Analysis Date: **6/15/2020**	SeqNo: **1199704**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Di-n-octyl phthalate	2.45	0.987	3.948	0	62.1	30.9	146	2.704	9.87	30	
Benzo(b)fluoranthene	2.95	0.493	3.948	0	74.7	43.5	146	3.256	9.90	30	
Benzo(k)fluoranthene	2.89	0.493	3.948	0	73.2	47.8	132	3.306	13.5	30	
Benzo(a)pyrene	2.75	0.493	3.948	0	69.5	41.5	137	3.025	9.69	30	
Indeno(1,2,3-cd)pyrene	2.85	0.493	3.948	0	72.3	46.6	125	2.977	4.23	30	
Dibenz(a,h)anthracene	2.83	0.493	3.948	0	71.7	45.1	124	3.090	8.80	30	
Benzo(g,h,i)perylene	2.73	0.493	3.948	0	69.0	40	131	2.976	8.79	30	
Surr: 2,4,6-Tribromophenol	4.72		3.948		120	24.7	176		0		
Surr: 2-Fluorobiphenyl	2.21		1.974		112	54.8	148		0		
Surr: Nitrobenzene-d5	2.13		1.974		108	40.8	151		0		
Surr: Phenol-d6	1.26		3.948		32.0	5	116		0		
Surr: p-Terphenyl	2.33		1.974		118	51.7	162		0		

NOTES:
S - Outlying spike recovery observed (low bias). Samples will be qualified with a *.

Sample ID: **2006085-001ADUP**	SampType: **DUP**	Units: **µg/L**	Prep Date: **6/10/2020**	RunNo: **59939**
Client ID: **GW-B1-0603**	Batch ID: **28620**		Analysis Date: **6/15/2020**	SeqNo: **1199706**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	2.46	2.10						2.104	15.8	50	
2-Chlorophenol	ND	1.05						0	0	50	
1,3-Dichlorobenzene	ND	1.05						0.1099	17.9	50	
1,4-Dichlorobenzene	ND	1.05						0	0	50	
1,2-Dichlorobenzene	ND	1.05						0	0	50	
Benzyl alcohol	ND	1.05						0	0	50	Q
Bis(2-chloroethyl) ether	ND	2.10						0	0	50	
2-Methylphenol (o-cresol)	ND	1.05						0	0	50	
Hexachloroethane	ND	1.05						0	0	50	
N-Nitrosodi-n-propylamine	ND	1.05						0	0	50	
3&4-Methylphenol (m, p-cresol)	1.63	1.05						1.475	10.1	50	Q
Nitrobenzene	ND	2.10						0	0	50	

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **2006085-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59939**
Client ID: **GW-B1-0603** Batch ID: **28620** Analysis Date: **6/15/2020** SeqNo: **1199706**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isophorone	ND	1.05						0	0	50	
2-Nitrophenol	ND	2.10						0	0	50	
2,4-Dimethylphenol	ND	1.05						0	0	50	
Bis(2-chloroethoxy)methane	ND	1.05						0	0	50	
2,4-Dichlorophenol	ND	2.10						0.04215	63.7	50	
1,2,4-Trichlorobenzene	ND	1.05						0	0	50	
Naphthalene	ND	0.526						0	0	50	
4-Chloroaniline	ND	5.26						0	0	50	
Hexachlorobutadiene	ND	1.05						0	0	50	
4-Chloro-3-methylphenol	ND	5.26						0	0	50	
2-Methylnaphthalene	ND	0.526						0	0	50	
1-Methylnaphthalene	ND	0.526						0	0	50	
Hexachlorocyclopentadiene	ND	1.05						0	0	50	
2,4,6-Trichlorophenol	ND	2.10						0	0	50	
2,4,5-Trichlorophenol	ND	2.10						0	0	50	
2-Chloronaphthalene	ND	1.05						0	0	50	
2-Nitroaniline	ND	5.26						0.5666	35.6	50	
Acenaphthene	ND	0.526						0	0	50	
Dimethylphthalate	ND	1.05						0	0	50	
2,6-Dinitrotoluene	ND	1.05						0	0	50	
Acenaphthylene	ND	0.526						0	0	50	
2,4-Dinitrophenol	ND	2.10						0	0	50	
Dibenzofuran	ND	1.05						0	0	50	
2,4-Dinitrotoluene	ND	1.05						0	0	50	
4-Nitrophenol	ND	5.26						0	0	50	Q*
Fluorene	ND	0.526						0.2829	19.6	50	
4-Chlorophenyl phenyl ether	ND	1.05						0	0	50	
Diethylphthalate	ND	1.05						0.07966	27.1	50	
4,6-Dinitro-2-methylphenol	ND	5.26						0	0	50	
4-Bromophenyl phenyl ether	ND	1.05						0	0	50	
Hexachlorobenzene	ND	1.05						0	0	50	

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **2006085-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/10/2020** RunNo: **59939**
Client ID: **GW-B1-0603** Batch ID: **28620** Analysis Date: **6/15/2020** SeqNo: **1199706**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pentachlorophenol	ND	2.10						0	0	50	
Phenanthrene	ND	0.526						0.3668	17.2	50	
Anthracene	ND	0.526						0.03340	31.9	50	
Carbazole	ND	5.26						0	0	50	
Di-n-butyl phthalate	ND	1.05						0.09002	22.9	50	
Fluoranthene	ND	0.526						0	200	50	
Pyrene	ND	0.526						0.04992	9.14	50	
Benzyl Butylphthalate	ND	1.05						0	0	50	
bis(2-Ethylhexyl)adipate	ND	1.05						0	0	50	
Benz(a)anthracene	ND	0.526						0	0	50	
Chrysene	ND	0.526						0	0	50	
Bis(2-ethylhexyl) phthalate	ND	1.05						0.1236	77.0	50	
Di-n-octyl phthalate	ND	1.05						0	0	50	
Benzo(b)fluoranthene	ND	0.526						0	0	50	
Benzo(k)fluoranthene	ND	0.526						0	0	50	
Benzo(a)pyrene	ND	0.526						0	0	50	
Indeno(1,2,3-cd)pyrene	ND	0.526						0	0	50	
Dibenz(a,h)anthracene	ND	0.526						0	0	50	
Benzo(g,h,i)perylene	ND	0.526						0	0	50	
Surr: 2,4,6-Tribromophenol	5.61		4.210		133	24.7	176		0		
Surr: 2-Fluorobiphenyl	2.37		2.105		113	54.8	148		0		
Surr: Nitrobenzene-d5	2.55		2.105		121	40.8	151		0		
Surr: Phenol-d6	1.78		4.210		42.4	5	116		0		
Surr: p-Terphenyl	1.29		2.105		61.3	51.7	162		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
* - Flagged value is not within established control limits.

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **QCS-28620**	SampType: **QCS**	Units: **µg/L**	Prep Date: **6/15/2020**	RunNo: **59939**
Client ID: **BATCH**	Batch ID: **28620**		Analysis Date: **6/15/2020**	SeqNo: **1199713**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	925	2.00	1,000	0	92.5	50	150				
2-Chlorophenol	886	1.00	1,000	0	88.6	50	150				
1,3-Dichlorobenzene	858	1.00	1,000	0	85.8	50	150				
1,4-Dichlorobenzene	896	1.00	1,000	0	89.6	50	150				
1,2-Dichlorobenzene	868	1.00	1,000	0	86.8	50	150				
Benzyl alcohol	234	1.00	1,000	0	23.4	50	150				S
Bis(2-chloroethyl) ether	872	2.00	1,000	0	87.2	50	150				
2-Methylphenol (o-cresol)	973	1.00	1,000	0	97.3	50	150				
Hexachloroethane	993	1.00	1,000	0	99.3	50	150				
N-Nitrosodi-n-propylamine	932	1.00	1,000	0	93.2	50	150				
3&4-Methylphenol (m, p-cresol)	900	1.00	1,000	0	90.0	50	150				
Nitrobenzene	837	2.00	1,000	0	83.7	50	150				
Isophorone	901	1.00	1,000	0	90.1	50	150				
2-Nitrophenol	909	2.00	1,000	0	90.9	50	150				
2,4-Dimethylphenol	941	1.00	1,000	0	94.1	50	150				
Bis(2-chloroethoxy)methane	861	1.00	1,000	0	86.1	50	150				
2,4-Dichlorophenol	843	2.00	1,000	0	84.3	50	150				
1,2,4-Trichlorobenzene	904	1.00	1,000	0	90.4	50	150				
Naphthalene	871	0.500	1,000	0	87.1	50	150				
4-Chloroaniline	780	5.00	1,000	0	78.0	50	150				
Hexachlorobutadiene	848	1.00	1,000	0	84.8	50	150				
4-Chloro-3-methylphenol	884	5.00	1,000	0	88.4	50	150				
2-Methylnaphthalene	903	0.500	1,000	0	90.3	50	150				
1-Methylnaphthalene	909	0.500	1,000	0	90.9	50	150				
Hexachlorocyclopentadiene	1,030	1.00	1,000	0	103	50	150				
2,4,6-Trichlorophenol	857	2.00	1,000	0	85.7	50	150				
2,4,5-Trichlorophenol	853	2.00	1,000	0	85.3	50	150				
2-Chloronaphthalene	938	1.00	1,000	0	93.8	50	150				
2-Nitroaniline	928	5.00	1,000	0	92.8	50	150				
Acenaphthene	883	0.500	1,000	0	88.3	50	150				
Dimethylphthalate	911	1.00	1,000	0	91.1	50	150				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **QCS-28620** SampType: **QCS** Units: **µg/L** Prep Date: **6/15/2020** RunNo: **59939**
Client ID: **BATCH** Batch ID: **28620** Analysis Date: **6/15/2020** SeqNo: **1199713**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,6-Dinitrotoluene	951	1.00	1,000	0	95.1	50	150				
Acenaphthylene	899	0.500	1,000	0	89.9	50	150				
2,4-Dinitrophenol	2,010	2.00	2,000	0	101	50	150				
Dibenzofuran	840	1.00	1,000	0	84.0	50	150				
2,4-Dinitrotoluene	917	1.00	1,000	0	91.7	50	150				
4-Nitrophenol	690	5.00	1,000	0	69.0	50	150				
Fluorene	900	0.500	1,000	0	90.0	50	150				
4-Chlorophenyl phenyl ether	811	1.00	1,000	0	81.1	50	150				
Diethylphthalate	916	1.00	1,000	0	91.6	50	150				
4,6-Dinitro-2-methylphenol	988	5.00	1,000	0	98.8	50	150				
4-Bromophenyl phenyl ether	848	1.00	1,000	0	84.8	50	150				
Hexachlorobenzene	950	1.00	1,000	0	95.0	50	150				
Pentachlorophenol	946	2.00	1,000	0	94.6	50	150				
Phenanthrene	852	0.500	1,000	0	85.2	50	150				
Anthracene	911	0.500	1,000	0	91.1	50	150				
Carbazole	830	5.00	1,000	0	83.0	50	150				
Di-n-butyl phthalate	912	1.00	1,000	0	91.2	50	150				
Fluoranthene	937	0.500	1,000	0	93.7	50	150				
Pyrene	965	0.500	1,000	0	96.5	50	150				
Benzyl Butylphthalate	985	1.00	1,000	0	98.5	50	150				
bis(2-Ethylhexyl)adipate	949	1.00	1,000	0	94.9	50	150				
Benz(a)anthracene	968	0.500	1,000	0	96.8	50	150				
Chrysene	886	0.500	1,000	0	88.6	50	150				
Bis(2-ethylhexyl) phthalate	884	1.00	1,000	0	88.4	50	150				
Di-n-octyl phthalate	947	1.00	1,000	0	94.7	50	150				
Benzo(b)fluoranthene	941	0.500	1,000	0	94.1	50	150				
Benzo(k)fluoranthene	839	0.500	1,000	0	83.9	50	150				
Benzo(a)pyrene	880	0.500	1,000	0	88.0	50	150				
Indeno(1,2,3-cd)pyrene	895	0.500	1,000	0	89.5	50	150				
Dibenz(a,h)anthracene	967	0.500	1,000	0	96.7	50	150				
Benzo(g,h,i)perylene	861	0.500	1,000	0	86.1	50	150				

Work Order: 2006085
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID: **QCS-28620** SampType: **QCS** Units: **µg/L** Prep Date: **6/15/2020** RunNo: **59939**
Client ID: **BATCH** Batch ID: **28620** Analysis Date: **6/15/2020** SeqNo: **1199713**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	1,110		1,000		111	50	150				
Surr: 2-Fluorobiphenyl	467		500.0		93.5	50	150				
Surr: Nitrobenzene-d5	526		500.0		105	50	150				
Surr: Phenol-d6	929		1,000		92.9	50	150				
Surr: p-Terphenyl	463		500.0		92.6	50	150				

NOTES:
S - Outlying spike recovery observed (low bias). Samples will be qualified with a Q.
S - Outlying QC recoveries were observed. More than 80% of the target analytes were within method acceptance criteria.

Sample Log-In Check List

Client Name:	**LIBBY**	Work Order Number:	**2006085**
Logged by:	**Carissa True**	Date Received:	**6/4/2020 12:24:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler 1	4.8
Cooler 2	2.3
Sample 1	3.6
Sample 2	2.9

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record 2006085

www.LibbyEnvironmental.com

Date: 6/4/20 Page: 1 of 2

Client: Libby Environmental
Address: See above
City: State: Zip:
Phone: Fax:
Client Project # L200603-7

Project Manager: Kodey Eley
Project Name: Hardel Site
Location: City, State: Olympia, Wa
Collector: SH/MK Date of Collection: 6/3/20
Email: libbyenv@gmail.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Total Bay Sc/Ag Hg		Field Notes
1 GW-B1-0603	10-15	1400	Grab	Amber/Poly											X	X	X		
2 GW-B2-0603	3-8	1300													X	X	X		
3 GW-B3-0603	3-8	1210													X	X	X		
4 GW-B4-0603	7-12	1110													X	X	X		
5 GW-B5-0603	3-8	1000													X	X	X		
6 GW-B6-0603	3-8	915													X	X	X		
7 GW-B6-0603-01	3-8	915													X	X	X		
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			

Relinquished by: Kodey Eley 6/4/20 Date / Time
Received by: 6/4/20 1224 Date / Time

Relinquished by: Date / Time
Received by: Date / Time

Relinquished by: Date / Time
Received by: Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks: Standard TAT

TAT: 24HR 48HR 5-DAY

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

L0e095

www.LibbyEnvironmental.com

Date: 6/4/20 Page: 2 of 2

Client: Libby Environmental
Address: See above
City: State: Zip:
Phone: Fax:
Client Project # L200603-7

Project Manager: Rodey Eley
Project Name: Hardel Site
Location: City, State: Olympia, Wa
Collector: SH/MK Date of Collection: 6/3/20
Email: libbyenv@gmail.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Total Bay Study	Field Notes
1 S-B1-4-5-0603	4-5	1340	Soil	4oz										X		X		
2 S-B2-2-4-0603	2-4	1230												X		X		
3 S-B3-2-3-0603	2-3	1130												X		X		
4 S-B4-1-3-0603	1-3	1030												X		X		
5 S-B4-1-3-0603-01	1-3	1030												X		X		
6 S-B4-11-12-0603	11-12	1045												X		X		
7 S-B5-3-4-0603	3-4	920													X	X		
8 S-B6-3-4-0603	3-4	0845													X	X		
9 S-B7-3-5-0603	3-5	1600													X	X		
10 S-B8-4-5-0603	4-5	1620												X				
11 S-B9-6-7-0603	6-7	1640												X				
12																		
13																		
14																		
15																		
16																		
17																		

Relinquished by: Rodey Eley 6/4/20 Date / Time
Received by: 6/4/20 1234 Date / Time
Relinquished by: Date / Time
Received by: Date / Time
Relinquished by: Date / Time
Received by: Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks: Standard TAT

TAT: 24HR 48HR 5-DAY

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

2006085

www.LibbyEnvironmental.com

Date: 6/4/20 Page: 2 of 2

Client: Libby Environmental
Project Manager: Hadley Eley
Address: See above
Project Name: Hardel Site
City: State: Zip:
Location: City, State: Olympia, Wa
Phone: Fax:
Collector: SH/MK Date of Collection: 6/3/20
Client Project # L200603-7
Email: libbyenv@gmail.com
Add ons by Lab 6/11 per S.C.

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Total Bay Sed Ag	EPH	TOC	Field Notes
1 S-B1-4-5-0603	4-5	1340	Soil	4oz										X		X				
2 S-B2-2-4-0603	2-4	1230												X		X		X		
3 S-B3-2-3-0603	2-3	1130												X		X		X		
4 S-B4-1-3-0603	1-3	1030												X		X				
5 S-B4-1-3-0603-01	1-3	1030												X		X				
6 S-B4-11-12-0603	11-12	1045												X		X				
7 S-B5-3-4-0603	3-4	920													X	X				
8 S-B6-3-4-0603	3-4	0845													X	X				
9 S-B7-3-5-0603	3-5	1600													X	X			X	
10 S-B8-4-5-0603	4-5	1620												X						
11 S-P9-6-7-0603	6-7	1640												X						
12																				
13																				
14																				
15																				
16																				
17																				

Relinquished by	Date / Time	Received by	Date / Time
Hadley Eley	6/4/20		6/4/20 1224
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks: Standard TAT

TAT: 24HR 48HR 5-DAY

Distribution: White - Lab, Yellow - Originator

DATA SET for Review -- Deliverable Requirements

Extractable Petroleum Hydrocarbons Analysis by NWTPH-EPH

Fremont Analytical Work Order No. 2006085

Libby Environmental

Project Name: Hardel Site

Project No. L200603-7

This Data contains the following:

- Analytical Sequence Summary for **Work Order 2006085**
- Calibration Information for **Work Order 2006085**

Injection Log

Directory: C:\GC20\DATA\2020\200623

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	100	062301.d	1.	CO	CCV O-EPH-S	23 Jun 2020 12:47
2	99	062302.d	1.	ARO-CCV-28677A	CCV O-EPH-W	23 Jun 2020 13:31
3	1	062303.d	1.	MB-28677	MBLK O-EPH-W	23 Jun 2020 14:15
4	8	062304.d	1.	2004010-020A	MBLK O-EPH-S	23 Jun 2020 14:59
5	2	062305.d	1.	LCS-28677	LCS O-EPH-S	23 Jun 2020 15:43
6	3	062306.d	1.	2006085-009A	SAMP O-EPH-S	23 Jun 2020 16:28
7	4	062307.d	1.	2006085-009ADUP	DUP O-EPH-S	23 Jun 2020 17:12
8	5	062308.d	1.	2006085-009AMS	MS O-EPH-S	23 Jun 2020 17:57
9	6	062309.d	1.	2006085-009AMSD	MSD O-EPH-S	23 Jun 2020 18:41
10	7	062310.d	1.	2006085-010A	SAMP O-EPH-S	23 Jun 2020 19:25
11	100	062311.d	1.	CO	CCV O-EPH-S	23 Jun 2020 20:10
12	99	062312.d	1.	ARO-CCV-28677B	CCV O-EPH-S	23 Jun 2020 20:54
13	98	062313.d	1.	ALI-CCV-28677A	CCV O-EPH-S	23 Jun 2020 21:38
14	9	062314.d	1.	MB-28677	MBLK O-EPH-S	23 Jun 2020 22:22
15	10	062315.d	1.	LCS-28677	LCS O-EPH-S	23 Jun 2020 23:06
16	11	062316.d	1.	2006085-009A	SAMP O-EPH-S	23 Jun 2020 23:50
17	12	062317.d	1.	2006085-009ADUP	DUP O-EPH-S	24 Jun 2020 00:34
18	13	062318.d	1.	2006085-009AMS	MS O-EPH-S	24 Jun 2020 01:18
19	14	062319.d	1.	2006085-009AMSD	MSD O-EPH-S	24 Jun 2020 02:02
20	15	062320.d	1.	2006085-010A	SAMP O-EPH-S	24 Jun 2020 02:45
21	100	062321.d	1.	CO	SAMP O-EPH-S	24 Jun 2020 03:29
22	98	062322.d	1.	ALI-CCV-28677B	CCV O-EPH-S	24 Jun 2020 04:12
23	100	062323.d	1.	CO	CCV O-EPH-S	24 Jun 2020 04:56
24	100	062324.d	1.	CO	CCV O-EPH-S	24 Jun 2020 05:40
25	100	062325.d	1.	CO	CCV O-EPH-S	24 Jun 2020 06:23
26	100	062326.d	1.	CO	CCV O-EPH-S	24 Jun 2020 07:07
27	100	062327.d	1.	CO	CCV O-EPH-S	24 Jun 2020 07:50
28	100	062328.d	1.	CO	CCV O-EPH-S	24 Jun 2020 08:34

Injection Log

Directory: C:\GC20\DATA\2020\200624

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	100	062401.d	1.	CO	CCV O-EPH-S	24 Jun 2020 14:07
2	98	062402.d	1.	ALI-CCV-28677C	CCV O-EPH-S	24 Jun 2020 14:51
3	10	062403.d	1.	LCS-28677	LCS O-EPH-S	24 Jun 2020 15:35
4	17	062404.d	1.	2006085-009A 5X	SAMP O-EPH-S	24 Jun 2020 16:19
5	14	062405.d	1.	2006085-009AMSD	MSD O-EPH-S	24 Jun 2020 17:03
6	15	062406.d	1.	2006085-010A	SAMP O-EPH-S	24 Jun 2020 17:48
7	100	062407.d	1.	CO	SAMP O-EPH-S	24 Jun 2020 18:32
8	98	062408.d	1.	ALI-CCV-28677D	CCV O-EPH-S	24 Jun 2020 19:17
9	100	062409.d	1.	CO	CCV O-EPH-S	24 Jun 2020 20:01
10	100	062410.d	1.	CO	CCV O-EPH-S	24 Jun 2020 20:45
11	100	062411.d	1.	CO	CCV O-EPH-S	24 Jun 2020 21:29
12	100	062412.d	1.	CO	CCV O-EPH-S	24 Jun 2020 22:13
13	100	062413.d	1.	CO	CCV O-EPH-S	24 Jun 2020 22:57
14	100	062414.d	1.	CO	CCV O-EPH-S	24 Jun 2020 23:41

Calibration

Calibration Report GC #20

Method : C:\GC20\METHODS\QUANT METHODS\AL190610.M (Chemstation Integrator)
Title :
Last Update : Mon Jun 10 12:42:03 2019
Response via : Initial Calibration

Calibration Files
1 =060504 2 =060505 3 =060506 4 =060507 5 =060508
6 =060509 7 =060510 8 =060511

	Compound	Fit	Constant	Linear	Quad	RSD/Cf
1) S	1-Chlorooctadecane	Lin	1.3172 e2	1.1121 e3	-----	0.993
2) S	o-Terphenyl	Lin	1.1104 e2	1.4341 e3	-----	0.993
3) H	Aliphatic (C8-C10)	Lin	1.6534 e4	1.0326 e3	-----	1.000
4) H	Aliphatic (C10-C12)	Lin	1.0119 e4	1.1024 e3	-----	1.000
5) H	Aliphatic (C12-C16)	Lin	1.3575 e4	1.1519 e3	-----	0.999
6) H	Aliphatic (C16-C21)	Lin	3.1285 e4	1.1564 e3	-----	0.998
7) H	Aliphatic (C21-C34)	Lin	4.5832 e4	7.5359 e2	-----	0.992

AL190610.M Tue Jun 11 10:17:28 2019

Calibration Report GC #20

Method : C:\GC20\METHODS\QUANT METHODS\AR190610.M (Chemstation Integrator)
Title :
Last Update : Tue Jun 11 10:00:22 2019
Response via : Initial Calibration

Calibration Files
1 =060517 2 =060518 3 =060519 4 =060520 5 =060521
6 =060522 7 =060523 8 =060524

	Compound	Fit	Constant	Linear	Quad	RSD/Cf
1) S	1-Chlorooctadecane	Lin	-3.5319 e2	1.0591 e3	-----	1.000
2) S	o-Terphenyl	Lin	-4.9515	1.3716 e3	-----	1.000
3) H	Aromatic (C8-C10)	Lin	4.3270 e4	1.2152 e3	-----	0.999
4) H	Aromatic (C10-C12)	Lin	4.8603 e3	1.2048 e3	-----	0.999
5) H	Aromatic (C12-C16)	Lin	8.5564 e3	1.2600 e3	-----	0.999
6) H	Aromatic (C16-C21)	Lin	2.4940 e4	1.3162 e3	-----	0.998
7) H	Aromatic (C21-C34)	Lin	3.4666 e4	9.1600 e2	-----	0.992

AR190610.M Tue Jun 11 10:16:05 2019

EPH Calibration

	Aliphatic	Aromatic
Date/Time:	6519 11:00	
5,000 ppm (CAL):	21619	21621
Analyst:	DMW	
10,000 ppm (SS):	21181	20860
Surrogate:	21708	
Matrix:	HEXANE 4292	$MeCl_2$ 4336

	Spike Type	Spike Conc. (ppb)	Surr Conc. (ppb)	Spike (uL)	Surr (uL)	Remove (uL)	Final Vol. (uL)	Comments
1	Aliphatic	10	4	2	1	3	1000	
2		20	8	4	2	6	1000	
3		50	20	10	5	15	1000	
4		100	40	20	10	30	1000	
5		200	100	40	25	65	1000	
6		500	200	10	5	15	100*	*Use insert
7		1000	400	20	10	30	100*	*Use insert
8		2000	800	40	20	60	100*	*Use insert
9		ICB	40	-	10	10	1000	
10		ICV (100)	40	10 (SS)	10	20	1000	
11	Aromatic	10	4	2	1	3	1000	
12		20	8	4	2	6	1000	
13		50	20	10	5	15	1000	
14		100	40	20	10	30	1000	
15		200	100	40	25	65	1000	
16		500	200	10	5	15	100*	*Use insert
17		1000	400	20	10	30	100*	*Use insert
18		2000	800	40	20	60	100*	*Use insert
19		ICB	40	-	10	10	1000	
20		ICV (100)	40	10 (SS)	10	20	1000	

Response Factor Report GC #20

Method : C:\GC20\METHODS\QUANT METHODS\AR-RFCAL.M (Chemstation Integrator)
Title :
Last Update : Wed Jun 10 13:15:43 2020

Calibration Files
1 =060517.D 2 =060518.D 3 =060519.D
4 =060520.D 5 =060521.D 6 =060522.D

		Compound	1	2	3	4	5	6	Avg		%RSD
1)	S	1-Chlorooctadecane	1.017	1.090	0.991	0.992	1.011	1.085	1.038	E3	3.90
2)	S	o-Terphenyl	1.454	1.433	1.313	1.306	1.315	1.403	1.371	E3	4.13
3)	H	Aromatic (C8-C10)	3.700	2.162	1.542	1.409	1.291	1.202	1.725	E3	49.71
4)	H	Aromatic (C10-C12)	1.663	1.441	1.352	1.325	1.186	1.143	1.319	E3	12.88
5)	H	Aromatic (C12-C16)	2.025	1.643	1.440	1.491	1.320	1.226	1.462	E3	18.25
6)	H	Aromatic (C16-C21)	3.218	2.950	1.976	1.621	1.462	1.314	1.904	E3	40.07
7)	H	Aromatic (C21-C34)	3.583	2.906	1.796	1.435	1.299	0.997	1.733	E3	57.43

(#) = Out of Range ### Number of calibration levels exceeded format ###

AR-RFCAL.M Thu Jul 02 13:49:47 2020

DATA SET for Review -- Deliverable Requirements

Mercury Analysis by EPA 245.1

Fremont Analytical Work Order No. 2006085

Libby Environmental

Project Name: Hardel Site

Project No. L200603-7

This Data contains the following:

- Analytical Sequence Summary for **Work Order 2006085**
- Calibration Information for **Work Order 2006085**

Calibration

Report Generated By Teledyne Leeman QuickTrace

Analyst: lab

Worksheet file: C:\Users\Public\Documents\Teledyne CETAC\QuickTrace\Worksheets\061120WATER C.wszf

Creation Date: 6/11/2020 5:30:37 PM

Comment:

Results

Sample Name	Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Residual	Flags	% Recovery
Calibration Blank	STD	06/11/20 05:33:30 pm	0.000	-71	20.99			N/A
Replicates	-93.0	-64.5	-68.5	-59.2				
Standard #1 (0.1 ug/L)	STD	06/11/20 05:35:11 pm	0.100	2096	0.63	13.32%		N/A
Replicates	2111.4	2080.5	2090.3	2100.0				
Standard #2 (0.5 ug/L)	STD	06/11/20 05:36:53 pm	0.500	10899	0.37	14.74%		N/A
Replicates	10854.2	10875.3	10940.0	10925.0				
Standard #3 (1.0 ug/L)	STD	06/11/20 05:38:35 pm	1.000	21151	0.46	10.98%		N/A
Replicates	21029.9	21118.7	21197.0	21256.5				
Standard #4 (2.5 ug/L)	STD	06/11/20 05:41:57 pm	2.500	49151	0.41	2.97%		N/A
Replicates	48908.5	49087.3	49230.3	49378.3				
Standard #5 (5.0 ug/L)	STD	06/11/20 05:43:40 pm	5.000	94262	2.27	-1.33%		N/A
Replicates	91521.5	93729.0	95365.2	96431.7				

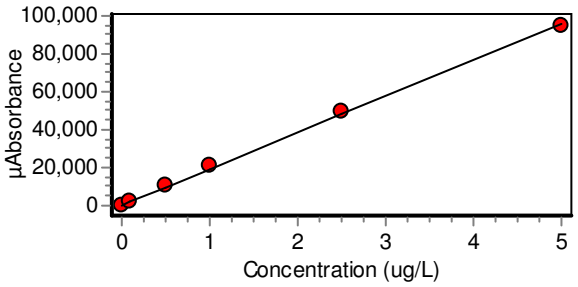
Calibration

Equation: Abs = 19121.661x + -71.310

R2: 0.99819 RSE: 13.24%

SEE: 1834.7130

Flags:



ICB	ICB	06/11/20 05:45:24 pm	-0.004	-157	7.96			N/A
Replicates	-155.0	-148.9	-165.1	-158.9				
ICV LL	CRDL	06/11/20 05:47:06 pm	0.109	2013	2.60			109.02
Replicates	2061.3	2050.5	1998.5	1943.2				
ICV	ICV	06/11/20 05:51:38 pm	2.400	45848	0.73			96.06
Replicates	45478.4	45700.1	45961.9	46251.9				
MB-28625	MB	06/11/20 05:53:19 pm	0.016	240	4.16		Z	N/A
Replicates	230.6	243.3	256.8	229.1				
LCS-28625	LCS	06/11/20 05:55:00 pm	2.260	43116	0.32			90.34
Replicates	42943.5	43096.8	43152.8	43272.0				
2006085-001B	UNK	06/11/20 05:56:41 pm	0.059	1047	4.01			N/A
Replicates	1107.9	1049.0	1027.0	1003.3				
2006085-001BDUP	UNK	06/11/20 05:58:23 pm	0.023	364	4.09			N/A
Replicates	344.0	385.1	356.4	370.9				

Sample Name					Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Residual	Flags	% Recovery
2006085-001BMS					UNK	06/11/20 06:00:05 pm	1.170	22314	0.14			N/A
	Replicates	22357.9	22301.4	22311.9	22285.4							
2006085-001BMSD					UNK	06/11/20 06:01:48 pm	1.150	21871	0.09			N/A
	Replicates	21894.4	21880.5	21858.5	21849.3							
2006085-002B					UNK	06/11/20 06:03:30 pm	0.011	146	3.29			N/A
	Replicates	144.2	144.0	155.5	138.5							
2006085-003B					UNK	06/11/20 06:05:11 pm	0.032	533	3.51			N/A
	Replicates	536.7	555.6	504.4	535.4							
2006085-004B					UNK	06/11/20 06:06:52 pm	0.029	481	4.03			N/A
	Replicates	484.0	511.0	465.8	462.5							
2006085-005B					UNK	06/11/20 06:08:34 pm	0.029	483	1.82			N/A
	Replicates	492.4	478.9	470.9	490.4							
CCV					CCV	06/11/20 06:11:47 pm	2.320	44297	0.83			92.81
	Replicates	43851.0	44163.0	44490.2	44684.0							
CCB					CCB	06/11/20 06:13:28 pm	-0.001	-88	97.82			N/A
	Replicates	-83.8	-112.5	-77.7	-78.5							
2006085-006B					UNK	06/11/20 06:15:10 pm	0.035	588	2.22			N/A
	Replicates	572.6	584.2	585.9	607.7							
2006085-007B					UNK	06/11/20 06:16:52 pm	0.027	437	3.31			N/A
	Replicates	431.3	431.4	423.7	461.7							
2006094-001E					UNK	06/11/20 06:18:34 pm	0.036	616	1.98			N/A
	Replicates	600.8	613.7	617.2	633.9							
2006098-001A					UNK	06/11/20 06:20:16 pm	0.006	43	4.36			N/A
	Replicates	40.6	49.2	38.2	45.9							
2006102-001A					UNK	06/11/20 06:21:57 pm	0.034	578	1.97			N/A
	Replicates	583.4	588.8	559.5	579.3							
2006114-001A					UNK	06/11/20 06:23:39 pm	0.024	386	1.77			N/A
	Replicates	389.9	374.9	384.4	393.4							
2006114-002A					UNK	06/11/20 06:25:20 pm	0.028	457	5.21			N/A
	Replicates	450.3	480.5	477.0	421.3							
2006126-001A					UNK	06/11/20 06:27:02 pm	0.005	22	9.38			N/A
	Replicates	24.9	8.5	26.5	26.3							
2006126-002A					UNK	06/11/20 06:28:44 pm	0.003	-12	38.15			N/A
	Replicates	-26.2	-36.1	8.6	6.4							
2006169-001D					UNK	06/11/20 06:30:26 pm	0.023	371	8.29			N/A
	Replicates	422.9	355.3	338.3	367.3							
CCV					CCV	06/11/20 06:35:01 pm	2.560	48790	0.39			102.21
	Replicates	48542.2	48746.9	48879.9	48990.1							

Sample Name			Type	Date/Time	Conc (ug/L)	µAbs	%RSD	Residual	Flags	% Recovery
CCB			CCB	06/11/20 06:36:43 pm	0.013	167	30.72			N/A
	Replicates	63.8	171.9	201.2	232.4					

Fremont Analytical

Calibration Set

Tube Lot # 2070/4981

Analysis: Mercury Water Calibration

Date/Time: 06/11/20

Analyst: Wayne Francis

Matrix: Water

Analytical Run: 59776

Curve	Concentration	Suggested Spike Amount	Acutal Spike Amount, g	Spike Standard	Initial Volume	Used Vol.	Conc. Sulfuric Acid, mL	Conc. Nitric Acid, mL	Permanganate, mL	Persulfate, mL	Hydroxylamine, mL
Standard 0	0 µg/L	0 µL	0.0	CAL STOCK	50 mL		1.6	0.8	4.8	2.6	1.9
Standard 1	0.1 µg/L	50 µL	0.052		50 mL						
Standard 2	0.5 µg/L	250 µL	0.264		50 mL						
Standard 3	1 µg/L	500 µL	0.522		50 mL						
Standard 4	2.5 µg/L	1.25 mL	1.266		50 mL						
Standard 5	5 µg/L	2.5 mL	2.554		50 mL						
ICB	0 µg/L	0 µL			50 mL						
ICV LL	0.1 µg/L	50 µL			50 mL						
ICV	2.5 µg/L	1.25 mL	1.265	ICV STOCK	50 mL						

Wayne 6/11/20

	Recommended Volume	I.D #
Potassium Permanganate:	4.8 mL	3562/3881
Potassium Persulfate:	2.6 mL	3479/3778
Hydroxylamine Sulfate:	1.9 mL	3575/3895
Sulfuric Acid:	1.6 mL	2004/4831
Nitric Acid:	0.8 mL	2072/4983

Balance ID: 5

Standard 4 used for: All CCV's

CAL STOCK → 0.5 mL of 22604/50 mL Jf ⇒ 100 ppb

ICV STOCK → 0.5 mL of 23127/50 mL Jf ⇒ 100 ppb

Pipette #29

Signature: NM

DATA SET for Review -- Deliverable Requirements

PAH Analysis by EPA 8270 SIM

Fremont Analytical Work Order No. 2006085

Libby Environmental

Project Name: Hardel Site

Project No. L200603-7

This Data contains the following:

- Analytical Sequence Summary for **Work Order 2006085**
- Calibration Information for **Work Order 2006085**
- Tune Information for **Work Order 2006085**

Injection Log

Data Directory: D:\GC-21\Data\060820\

SampleName	MiscInfo	Vial	Multiplier	Injection Time
1) 060801.D				
CO		2	1.000	08 Jun 2020 07:47 am
2) 060802.D				
TUNE		1	1.000	08 Jun 2020 08:09 am
3) 060803.D				
CCV-		2	1.000	08 Jun 2020 08:31 am
4) 060804.D				
MB-28581		56	1.000	08 Jun 2020 01:02 pm
5) 060805.D				
LCS-28581		57	1.000	08 Jun 2020 01:24 pm
6) 060806.D				
2005095-006A		58	1.000	08 Jun 2020 01:46 pm
7) 060807.D				
2005114-007A		59	1.000	08 Jun 2020 02:09 pm
8) 060808.D				
2005114-011A		60	1.000	08 Jun 2020 02:31 pm
9) 060809.D				
2005114-012A		61	1.000	08 Jun 2020 02:54 pm
10) 060810.D				
2005160-002A		62	1.000	08 Jun 2020 03:16 pm
11) 060811.D				
2005192-041A		63	1.000	08 Jun 2020 03:38 pm
12) 060812.D				
2006084-005A		64	1.000	08 Jun 2020 04:01 pm
13) 060813.D				
2006084-005ADUP		65	1.000	08 Jun 2020 04:23 pm
14) 060814.D				
2006084-005AMS		66	1.000	08 Jun 2020 04:46 pm
15) 060815.D				
2006084-005AMSD		67	1.000	08 Jun 2020 05:08 pm
16) 060816.D				
QCS-28581A		2	1.000	08 Jun 2020 05:30 pm
17) 060817.D				
CCV-28581B		2	1.000	08 Jun 2020 05:53 pm
18) 060818.D				
2006076-001A		68	1.000	08 Jun 2020 06:15 pm
19) 060819.D				
2006076-002A		69	1.000	08 Jun 2020 06:37 pm
20) 060820.D				
2006084-001A		70	1.000	08 Jun 2020 07:00 pm
21) 060821.D				
2006084-002A		71	1.000	08 Jun 2020 07:22 pm

22) 060822.D
2006084-003A 72 1.000 08 Jun 2020 07:44 pm

23) 060823.D
2006084-004A 73 1.000 08 Jun 2020 08:07 pm

24) 060824.D
2006085-008A 74 1.000 08 Jun 2020 08:29 pm

25) 060825.D
2006085-009A 75 1.000 08 Jun 2020 08:51 pm

26) 060826.D
2006085-010A 76 1.000 08 Jun 2020 09:13 pm

27) 060827.D
2006085-011A 77 1.000 08 Jun 2020 09:36 pm

28) 060828.D
2006085-012A 78 1.000 08 Jun 2020 09:58 pm

29) 060829.D
2006085-013A 79 1.000 08 Jun 2020 10:20 pm

30) 060830.D
2006104-001A 80 1.000 08 Jun 2020 10:42 pm

31) 060831.D
QCS-28581B 2 1.000 08 Jun 2020 11:04 pm

32) 060901.D
CO 2 1.000 09 Jun 2020 08:37 am

33) 060902.D
TUNE 1 1.000 09 Jun 2020 08:59 am

34) 060903.D
CCV- 2 1.000 09 Jun 2020 09:21 am

35) 060904.D
SEMI CHECK NEW INT 4 1.000 09 Jun 2020 10:10 am

36) 060905.D
2006085-009A 10X 10 1.000 09 Jun 2020 11:13 am

37) 060912.D
QCS- 2 1.000 09 Jun 2020 01:59 pm

Injection Log

Data Directory: D:\GC-21\Data\061020\

SampleName	MiscInfo	Vial	Multiplier	Injection Time
1) 061050.D				
No data found			0.000	N/A
2) 061001.D				
PAH SIM WINDOW CHECK		2	1.000	10 Jun 2020 08:56 am
3) 061002.D				
PAH SIM		2	1.000	10 Jun 2020 09:23 am
4) 061003.D				
SEMI		2	1.000	10 Jun 2020 10:51 am
5) 061004.D				
TUNE		1	1.000	10 Jun 2020 11:13 am
6) 061005.D				
PAH 10		11	1.000	10 Jun 2020 11:36 am
7) 061006.D				
PAH 20		12	1.000	10 Jun 2020 11:58 am
8) 061007.D				
PAH 40		13	1.000	10 Jun 2020 12:21 pm
9) 061008.D				
PAH 100		14	1.000	10 Jun 2020 12:54 pm
10) 061009.D				
PAH 200		15	1.000	10 Jun 2020 01:17 pm
11) 061010.D				
PAH 400		16	1.000	10 Jun 2020 01:39 pm
12) 061011.D				
PAH 750		17	1.000	10 Jun 2020 02:02 pm
13) 061012.D				
PAH 1000		18	1.000	10 Jun 2020 02:25 pm
14) 061013.D				
PAH 2000		19	1.000	10 Jun 2020 02:47 pm
15) 061014.D				
PAH 5000		20	1.000	10 Jun 2020 03:10 pm
16) 061015.D				
PAH ICB		21	1.000	10 Jun 2020 03:33 pm
17) 061016.D				
PAH ICV		22	1.000	10 Jun 2020 03:55 pm
18) 061017.D				
PAH ICB		21	1.000	10 Jun 2020 04:18 pm
19) 061018.D				
CCV-28595		2	1.000	10 Jun 2020 04:41 pm
20) 061019.D				
MB-28595		76	1.000	10 Jun 2020 05:04 pm
21) 061020.D				
LCS-28595		77	1.000	10 Jun 2020 05:26 pm

22) 061021.D
2006123-010A 82 1.000 10 Jun 2020 05:49 pm

23) 061022.D
2006123-018A 90 1.000 10 Jun 2020 06:12 pm

24) 061023.D
2006123-001A 97 1.000 10 Jun 2020 06:34 pm

25) 061024.D
2006123-003A 78 1.000 10 Jun 2020 06:57 pm

26) 061025.D
2006123-006A 79 1.000 10 Jun 2020 07:20 pm

27) 061026.D
2006123-008A 80 1.000 10 Jun 2020 10:28 pm

28) 061027.D
2006123-009A 81 1.000 10 Jun 2020 10:51 pm

29) 061028.D
2006123-011A 83 1.000 10 Jun 2020 11:13 pm

30) 061029.D
2006123-012A 84 1.000 10 Jun 2020 11:36 pm

31) 061030.D
2006123-013A 85 1.000 10 Jun 2020 11:58 pm

32) 061031.D
2006123-014A 86 1.000 11 Jun 2020 12:20 am

33) 061032.D
2006123-015A 87 1.000 11 Jun 2020 12:43 am

34) 061033.D
2006123-016A 88 1.000 11 Jun 2020 01:05 am

35) 061034.D
2006123-017A 89 1.000 11 Jun 2020 01:27 am

36) 061035.D
2006085-017A 91 1.000 11 Jun 2020 01:50 am

37) 061036.D
2006085-018A 92 1.000 11 Jun 2020 02:12 am

38) 061037.D
2006123-002A 93 1.000 11 Jun 2020 02:34 am

39) 061038.D
2006123-002ADUP 94 1.000 11 Jun 2020 02:57 am

40) 061039.D
2006123-002AMS 95 1.000 11 Jun 2020 03:19 am

41) 061040.D
2006123-002AMSD 96 1.000 11 Jun 2020 03:42 am

42) 061041.D
2005309-017A 98 1.000 11 Jun 2020 04:04 am

43) 061042.D
2005309-022A 99 1.000 11 Jun 2020 04:26 am

44) 061043.D
MB-28595 76 1.000 11 Jun 2020 04:49 am

45) 061044.D

2006123-010A 82 1.000 11 Jun 2020 05:11 am

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46) 061045.D
2006123-018A 90 1.000 11 Jun 2020 05:33 am

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47) 061047.D
QCS-28595 2 1.000 11 Jun 2020 05:56 am

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48) 061048.D
TUNE 1 1.000 11 Jun 2020 06:18 am

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49) 061049.D
CCV-EXT-28585 3 1.000 11 Jun 2020 06:40 am

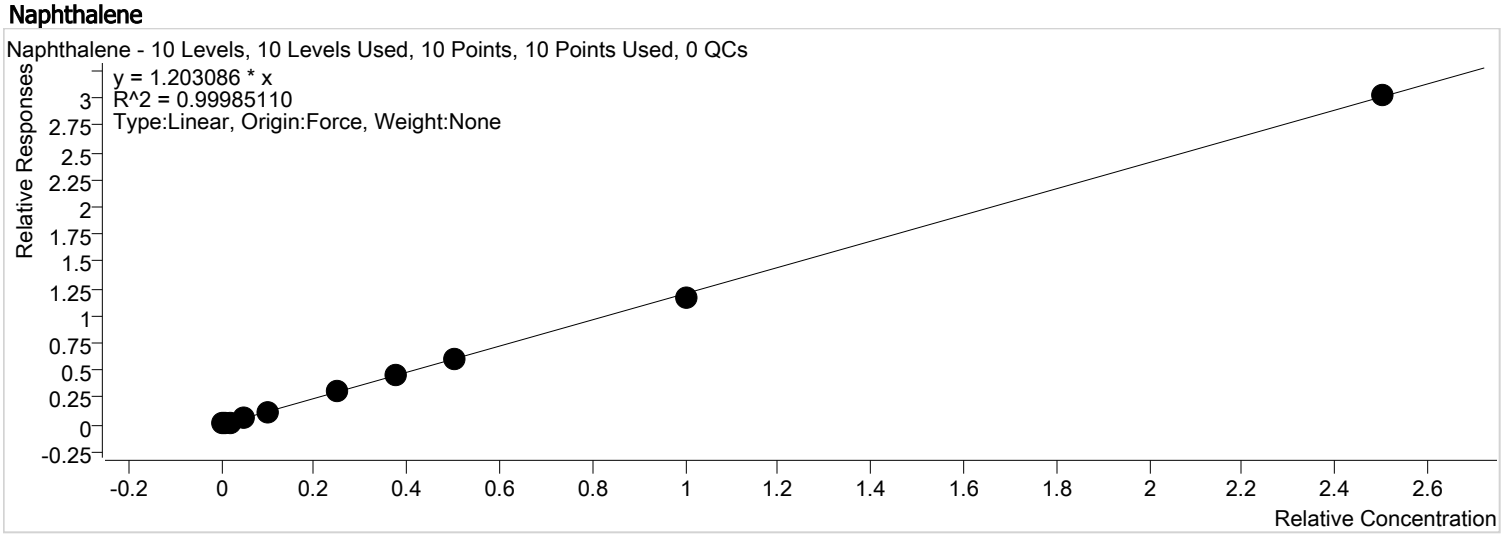
Calibration

Calibration Report

Agilent Technologies

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:37 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

Naphthalene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
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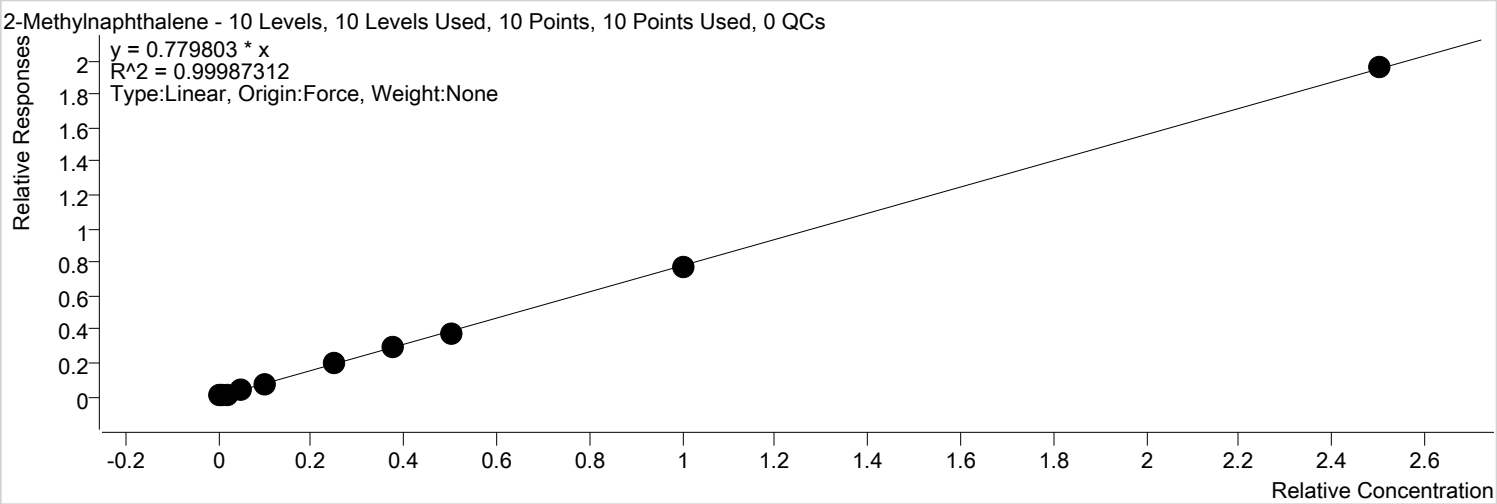
D:\GC-21\Data\060320\060332.D	Calibration	2	x	1108	20.0000	1.4010
D:\GC-21\Data\060320\060333.D	Calibration	3	x	2055	40.0000	1.2291
D:\GC-21\Data\060320\060334.D	Calibration	4	x	4916	100.0000	1.2198
D:\GC-21\Data\060320\060335.D	Calibration	5	x	10067	200.0000	1.2453
D:\GC-21\Data\060320\060336.D	Calibration	6	x	24980	500.0000	1.2121
D:\GC-21\Data\060320\060337.D	Calibration	7	x	36967	750.0000	1.1872
D:\GC-21\Data\060320\060338.D	Calibration	8	x	52707	1000.0000	1.2188
D:\GC-21\Data\060320\060339.D	Calibration	9	x	100421	2000.0000	1.1728
D:\GC-21\Data\060320\060340.D	Calibration	10	x	253311	5000.0000	1.2075

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

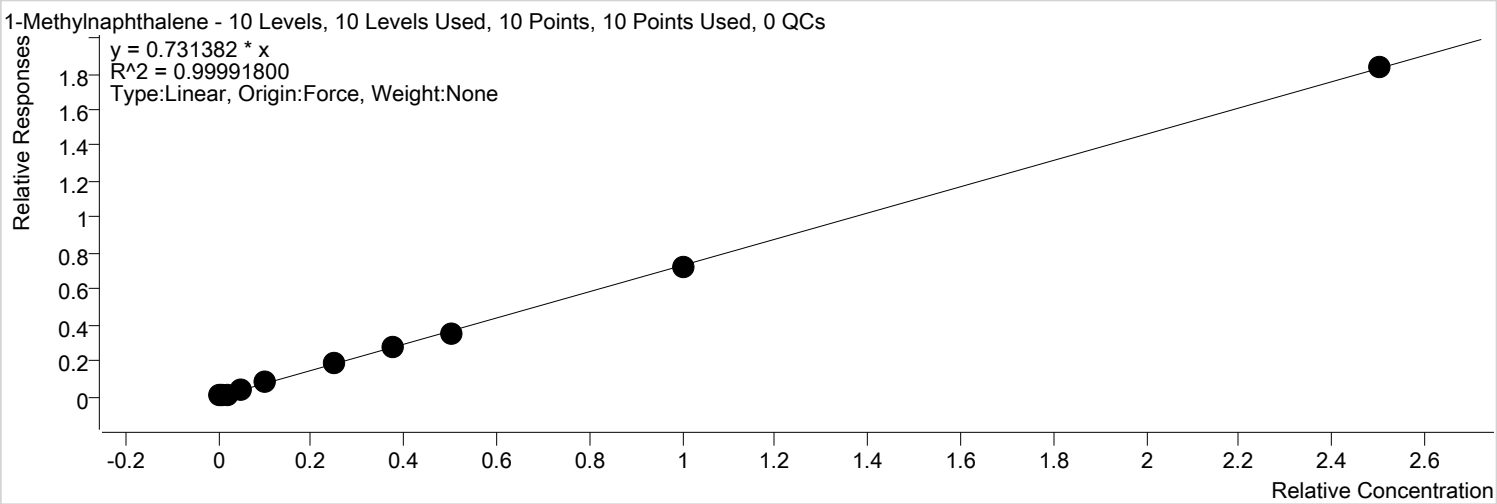
2-Methylnaphthalene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	406	10.0000	1.0028
D:\GC-21\Data\060320\060332.D	Calibration	2	x	734	20.0000	0.9277
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1352	40.0000	0.8087
D:\GC-21\Data\060320\060334.D	Calibration	4	x	3211	100.0000	0.7966
D:\GC-21\Data\060320\060335.D	Calibration	5	x	6596	200.0000	0.8159
D:\GC-21\Data\060320\060336.D	Calibration	6	x	16410	500.0000	0.7962
D:\GC-21\Data\060320\060337.D	Calibration	7	x	24234	750.0000	0.7783
D:\GC-21\Data\060320\060338.D	Calibration	8	x	32844	1000.0000	0.7595
D:\GC-21\Data\060320\060339.D	Calibration	9	x	65489	2000.0000	0.7649
D:\GC-21\Data\060320\060340.D	Calibration	10	x	164220	5000.0000	0.7828

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

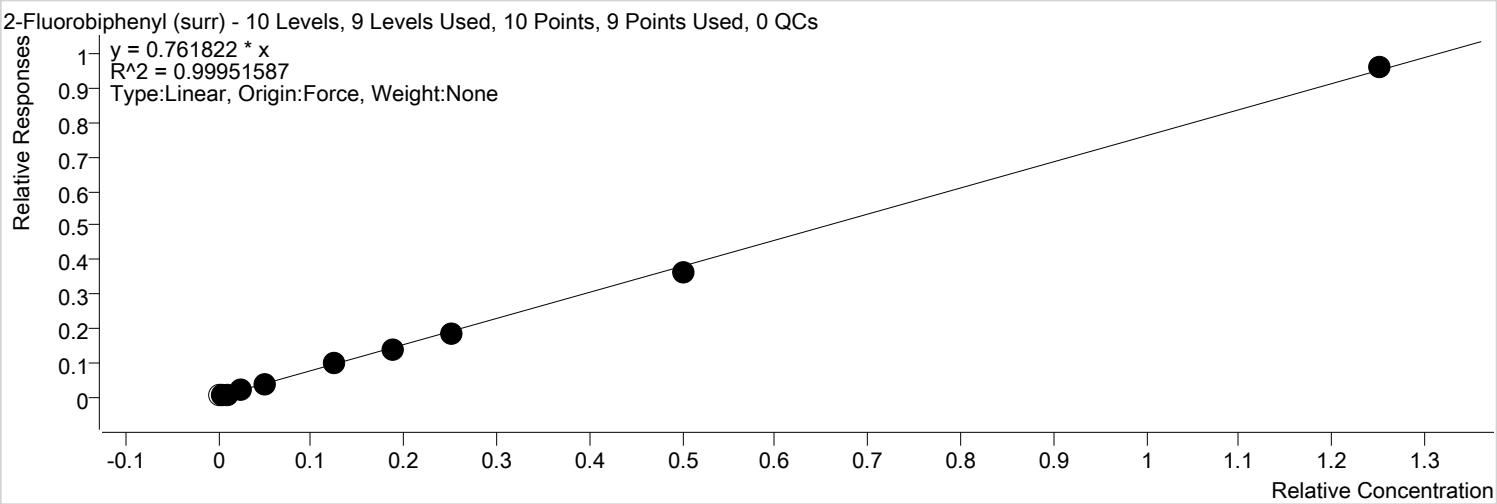
1-Methylnaphthalene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	388	10.0000	0.9579
D:\GC-21\Data\060320\060332.D	Calibration	2	x	704	20.0000	0.8901
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1290	40.0000	0.7714
D:\GC-21\Data\060320\060334.D	Calibration	4	x	3048	100.0000	0.7564
D:\GC-21\Data\060320\060335.D	Calibration	5	x	6293	200.0000	0.7784
D:\GC-21\Data\060320\060336.D	Calibration	6	x	15532	500.0000	0.7536
D:\GC-21\Data\060320\060337.D	Calibration	7	x	22968	750.0000	0.7376
D:\GC-21\Data\060320\060338.D	Calibration	8	x	31053	1000.0000	0.7181
D:\GC-21\Data\060320\060339.D	Calibration	9	x	61729	2000.0000	0.7209
D:\GC-21\Data\060320\060340.D	Calibration	10	x	153799	5000.0000	0.7331

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

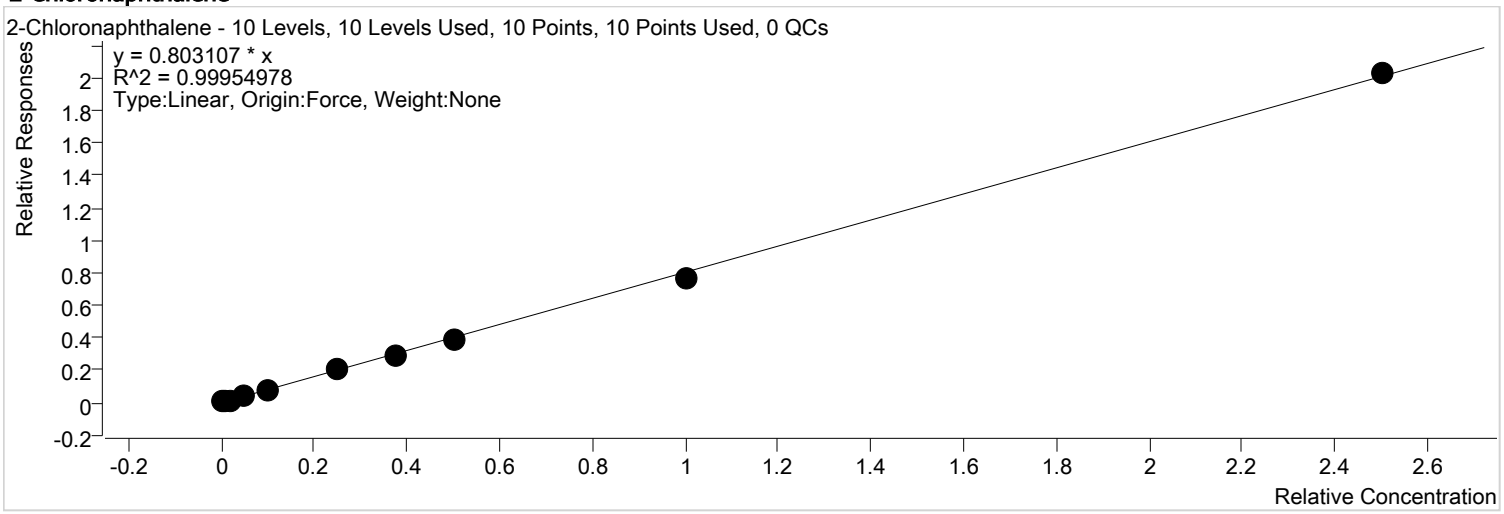
2-Fluorobiphenyl (surr)



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1		199	5.0000	0.9837
D:\GC-21\Data\060320\060332.D	Calibration	2	x	356	10.0000	0.9005
D:\GC-21\Data\060320\060333.D	Calibration	3	x	658	20.0000	0.7874
D:\GC-21\Data\060320\060334.D	Calibration	4	x	1558	50.0000	0.7734
D:\GC-21\Data\060320\060335.D	Calibration	5	x	3189	100.0000	0.7891
D:\GC-21\Data\060320\060336.D	Calibration	6	x	7819	250.0000	0.7588
D:\GC-21\Data\060320\060337.D	Calibration	7	x	11578	375.0000	0.7437
D:\GC-21\Data\060320\060338.D	Calibration	8	x	15647	500.0000	0.7236
D:\GC-21\Data\060320\060339.D	Calibration	9	x	31416	1000.0000	0.7338
D:\GC-21\Data\060320\060340.D	Calibration	10	x	80580	2500.0000	0.7682

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

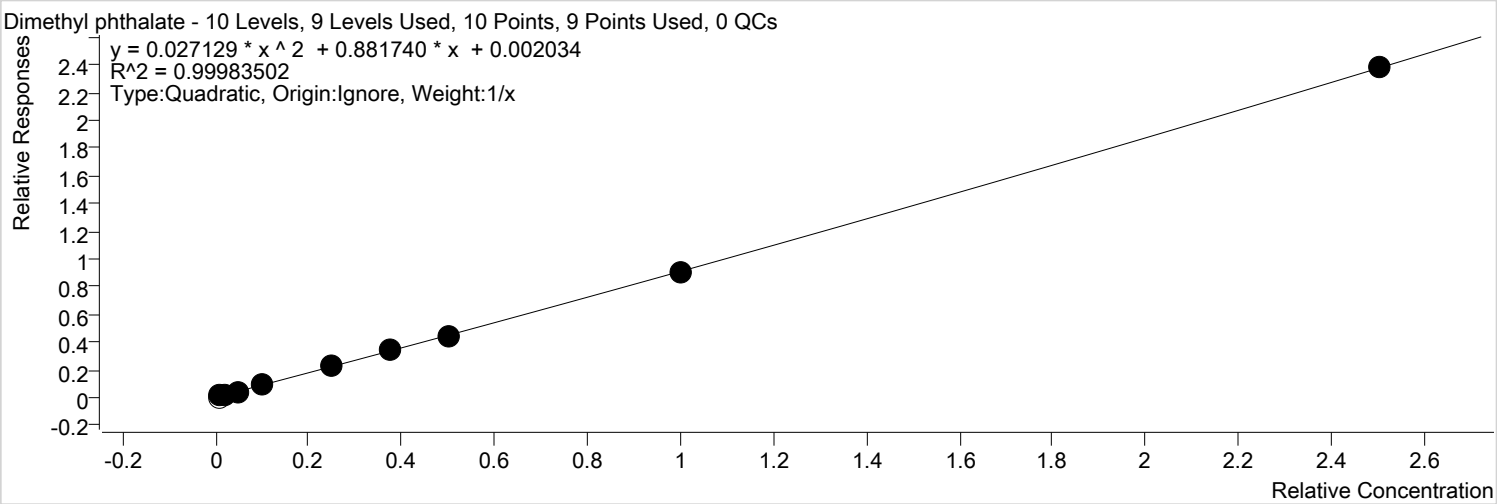
2-Chloronaphthalene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	414	10.0000	1.0228
D:\GC-21\Data\060320\060332.D	Calibration	2	x	744	20.0000	0.9405
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1376	40.0000	0.8230
D:\GC-21\Data\060320\060334.D	Calibration	4	x	3261	100.0000	0.8091
D:\GC-21\Data\060320\060335.D	Calibration	5	x	6702	200.0000	0.8291
D:\GC-21\Data\060320\060336.D	Calibration	6	x	16506	500.0000	0.8009
D:\GC-21\Data\060320\060337.D	Calibration	7	x	24524	750.0000	0.7876
D:\GC-21\Data\060320\060338.D	Calibration	8	x	33036	1000.0000	0.7639
D:\GC-21\Data\060320\060339.D	Calibration	9	x	66227	2000.0000	0.7735
D:\GC-21\Data\060320\060340.D	Calibration	10	x	169870	5000.0000	0.8097

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

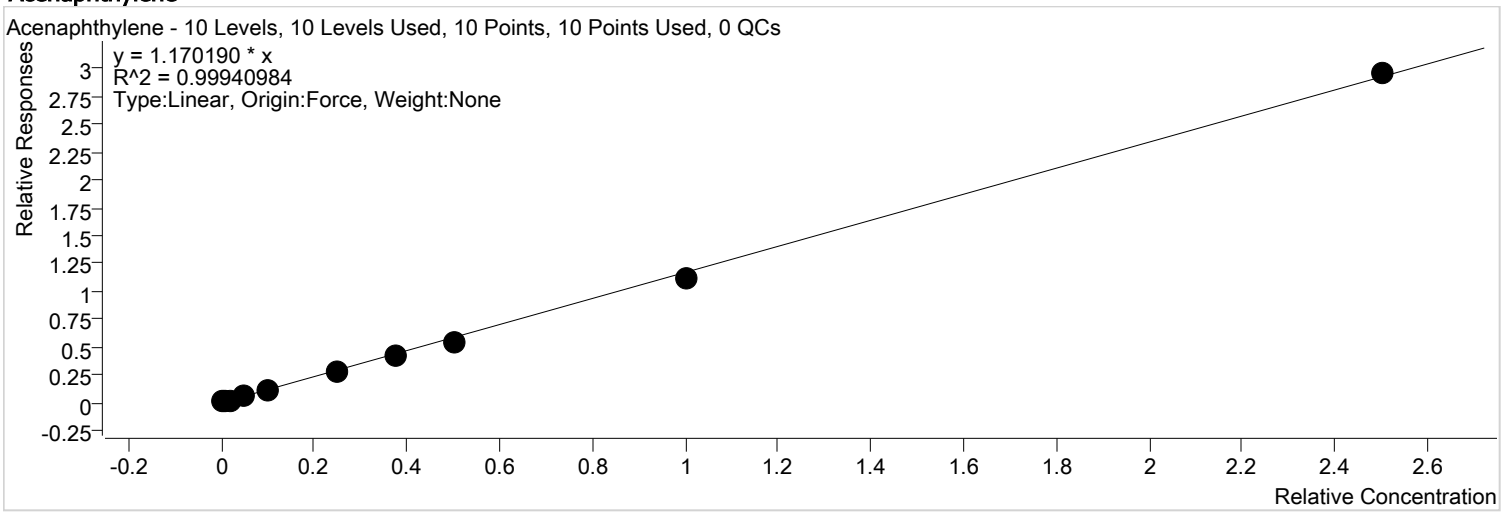
Dimethyl phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1		481	10.0000	1.1896
D:\GC-21\Data\060320\060332.D	Calibration	2	x	860	20.0000	1.0867
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1562	40.0000	0.9343
D:\GC-21\Data\060320\060334.D	Calibration	4	x	3705	100.0000	0.9194
D:\GC-21\Data\060320\060335.D	Calibration	5	x	7655	200.0000	0.9470
D:\GC-21\Data\060320\060336.D	Calibration	6	x	19014	500.0000	0.9226
D:\GC-21\Data\060320\060337.D	Calibration	7	x	28179	750.0000	0.9049
D:\GC-21\Data\060320\060338.D	Calibration	8	x	38134	1000.0000	0.8818
D:\GC-21\Data\060320\060339.D	Calibration	9	x	77408	2000.0000	0.9041
D:\GC-21\Data\060320\060340.D	Calibration	10	x	199647	5000.0000	0.9517

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

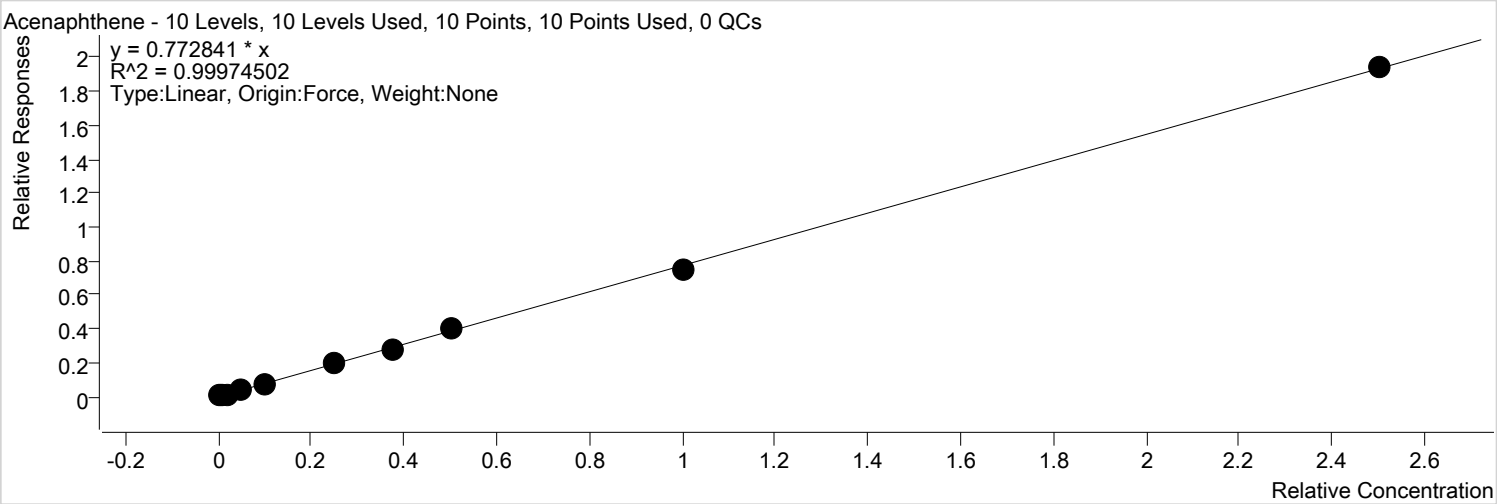
Acenaphthylene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	600	10.0000	1.4821
D:\GC-21\Data\060320\060332.D	Calibration	2	x	1057	20.0000	1.3356
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1942	40.0000	1.1614
D:\GC-21\Data\060320\060334.D	Calibration	4	x	4563	100.0000	1.1322
D:\GC-21\Data\060320\060335.D	Calibration	5	x	9438	200.0000	1.1675
D:\GC-21\Data\060320\060336.D	Calibration	6	x	23633	500.0000	1.1467
D:\GC-21\Data\060320\060337.D	Calibration	7	x	35388	750.0000	1.1365
D:\GC-21\Data\060320\060338.D	Calibration	8	x	47370	1000.0000	1.0954
D:\GC-21\Data\060320\060339.D	Calibration	9	x	96338	2000.0000	1.1251
D:\GC-21\Data\060320\060340.D	Calibration	10	x	247838	5000.0000	1.1814

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

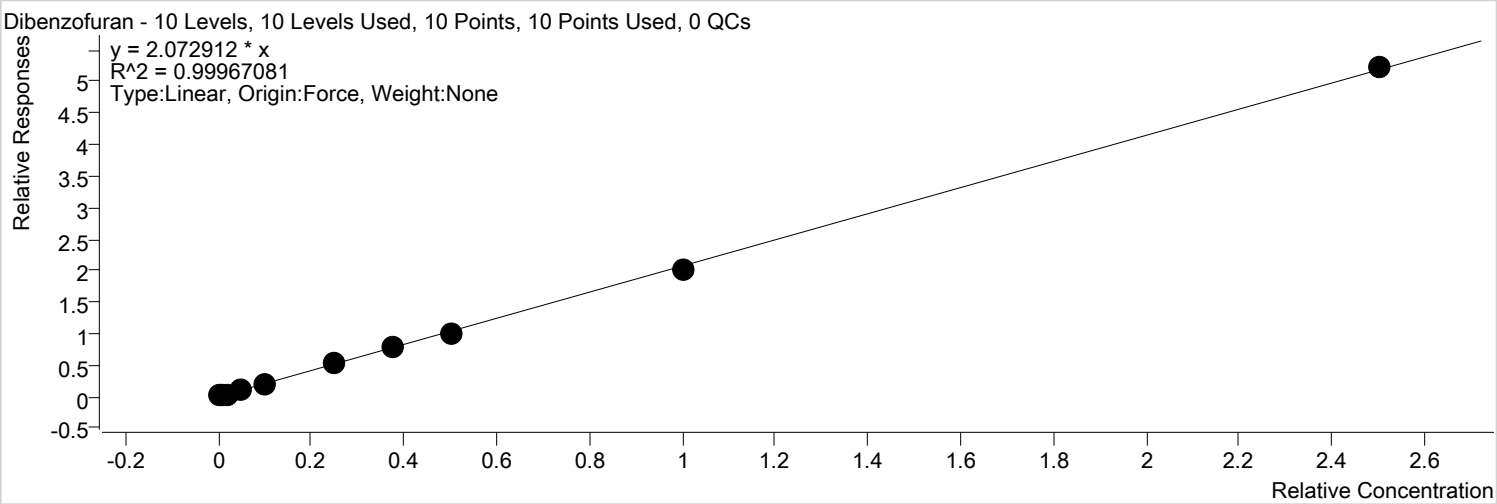
Acenaphthene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	398	10.0000	0.9830
D:\GC-21\Data\060320\060332.D	Calibration	2	x	722	20.0000	0.9125
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1322	40.0000	0.7906
D:\GC-21\Data\060320\060334.D	Calibration	4	x	3141	100.0000	0.7794
D:\GC-21\Data\060320\060335.D	Calibration	5	x	6444	200.0000	0.7971
D:\GC-21\Data\060320\060336.D	Calibration	6	x	15845	500.0000	0.7688
D:\GC-21\Data\060320\060337.D	Calibration	7	x	23455	750.0000	0.7532
D:\GC-21\Data\060320\060338.D	Calibration	8	x	34919	1000.0000	0.8075
D:\GC-21\Data\060320\060339.D	Calibration	9	x	64409	2000.0000	0.7522
D:\GC-21\Data\060320\060340.D	Calibration	10	x	162622	5000.0000	0.7752

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

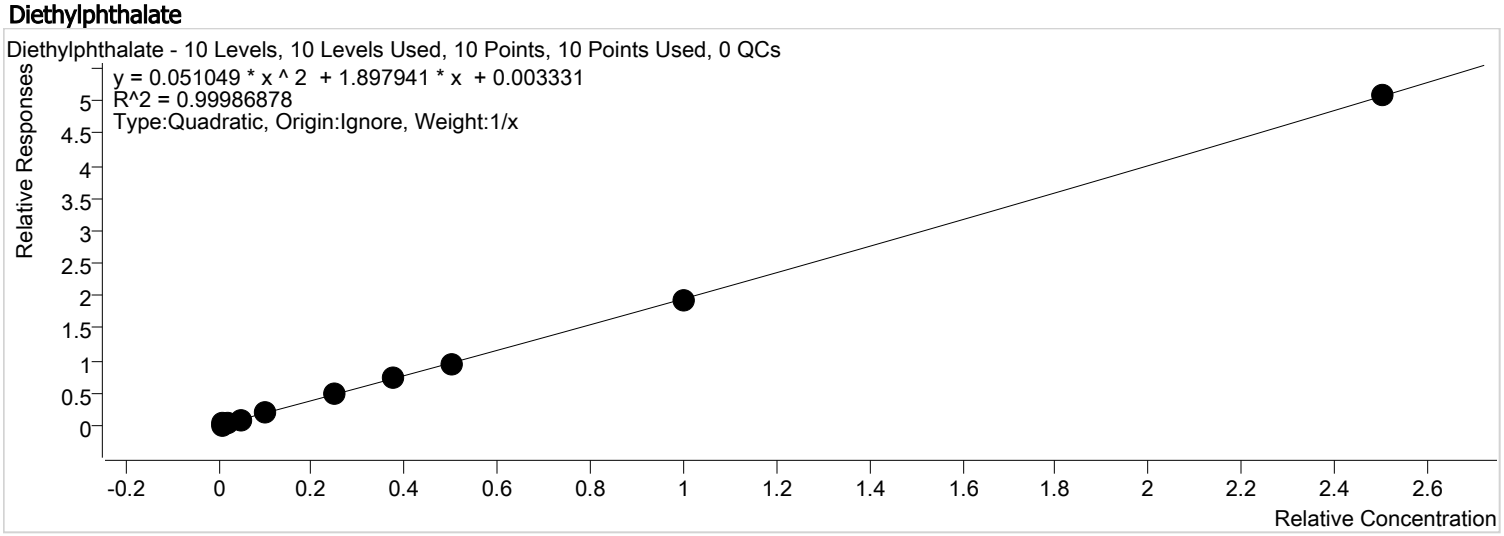
Dibenzofuran



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	548	10.0000	2.6993
D:\GC-21\Data\060320\060332.D	Calibration	2	x	995	20.0000	2.5431
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1800	40.0000	2.1419
D:\GC-21\Data\060320\060334.D	Calibration	4	x	4255	100.0000	2.1250
D:\GC-21\Data\060320\060335.D	Calibration	5	x	8699	200.0000	2.1493
D:\GC-21\Data\060320\060336.D	Calibration	6	x	21606	500.0000	2.1039
D:\GC-21\Data\060320\060337.D	Calibration	7	x	32031	750.0000	2.0712
D:\GC-21\Data\060320\060338.D	Calibration	8	x	43294	1000.0000	2.0282
D:\GC-21\Data\060320\060339.D	Calibration	9	x	86556	2000.0000	1.9964
D:\GC-21\Data\060320\060340.D	Calibration	10	x	220001	5000.0000	2.0865

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

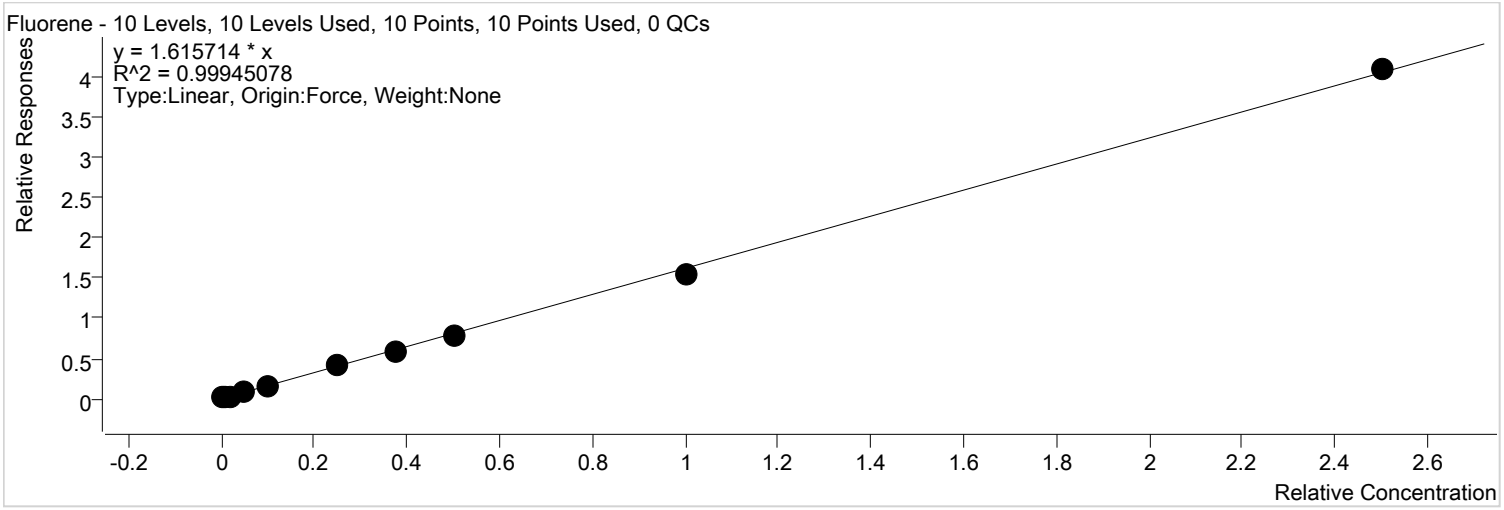
Diethylphthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	511	10.0000	2.5156
D:\GC-21\Data\060320\060332.D	Calibration	2	x	890	20.0000	2.2754
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1663	40.0000	1.9790
D:\GC-21\Data\060320\060334.D	Calibration	4	x	3919	100.0000	1.9568
D:\GC-21\Data\060320\060335.D	Calibration	5	x	8116	200.0000	2.0053
D:\GC-21\Data\060320\060336.D	Calibration	6	x	20292	500.0000	1.9760
D:\GC-21\Data\060320\060337.D	Calibration	7	x	30054	750.0000	1.9433
D:\GC-21\Data\060320\060338.D	Calibration	8	x	40930	1000.0000	1.9175
D:\GC-21\Data\060320\060339.D	Calibration	9	x	83433	2000.0000	1.9244
D:\GC-21\Data\060320\060340.D	Calibration	10	x	214133	5000.0000	2.0309

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

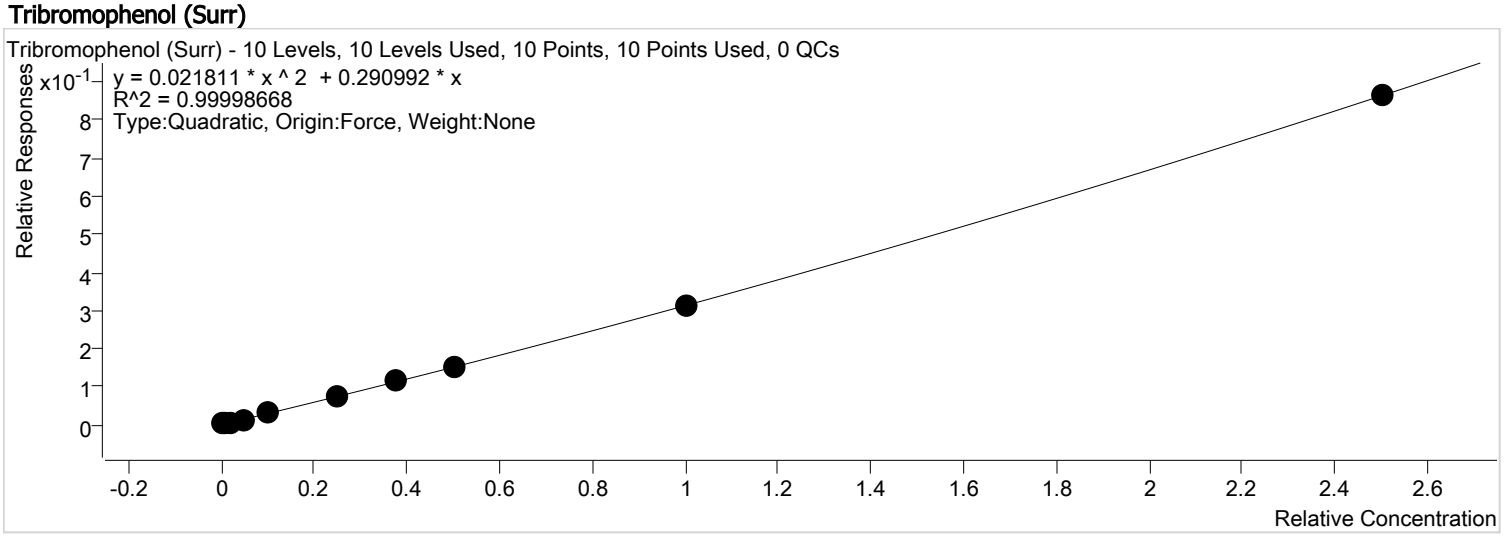
Fluorene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	413	10.0000	2.0351
D:\GC-21\Data\060320\060332.D	Calibration	2	x	746	20.0000	1.9084
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1347	40.0000	1.6031
D:\GC-21\Data\060320\060334.D	Calibration	4	x	3245	100.0000	1.6205
D:\GC-21\Data\060320\060335.D	Calibration	5	x	6666	200.0000	1.6472
D:\GC-21\Data\060320\060336.D	Calibration	6	x	16557	500.0000	1.6123
D:\GC-21\Data\060320\060337.D	Calibration	7	x	24632	750.0000	1.5928
D:\GC-21\Data\060320\060338.D	Calibration	8	x	33107	1000.0000	1.5510
D:\GC-21\Data\060320\060339.D	Calibration	9	x	66893	2000.0000	1.5429
D:\GC-21\Data\060320\060340.D	Calibration	10	x	171914	5000.0000	1.6305

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

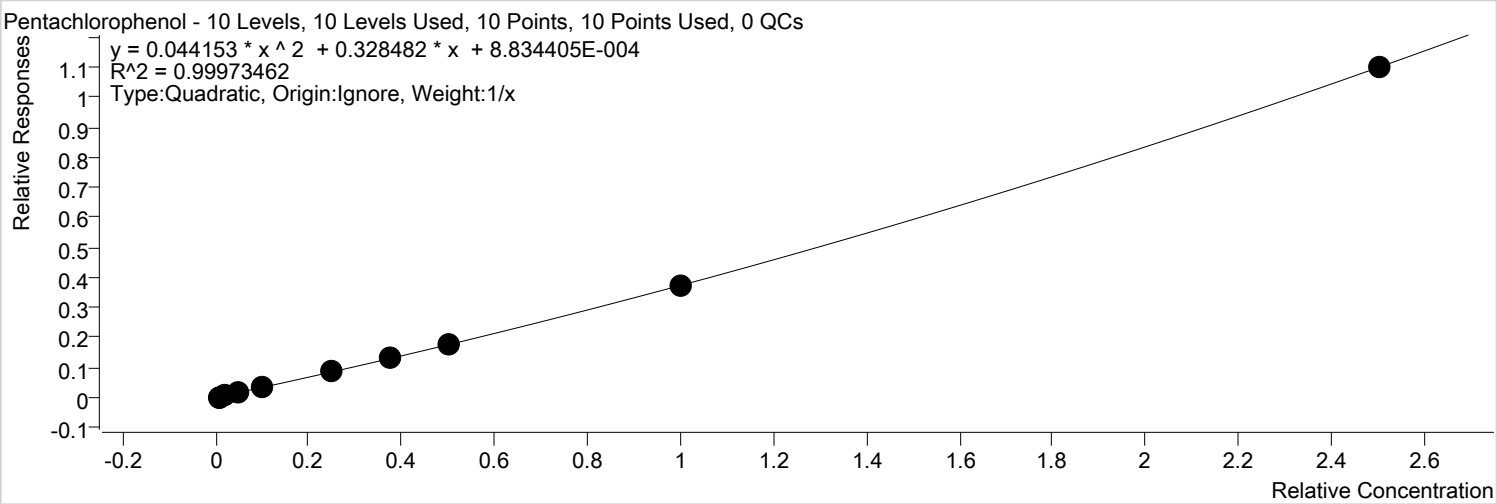
Tribromophenol (Surr)



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	77	10.0000	0.3811
D:\GC-21\Data\060320\060332.D	Calibration	2	x	132	20.0000	0.3384
D:\GC-21\Data\060320\060333.D	Calibration	3	x	247	40.0000	0.2939
D:\GC-21\Data\060320\060334.D	Calibration	4	x	589	100.0000	0.2941
D:\GC-21\Data\060320\060335.D	Calibration	5	x	1207	200.0000	0.2983
D:\GC-21\Data\060320\060336.D	Calibration	6	x	3109	500.0000	0.3028
D:\GC-21\Data\060320\060337.D	Calibration	7	x	4691	750.0000	0.3033
D:\GC-21\Data\060320\060338.D	Calibration	8	x	6454	1000.0000	0.3023
D:\GC-21\Data\060320\060339.D	Calibration	9	x	13490	2000.0000	0.3111
D:\GC-21\Data\060320\060340.D	Calibration	10	x	36440	5000.0000	0.3456

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

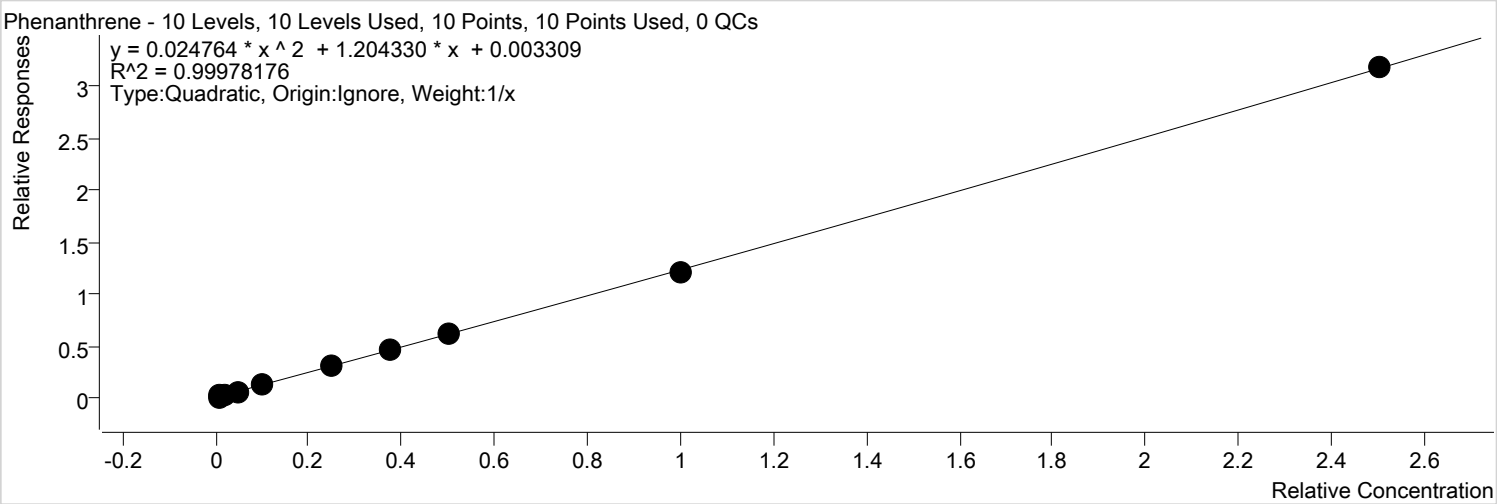
Pentachlorophenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	125	10.0000	0.6161
D:\GC-21\Data\060320\060332.D	Calibration	2	x	154	20.0000	0.3948
D:\GC-21\Data\060320\060333.D	Calibration	3	x	264	40.0000	0.3137
D:\GC-21\Data\060320\060334.D	Calibration	4	x	638	100.0000	0.3187
D:\GC-21\Data\060320\060335.D	Calibration	5	x	1355	200.0000	0.3347
D:\GC-21\Data\060320\060336.D	Calibration	6	x	3559	500.0000	0.3466
D:\GC-21\Data\060320\060337.D	Calibration	7	x	5420	750.0000	0.3505
D:\GC-21\Data\060320\060338.D	Calibration	8	x	7524	1000.0000	0.3525
D:\GC-21\Data\060320\060339.D	Calibration	9	x	16276	2000.0000	0.3754
D:\GC-21\Data\060320\060340.D	Calibration	10	x	46270	5000.0000	0.4388

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

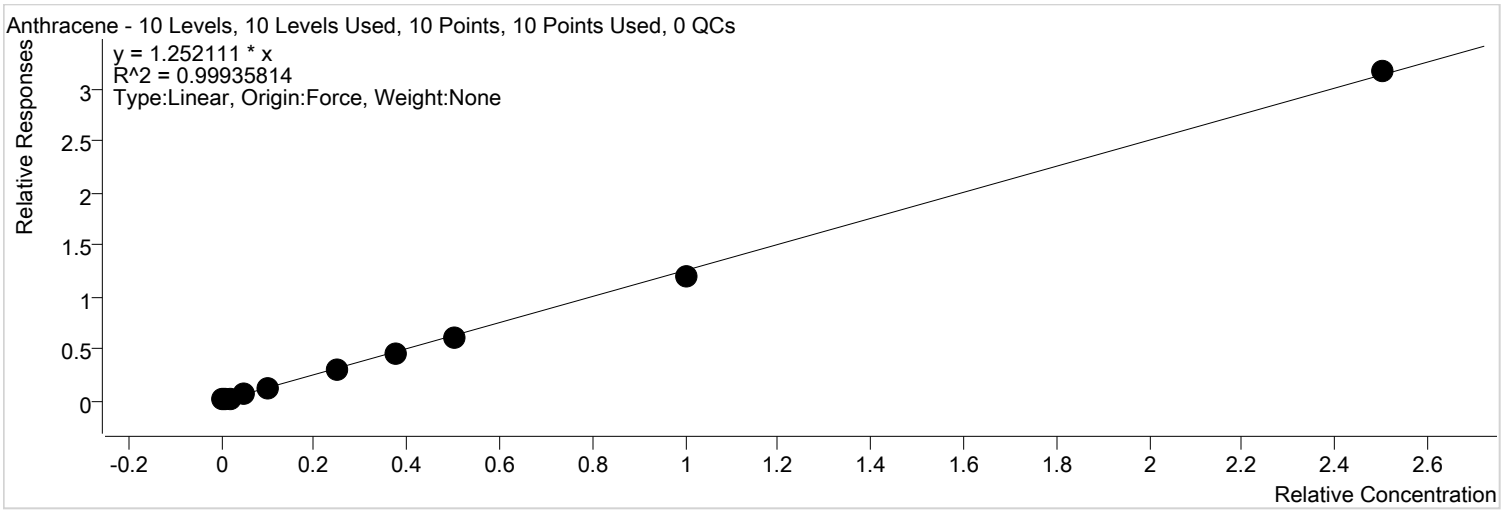
Phenanthrene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	643	10.0000	1.7866
D:\GC-21\Data\060320\060332.D	Calibration	2	x	1104	20.0000	1.5983
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1964	40.0000	1.3126
D:\GC-21\Data\060320\060334.D	Calibration	4	x	4515	100.0000	1.2679
D:\GC-21\Data\060320\060335.D	Calibration	5	x	9260	200.0000	1.2966
D:\GC-21\Data\060320\060336.D	Calibration	6	x	23067	500.0000	1.2495
D:\GC-21\Data\060320\060337.D	Calibration	7	x	34037	750.0000	1.2435
D:\GC-21\Data\060320\060338.D	Calibration	8	x	46415	1000.0000	1.2214
D:\GC-21\Data\060320\060339.D	Calibration	9	x	94128	2000.0000	1.2056
D:\GC-21\Data\060320\060340.D	Calibration	10	x	243362	5000.0000	1.2711

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

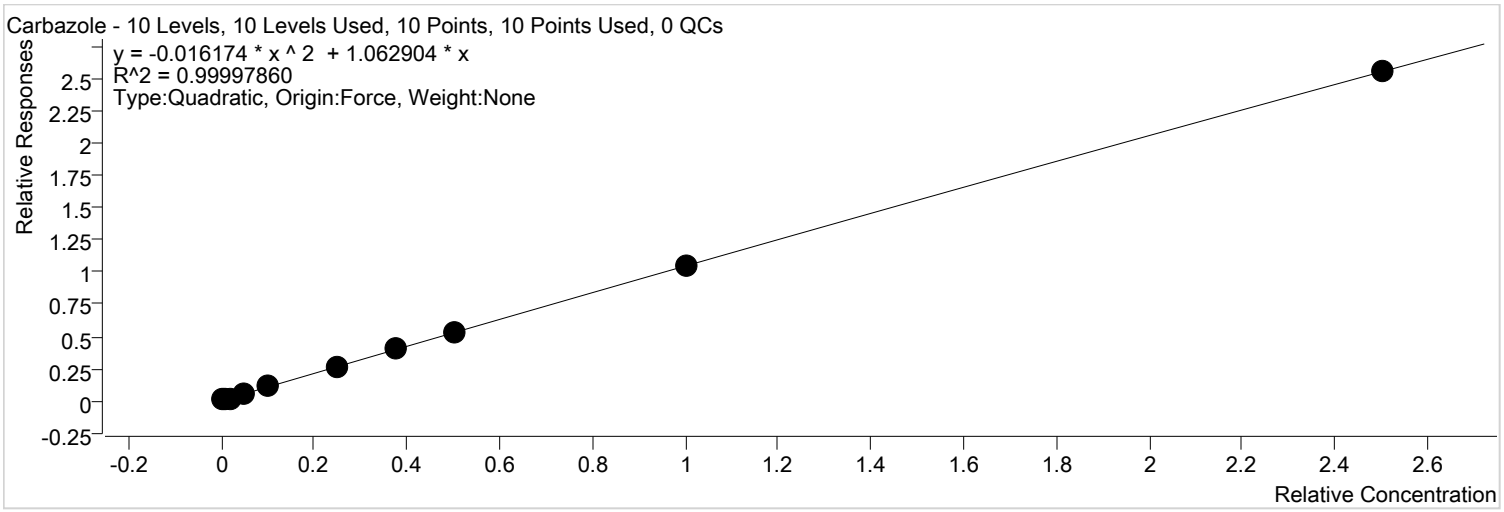
Anthracene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	558	10.0000	1.5514
D:\GC-21\Data\060320\060332.D	Calibration	2	x	1002	20.0000	1.4501
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1871	40.0000	1.2501
D:\GC-21\Data\060320\060334.D	Calibration	4	x	4355	100.0000	1.2230
D:\GC-21\Data\060320\060335.D	Calibration	5	x	9046	200.0000	1.2666
D:\GC-21\Data\060320\060336.D	Calibration	6	x	22590	500.0000	1.2236
D:\GC-21\Data\060320\060337.D	Calibration	7	x	33791	750.0000	1.2345
D:\GC-21\Data\060320\060338.D	Calibration	8	x	45521	1000.0000	1.1979
D:\GC-21\Data\060320\060339.D	Calibration	9	x	93028	2000.0000	1.1915
D:\GC-21\Data\060320\060340.D	Calibration	10	x	242123	5000.0000	1.2646

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

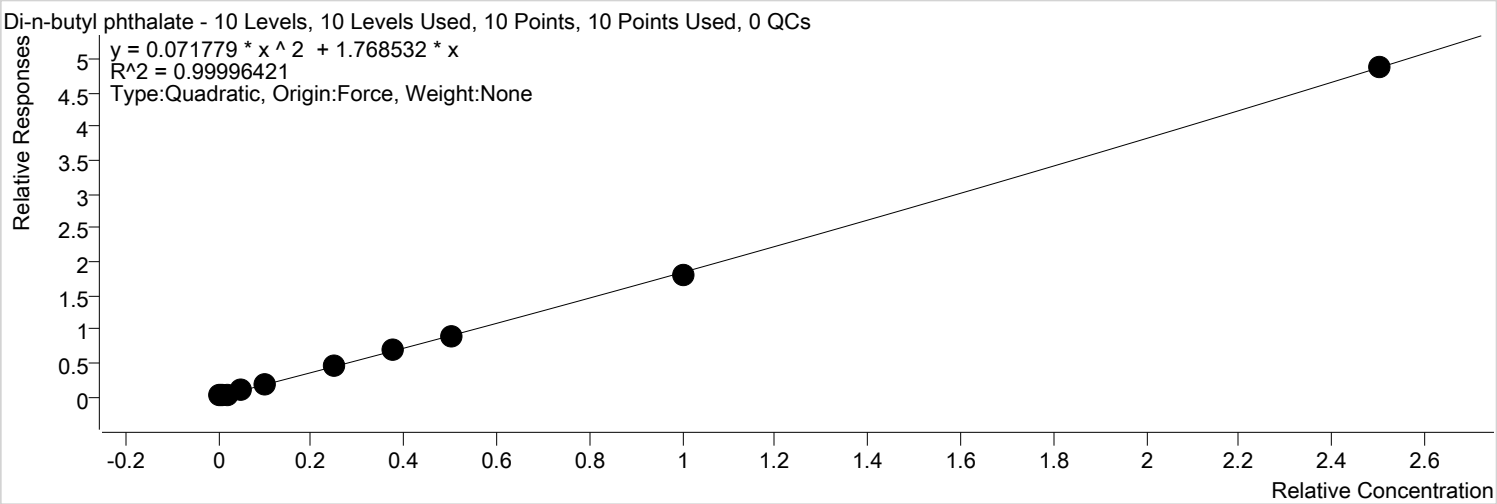
Carbazole



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	504	10.0000	1.4017
D:\GC-21\Data\060320\060332.D	Calibration	2	x	896	20.0000	1.2963
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1589	40.0000	1.0618
D:\GC-21\Data\060320\060334.D	Calibration	4	x	3749	100.0000	1.0528
D:\GC-21\Data\060320\060335.D	Calibration	5	x	7751	200.0000	1.0854
D:\GC-21\Data\060320\060336.D	Calibration	6	x	19738	500.0000	1.0692
D:\GC-21\Data\060320\060337.D	Calibration	7	x	29556	750.0000	1.0798
D:\GC-21\Data\060320\060338.D	Calibration	8	x	39938	1000.0000	1.0510
D:\GC-21\Data\060320\060339.D	Calibration	9	x	81359	2000.0000	1.0421
D:\GC-21\Data\060320\060340.D	Calibration	10	x	195804	5000.0000	1.0227

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

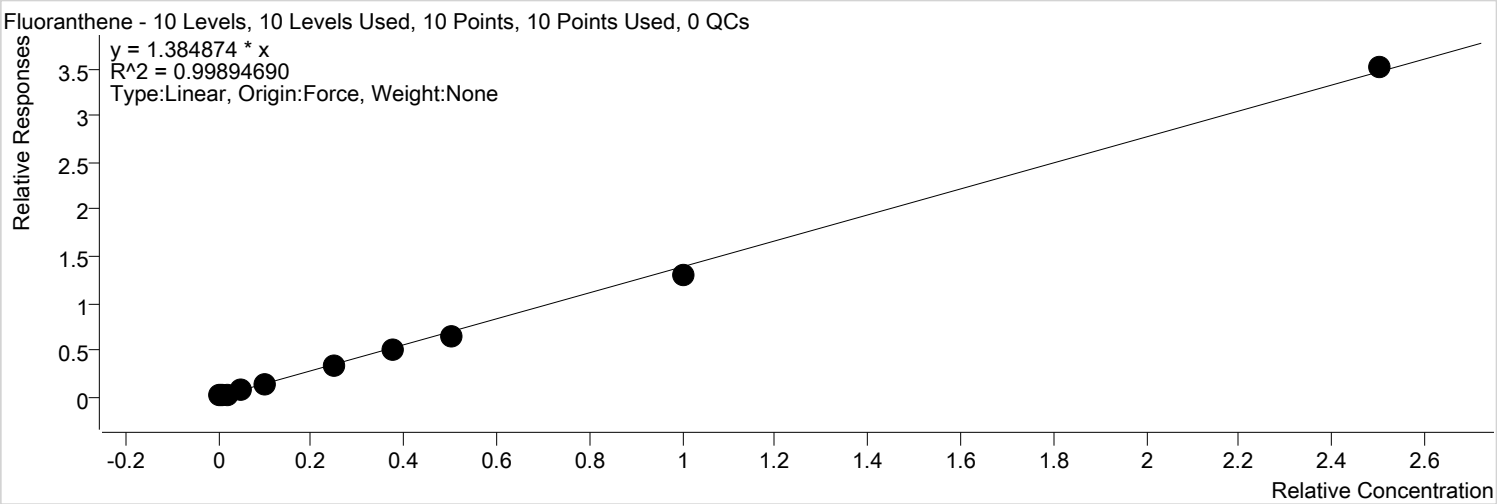
Di-n-butyl phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	817	10.0000	2.2728
D:\GC-21\Data\060320\060332.D	Calibration	2	x	1434	20.0000	2.0753
D:\GC-21\Data\060320\060333.D	Calibration	3	x	2643	40.0000	1.7661
D:\GC-21\Data\060320\060334.D	Calibration	4	x	6292	100.0000	1.7670
D:\GC-21\Data\060320\060335.D	Calibration	5	x	13004	200.0000	1.8209
D:\GC-21\Data\060320\060336.D	Calibration	6	x	33568	500.0000	1.8183
D:\GC-21\Data\060320\060337.D	Calibration	7	x	50444	750.0000	1.8429
D:\GC-21\Data\060320\060338.D	Calibration	8	x	68972	1000.0000	1.8150
D:\GC-21\Data\060320\060339.D	Calibration	9	x	142375	2000.0000	1.8236
D:\GC-21\Data\060320\060340.D	Calibration	10	x	373104	5000.0000	1.9488

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

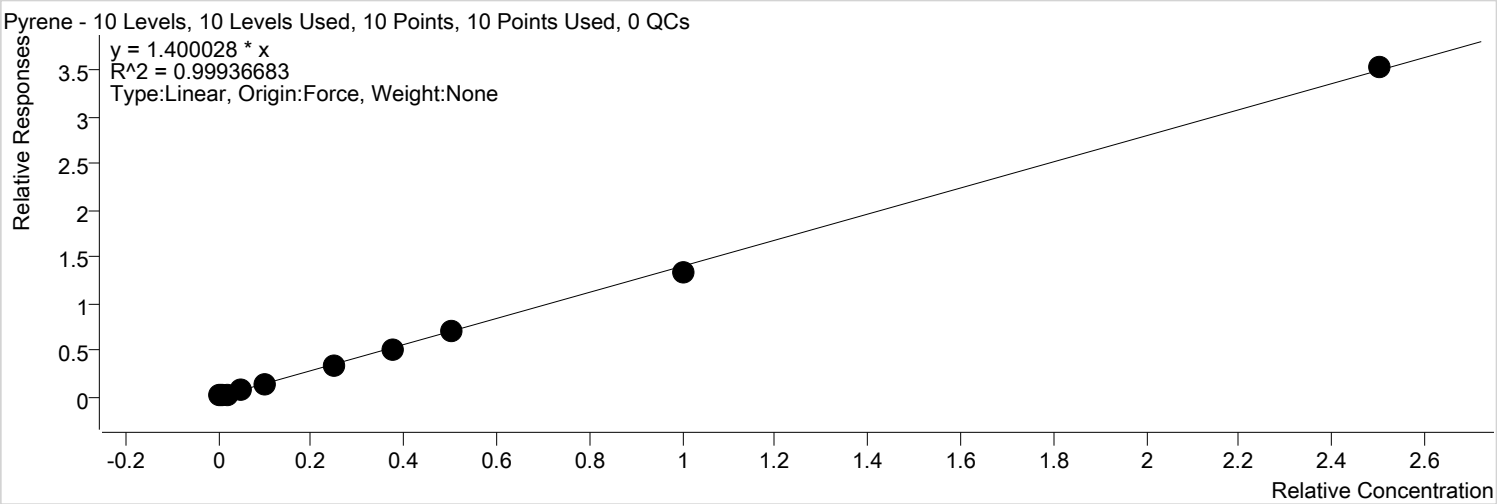
Fluoranthene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	624	10.0000	1.7342
D:\GC-21\Data\060320\060332.D	Calibration	2	x	1093	20.0000	1.5818
D:\GC-21\Data\060320\060333.D	Calibration	3	x	2012	40.0000	1.3446
D:\GC-21\Data\060320\060334.D	Calibration	4	x	4760	100.0000	1.3368
D:\GC-21\Data\060320\060335.D	Calibration	5	x	9856	200.0000	1.3801
D:\GC-21\Data\060320\060336.D	Calibration	6	x	24856	500.0000	1.3464
D:\GC-21\Data\060320\060337.D	Calibration	7	x	36690	750.0000	1.3405
D:\GC-21\Data\060320\060338.D	Calibration	8	x	50004	1000.0000	1.3159
D:\GC-21\Data\060320\060339.D	Calibration	9	x	101377	2000.0000	1.2985
D:\GC-21\Data\060320\060340.D	Calibration	10	x	268588	5000.0000	1.4029

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

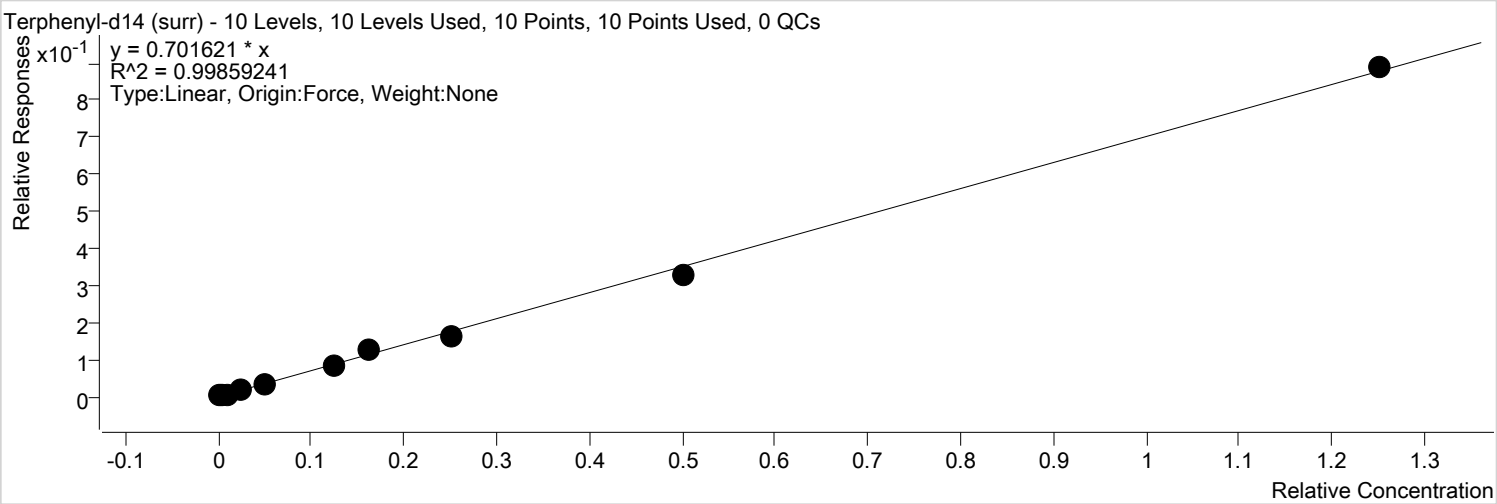
Pyrene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	652	10.0000	1.8130
D:\GC-21\Data\060320\060332.D	Calibration	2	x	1123	20.0000	1.6252
D:\GC-21\Data\060320\060333.D	Calibration	3	x	2031	40.0000	1.3567
D:\GC-21\Data\060320\060334.D	Calibration	4	x	4819	100.0000	1.3533
D:\GC-21\Data\060320\060335.D	Calibration	5	x	9938	200.0000	1.3916
D:\GC-21\Data\060320\060336.D	Calibration	6	x	25105	500.0000	1.3598
D:\GC-21\Data\060320\060337.D	Calibration	7	x	37405	750.0000	1.3666
D:\GC-21\Data\060320\060338.D	Calibration	8	x	54315	1000.0000	1.4293
D:\GC-21\Data\060320\060339.D	Calibration	9	x	103570	2000.0000	1.3266
D:\GC-21\Data\060320\060340.D	Calibration	10	x	270298	5000.0000	1.4118

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

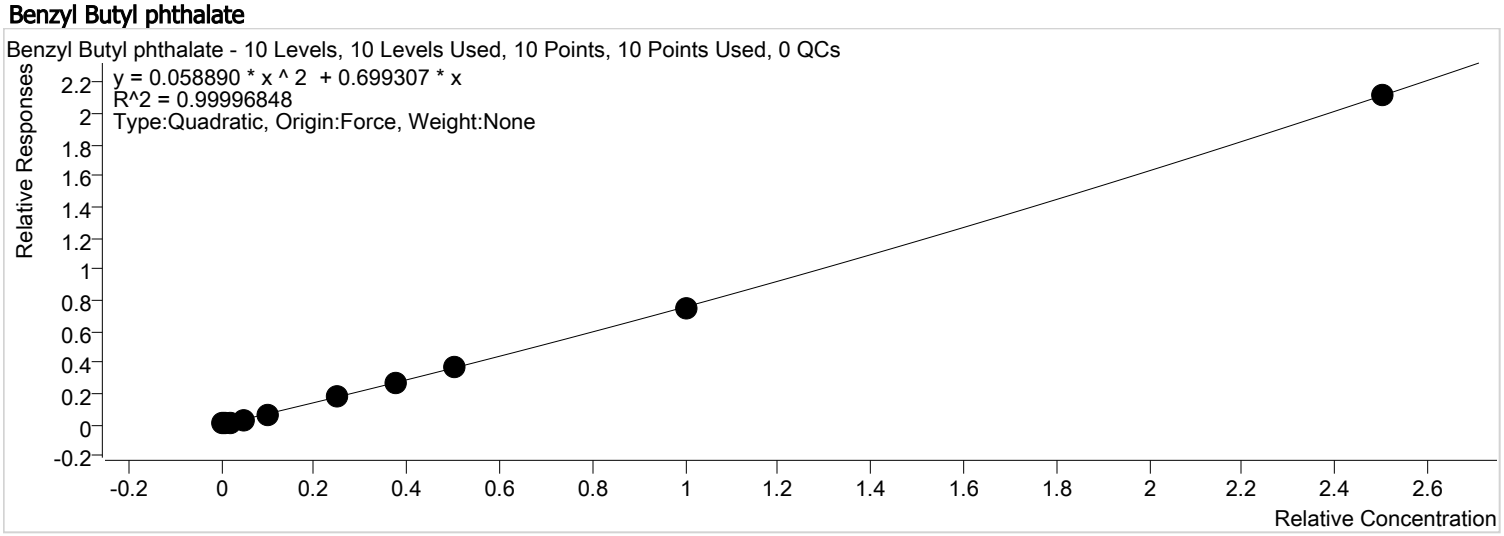
Terphenyl-d14 (surr)



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	167	5.0000	0.9279
D:\GC-21\Data\060320\060332.D	Calibration	2	x	288	10.0000	0.8327
D:\GC-21\Data\060320\060333.D	Calibration	3	x	512	20.0000	0.6845
D:\GC-21\Data\060320\060334.D	Calibration	4	x	1220	50.0000	0.6854
D:\GC-21\Data\060320\060335.D	Calibration	5	x	2500	100.0000	0.7001
D:\GC-21\Data\060320\060336.D	Calibration	6	x	6250	250.0000	0.6771
D:\GC-21\Data\060320\060337.D	Calibration	7	x	9331	325.0000	0.7867
D:\GC-21\Data\060320\060338.D	Calibration	8	x	12636	500.0000	0.6650
D:\GC-21\Data\060320\060339.D	Calibration	9	x	25537	1000.0000	0.6542
D:\GC-21\Data\060320\060340.D	Calibration	10	x	67918	2500.0000	0.7095

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

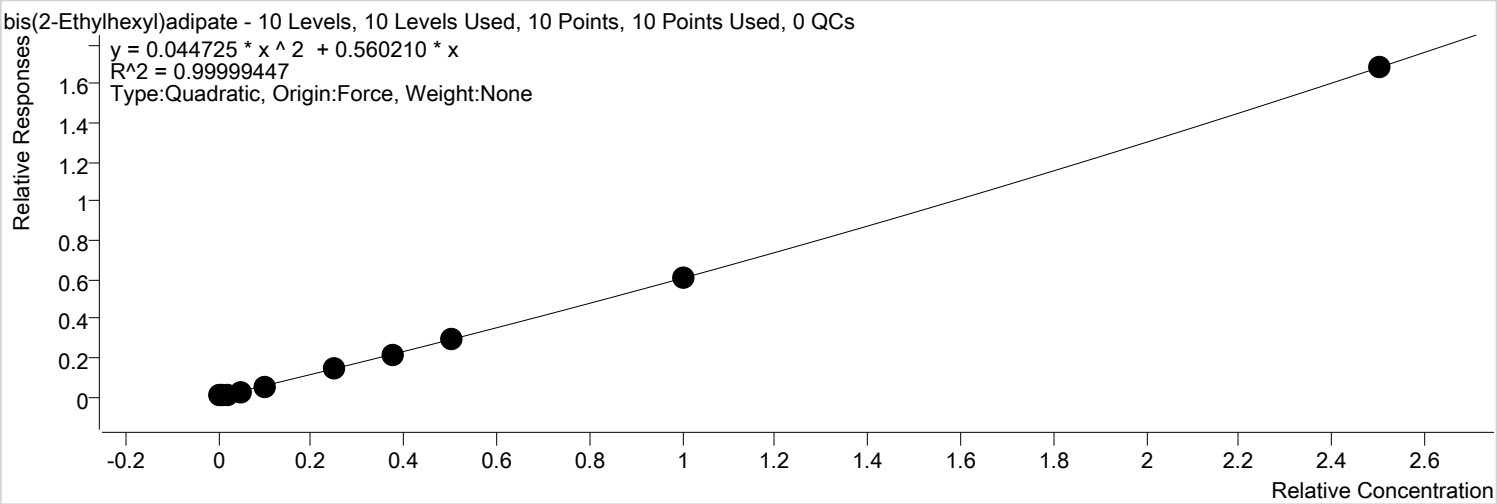
Benzyl Butyl phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	347	10.0000	0.9643
D:\GC-21\Data\060320\060332.D	Calibration	2	x	588	20.0000	0.8515
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1027	40.0000	0.6861
D:\GC-21\Data\060320\060334.D	Calibration	4	x	2404	100.0000	0.6753
D:\GC-21\Data\060320\060335.D	Calibration	5	x	5059	200.0000	0.7084
D:\GC-21\Data\060320\060336.D	Calibration	6	x	13069	500.0000	0.7079
D:\GC-21\Data\060320\060337.D	Calibration	7	x	20254	750.0000	0.7400
D:\GC-21\Data\060320\060338.D	Calibration	8	x	28062	1000.0000	0.7385
D:\GC-21\Data\060320\060339.D	Calibration	9	x	58702	2000.0000	0.7519
D:\GC-21\Data\060320\060340.D	Calibration	10	x	162126	5000.0000	0.8468

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

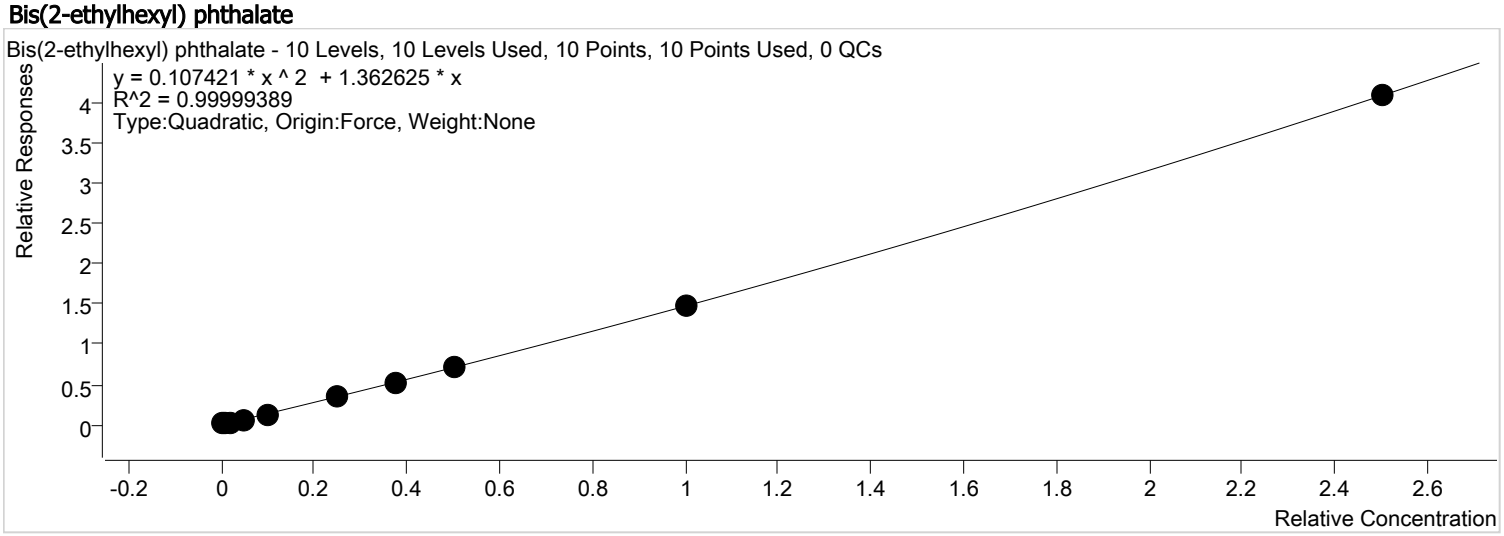
bis(2-Ethylhexyl)adipate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	264	10.0000	0.7338
D:\GC-21\Data\060320\060332.D	Calibration	2	x	459	20.0000	0.6639
D:\GC-21\Data\060320\060333.D	Calibration	3	x	764	40.0000	0.5107
D:\GC-21\Data\060320\060334.D	Calibration	4	x	1845	100.0000	0.5180
D:\GC-21\Data\060320\060335.D	Calibration	5	x	3936	200.0000	0.5511
D:\GC-21\Data\060320\060336.D	Calibration	6	x	10420	500.0000	0.5644
D:\GC-21\Data\060320\060337.D	Calibration	7	x	15829	750.0000	0.5783
D:\GC-21\Data\060320\060338.D	Calibration	8	x	22183	1000.0000	0.5837
D:\GC-21\Data\060320\060339.D	Calibration	9	x	47262	2000.0000	0.6053
D:\GC-21\Data\060320\060340.D	Calibration	10	x	128657	5000.0000	0.6720

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

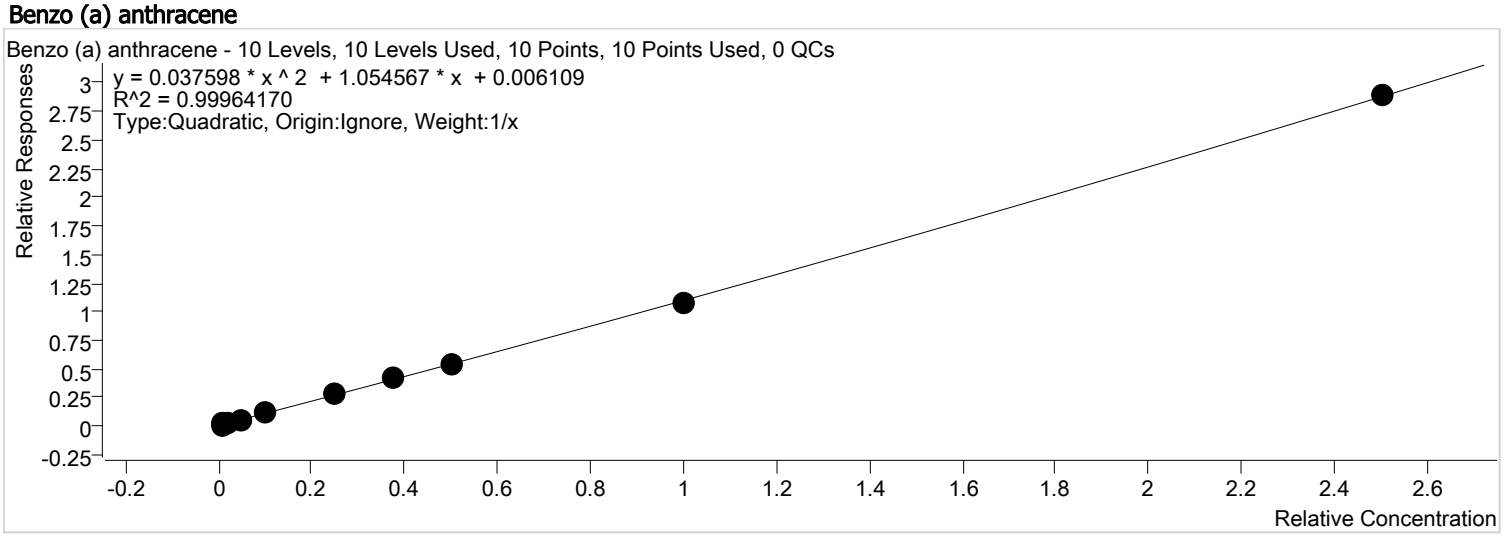
Bis(2-ethylhexyl) phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	408	10.0000	1.4984
D:\GC-21\Data\060320\060332.D	Calibration	2	x	734	20.0000	1.4285
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1377	40.0000	1.2256
D:\GC-21\Data\060320\060334.D	Calibration	4	x	3385	100.0000	1.2682
D:\GC-21\Data\060320\060335.D	Calibration	5	x	7310	200.0000	1.3464
D:\GC-21\Data\060320\060336.D	Calibration	6	x	19337	500.0000	1.3711
D:\GC-21\Data\060320\060337.D	Calibration	7	x	29678	750.0000	1.4107
D:\GC-21\Data\060320\060338.D	Calibration	8	x	41574	1000.0000	1.4240
D:\GC-21\Data\060320\060339.D	Calibration	9	x	87241	2000.0000	1.4686
D:\GC-21\Data\060320\060340.D	Calibration	10	x	235986	5000.0000	1.6312

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

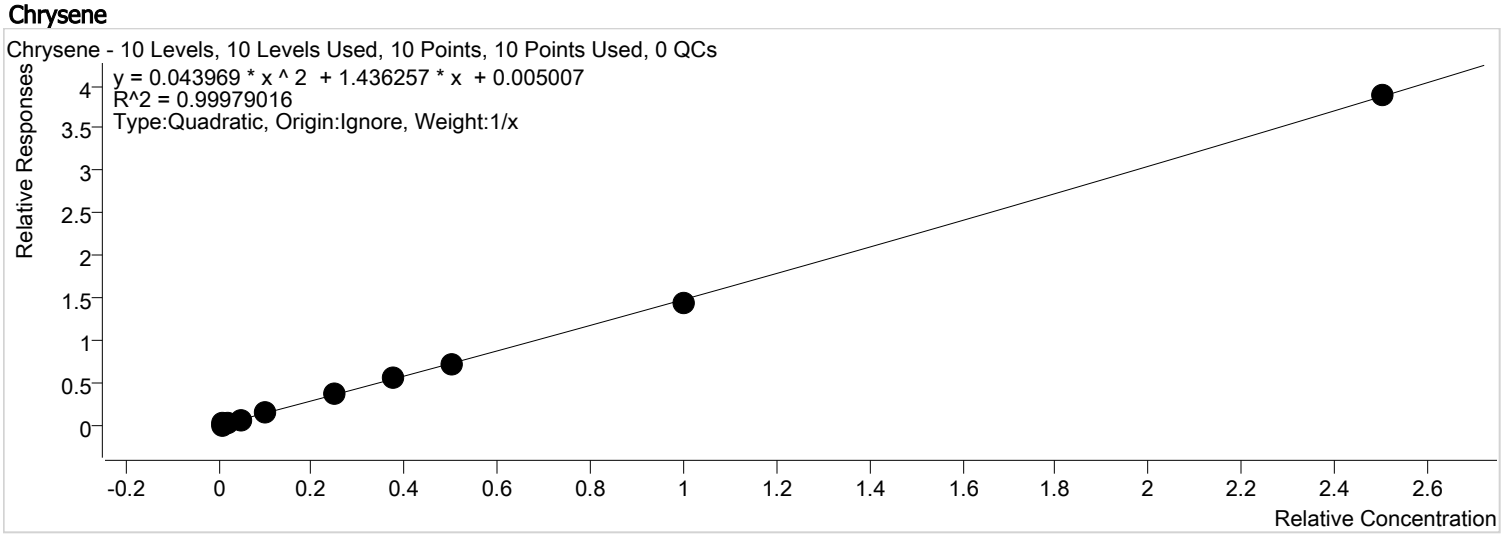
Benzo (a) anthracene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	860	10.0000	2.3910
D:\GC-21\Data\060320\060332.D	Calibration	2	x	1131	20.0000	1.6368
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1881	40.0000	1.2568
D:\GC-21\Data\060320\060334.D	Calibration	4	x	4044	100.0000	1.1357
D:\GC-21\Data\060320\060335.D	Calibration	5	x	8123	200.0000	1.1374
D:\GC-21\Data\060320\060336.D	Calibration	6	x	20640	500.0000	1.1180
D:\GC-21\Data\060320\060337.D	Calibration	7	x	30548	750.0000	1.1160
D:\GC-21\Data\060320\060338.D	Calibration	8	x	41649	1000.0000	1.0960
D:\GC-21\Data\060320\060339.D	Calibration	9	x	83331	2000.0000	1.0673
D:\GC-21\Data\060320\060340.D	Calibration	10	x	221044	5000.0000	1.1545

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

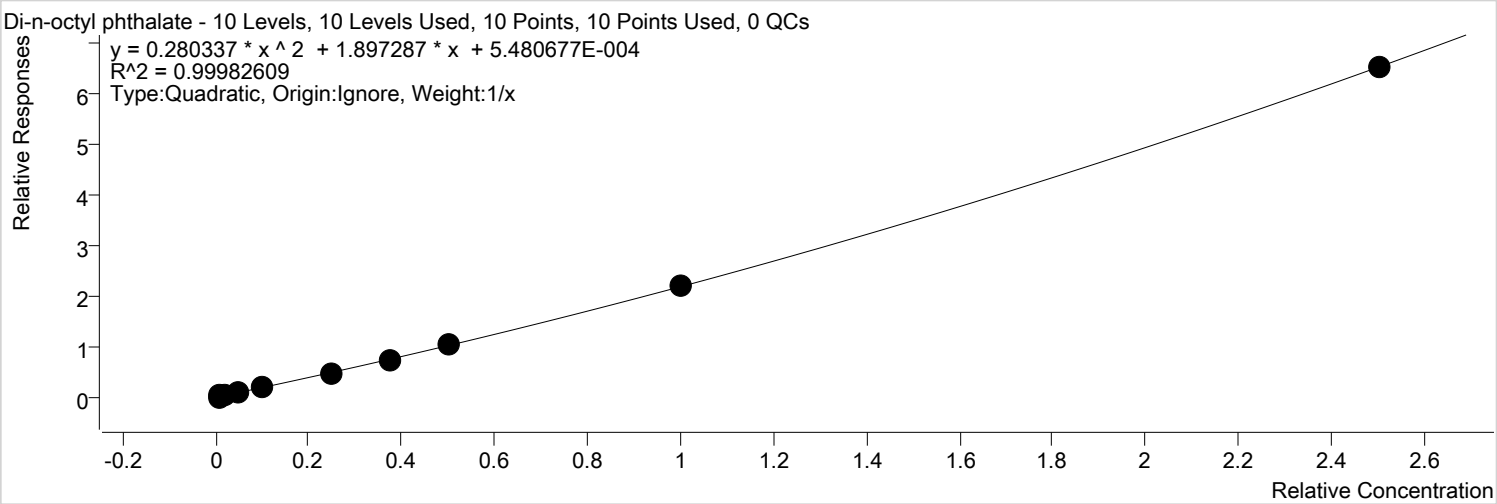
Chrysene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	672	10.0000	2.4669
D:\GC-21\Data\060320\060332.D	Calibration	2	x	978	20.0000	1.9043
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1817	40.0000	1.6174
D:\GC-21\Data\060320\060334.D	Calibration	4	x	4070	100.0000	1.5250
D:\GC-21\Data\060320\060335.D	Calibration	5	x	8384	200.0000	1.5442
D:\GC-21\Data\060320\060336.D	Calibration	6	x	21171	500.0000	1.5012
D:\GC-21\Data\060320\060337.D	Calibration	7	x	31543	750.0000	1.4994
D:\GC-21\Data\060320\060338.D	Calibration	8	x	42720	1000.0000	1.4633
D:\GC-21\Data\060320\060339.D	Calibration	9	x	86339	2000.0000	1.4534
D:\GC-21\Data\060320\060340.D	Calibration	10	x	224573	5000.0000	1.5523

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

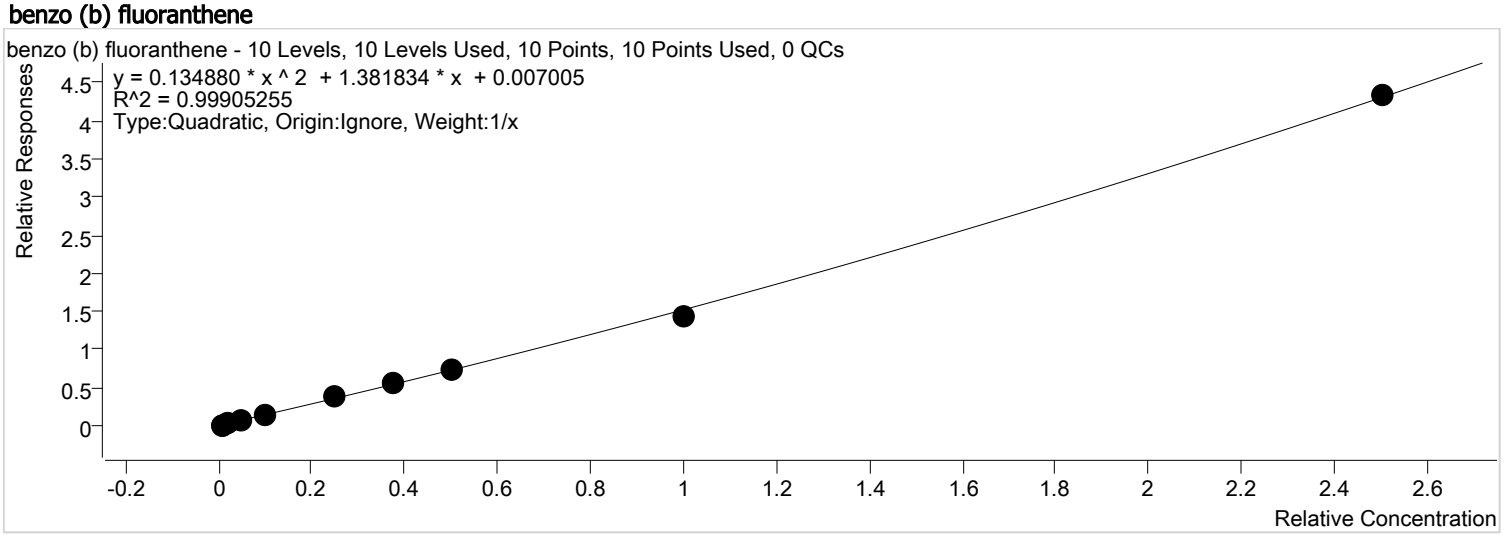
Di-n-octyl phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	636	10.0000	2.3358
D:\GC-21\Data\060320\060332.D	Calibration	2	x	1057	20.0000	2.0574
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1933	40.0000	1.7210
D:\GC-21\Data\060320\060334.D	Calibration	4	x	4710	100.0000	1.7648
D:\GC-21\Data\060320\060335.D	Calibration	5	x	10097	200.0000	1.8597
D:\GC-21\Data\060320\060336.D	Calibration	6	x	27383	500.0000	1.9417
D:\GC-21\Data\060320\060337.D	Calibration	7	x	42111	750.0000	2.0017
D:\GC-21\Data\060320\060338.D	Calibration	8	x	59891	1000.0000	2.0514
D:\GC-21\Data\060320\060339.D	Calibration	9	x	131165	2000.0000	2.2080
D:\GC-21\Data\060320\060340.D	Calibration	10	x	375213	5000.0000	2.5936

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:38 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

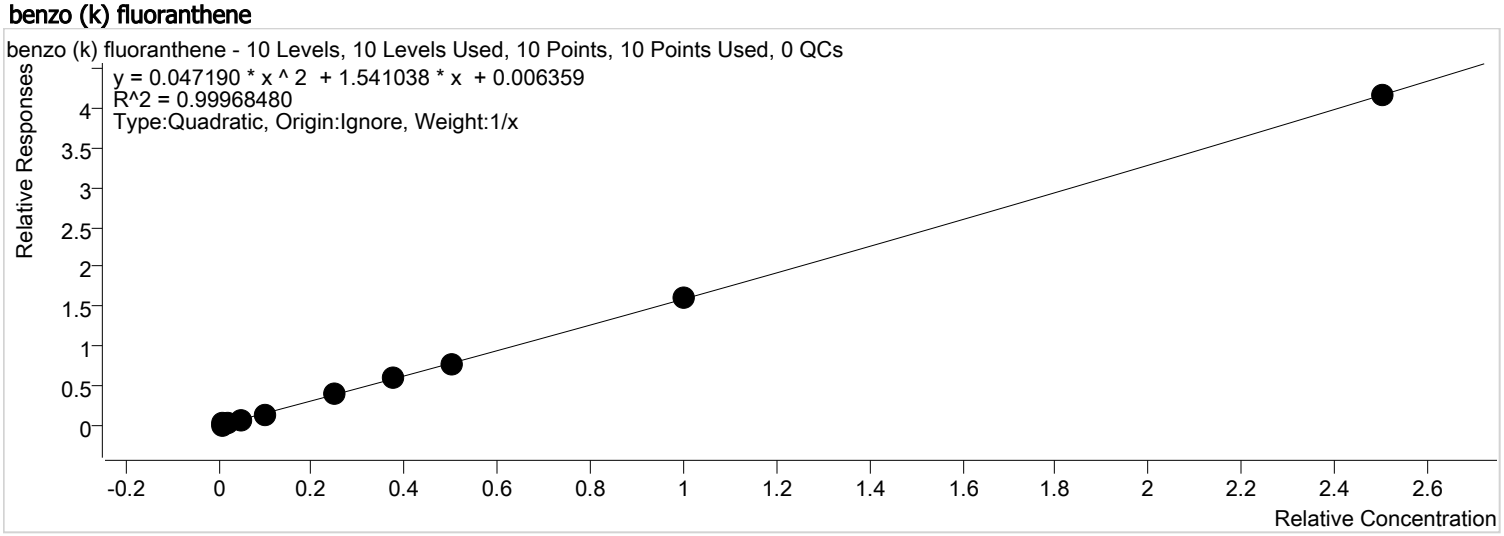
benzo (b) fluoranthene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	802	10.0000	2.9442
D:\GC-21\Data\060320\060332.D	Calibration	2	x	1003	20.0000	1.9531
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1709	40.0000	1.5214
D:\GC-21\Data\060320\060334.D	Calibration	4	x	4092	100.0000	1.5331
D:\GC-21\Data\060320\060335.D	Calibration	5	x	8521	200.0000	1.5695
D:\GC-21\Data\060320\060336.D	Calibration	6	x	21221	500.0000	1.5047
D:\GC-21\Data\060320\060337.D	Calibration	7	x	31898	750.0000	1.5162
D:\GC-21\Data\060320\060338.D	Calibration	8	x	43203	1000.0000	1.4798
D:\GC-21\Data\060320\060339.D	Calibration	9	x	85903	2000.0000	1.4460
D:\GC-21\Data\060320\060340.D	Calibration	10	x	250477	5000.0000	1.7314

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:39 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

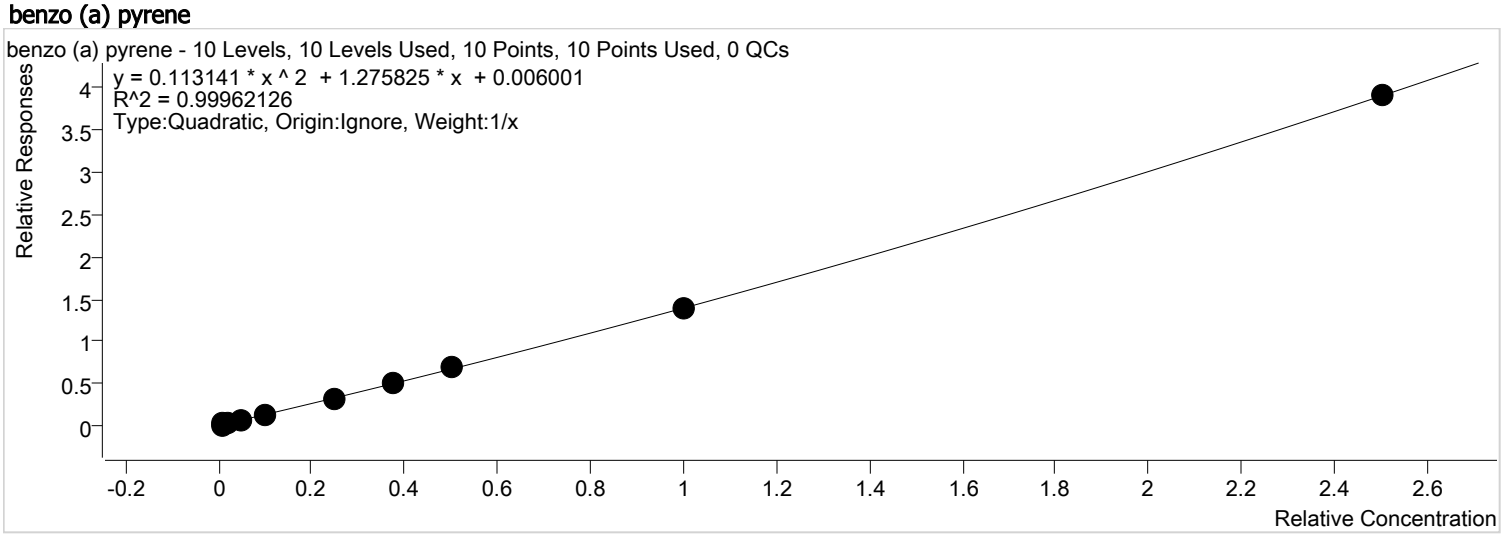
benzo (k) fluoranthene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	845	10.0000	3.1006
D:\GC-21\Data\060320\060332.D	Calibration	2	x	1129	20.0000	2.1985
D:\GC-21\Data\060320\060333.D	Calibration	3	x	2018	40.0000	1.7964
D:\GC-21\Data\060320\060334.D	Calibration	4	x	3866	100.0000	1.4485
D:\GC-21\Data\060320\060335.D	Calibration	5	x	8421	200.0000	1.5510
D:\GC-21\Data\060320\060336.D	Calibration	6	x	22232	500.0000	1.5764
D:\GC-21\Data\060320\060337.D	Calibration	7	x	33711	750.0000	1.6024
D:\GC-21\Data\060320\060338.D	Calibration	8	x	46047	1000.0000	1.5772
D:\GC-21\Data\060320\060339.D	Calibration	9	x	95526	2000.0000	1.6080
D:\GC-21\Data\060320\060340.D	Calibration	10	x	240009	5000.0000	1.6590

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:39 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

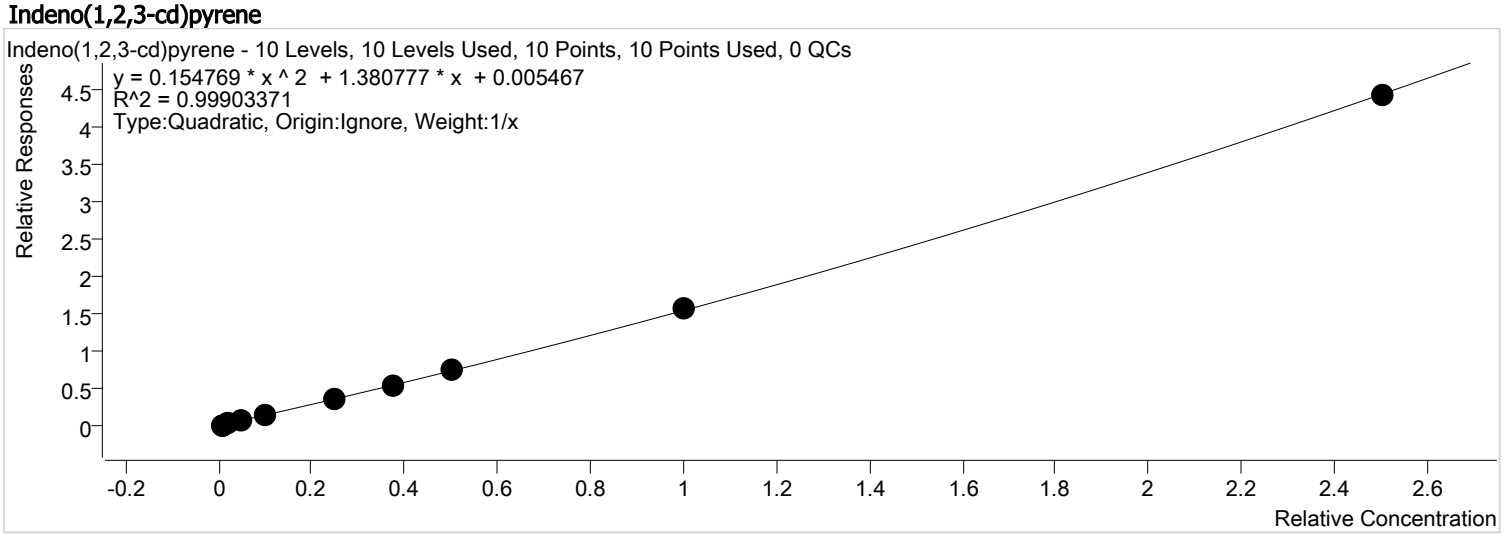
benzo (a) pyrene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	752	10.0000	2.7593
D:\GC-21\Data\060320\060332.D	Calibration	2	x	986	20.0000	1.9195
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1534	40.0000	1.3657
D:\GC-21\Data\060320\060334.D	Calibration	4	x	3406	100.0000	1.2763
D:\GC-21\Data\060320\060335.D	Calibration	5	x	7159	200.0000	1.3186
D:\GC-21\Data\060320\060336.D	Calibration	6	x	18522	500.0000	1.3133
D:\GC-21\Data\060320\060337.D	Calibration	7	x	29084	750.0000	1.3825
D:\GC-21\Data\060320\060338.D	Calibration	8	x	39961	1000.0000	1.3688
D:\GC-21\Data\060320\060339.D	Calibration	9	x	81827	2000.0000	1.3774
D:\GC-21\Data\060320\060340.D	Calibration	10	x	225985	5000.0000	1.5621

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:39 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

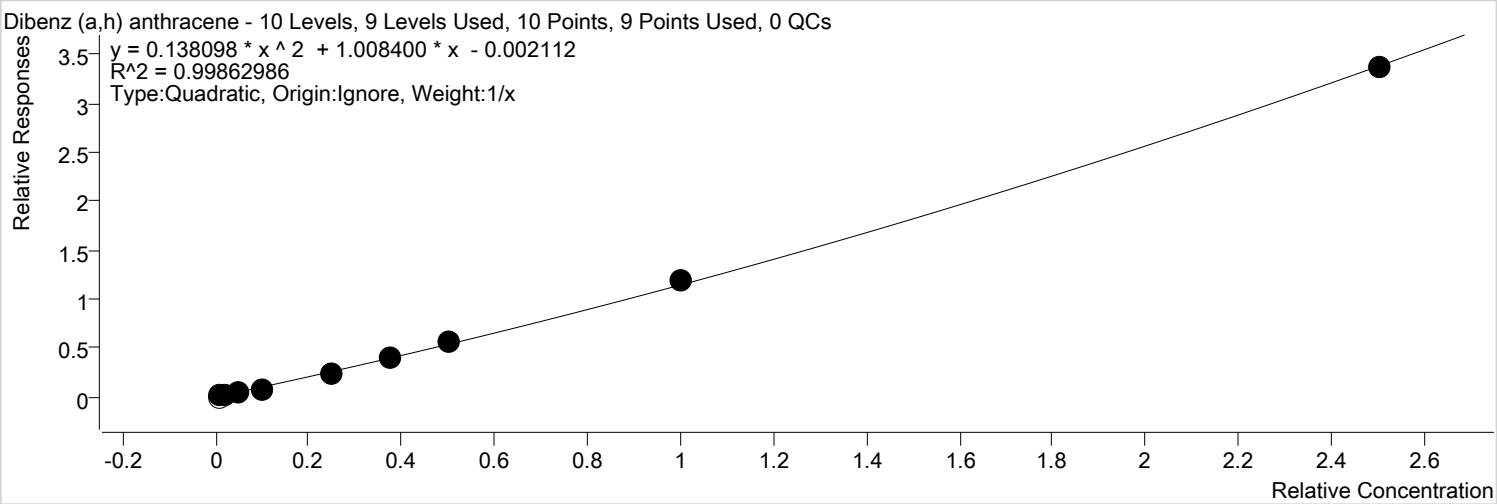
Indeno(1,2,3-cd)pyrene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	921	10.0000	3.1385
D:\GC-21\Data\060320\060332.D	Calibration	2	x	1091	20.0000	1.9501
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1622	40.0000	1.3214
D:\GC-21\Data\060320\060334.D	Calibration	4	x	3661	100.0000	1.2612
D:\GC-21\Data\060320\060335.D	Calibration	5	x	7886	200.0000	1.3184
D:\GC-21\Data\060320\060336.D	Calibration	6	x	21539	500.0000	1.3951
D:\GC-21\Data\060320\060337.D	Calibration	7	x	33775	750.0000	1.4595
D:\GC-21\Data\060320\060338.D	Calibration	8	x	48182	1000.0000	1.4927
D:\GC-21\Data\060320\060339.D	Calibration	9	x	104620	2000.0000	1.5851
D:\GC-21\Data\060320\060340.D	Calibration	10	x	290866	5000.0000	1.7625

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:39 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

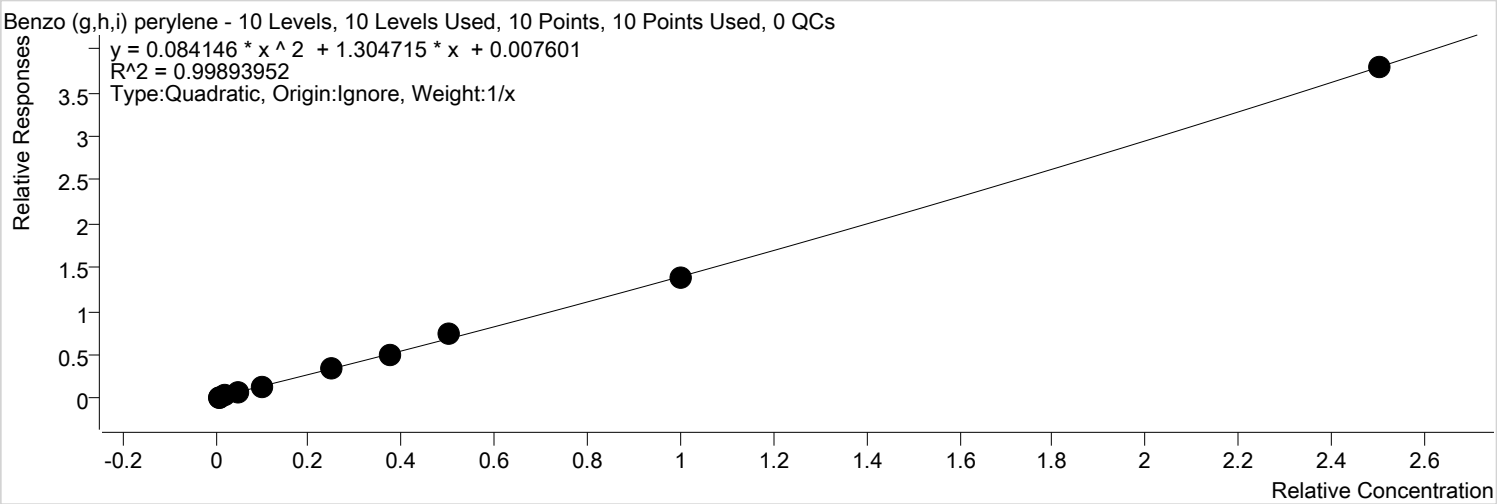
Dibenz (a,h) anthracene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1		0	10.0000	0.0000
D:\GC-21\Data\060320\060332.D	Calibration	2	x	681	20.0000	1.2165
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1031	40.0000	0.8394
D:\GC-21\Data\060320\060334.D	Calibration	4	x	2238	100.0000	0.7709
D:\GC-21\Data\060320\060335.D	Calibration	5	x	5081	200.0000	0.8494
D:\GC-21\Data\060320\060336.D	Calibration	6	x	15022	500.0000	0.9730
D:\GC-21\Data\060320\060337.D	Calibration	7	x	24194	750.0000	1.0455
D:\GC-21\Data\060320\060338.D	Calibration	8	x	36067	1000.0000	1.1174
D:\GC-21\Data\060320\060339.D	Calibration	9	x	77805	2000.0000	1.1788
D:\GC-21\Data\060320\060340.D	Calibration	10	x	222236	5000.0000	1.3467

Batch Path	D:\GC-21\Data\060320\QuantResults\PAH CAL.batch.bin		
Analysis Time	6/8/2020 10:54:41 AM	**Analyst Name**	FA\lab
Report Time	6/8/2020 10:58:39 AM	**Reporter Name**	lab
Last Calib Update	6/8/2020 10:54:04 AM	**Batch State**	Processed

Benzo (g,h,i) perylene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060331.D	Calibration	1	x	967	10.0000	3.2959
D:\GC-21\Data\060320\060332.D	Calibration	2	x	1168	20.0000	2.0882
D:\GC-21\Data\060320\060333.D	Calibration	3	x	1763	40.0000	1.4360
D:\GC-21\Data\060320\060334.D	Calibration	4	x	3736	100.0000	1.2871
D:\GC-21\Data\060320\060335.D	Calibration	5	x	7733	200.0000	1.2929
D:\GC-21\Data\060320\060336.D	Calibration	6	x	20253	500.0000	1.3119
D:\GC-21\Data\060320\060337.D	Calibration	7	x	30972	750.0000	1.3383
D:\GC-21\Data\060320\060338.D	Calibration	8	x	47083	1000.0000	1.4587
D:\GC-21\Data\060320\060339.D	Calibration	9	x	91866	2000.0000	1.3919
D:\GC-21\Data\060320\060340.D	Calibration	10	x	250194	5000.0000	1.5161

Semivolatile Calibration

Intermediate

Date: 05/26/2020

Analyst: Sam Beltman

MeCl2: 20E3/4944

Cal		ICV	
8270 Megamix:	23298	**8270 Megamix:**	23297
2,4-DNP:	23446	**2,4-DNP:**	23305
Benzoic Acid:	23363	**Benzoic Acid:**	23362

23057

8270 Surrogate: 23454 / 23712 (ICB/ICV surr) **IS** 23709

Spike Conc. (ppb)	BN/Acid Surr Conc. (ppb)	2° Spike (uL)	B/N Surr (uL)	Internal Standard (uL)	Remove (uL)	Final Vol. (mL)	Comments
10	10/5	1	--	10	11	1	
20	20/10	2	--	10	12	1	
40	40/20	4	--	10	14	1	
100	100/50	10	--	10	20	1	
200	200/100	20	--	10	30	1	
500	500/250	~~40~~ 50	--	10	60	1	
750	750/375	75 SM 5/26	--	10	85	1	
1000	1000/500	100	--	10	110	1	
2000	2000/1000	200	--	10	210	1	
5000	5000/2500	500	--	10	510	1	
ICB	1000/500		1	10	11	1	
ICV (1000 ppb)	1000/500	~~100~~ (2° SS)	-- 1	10	~~110~~ 14 SM 5/26	1	

	Mega Mix (uL)	2,4-DNP (uL)	Benzoic Acid (uL)	8270 Surr (uL)	Final Volume (mL)
2° Intermediate (cal)	100	100	100	100	10
2° Intermediate (SS)	50	50	50	50	5

Signature and Date: 5/26/2020

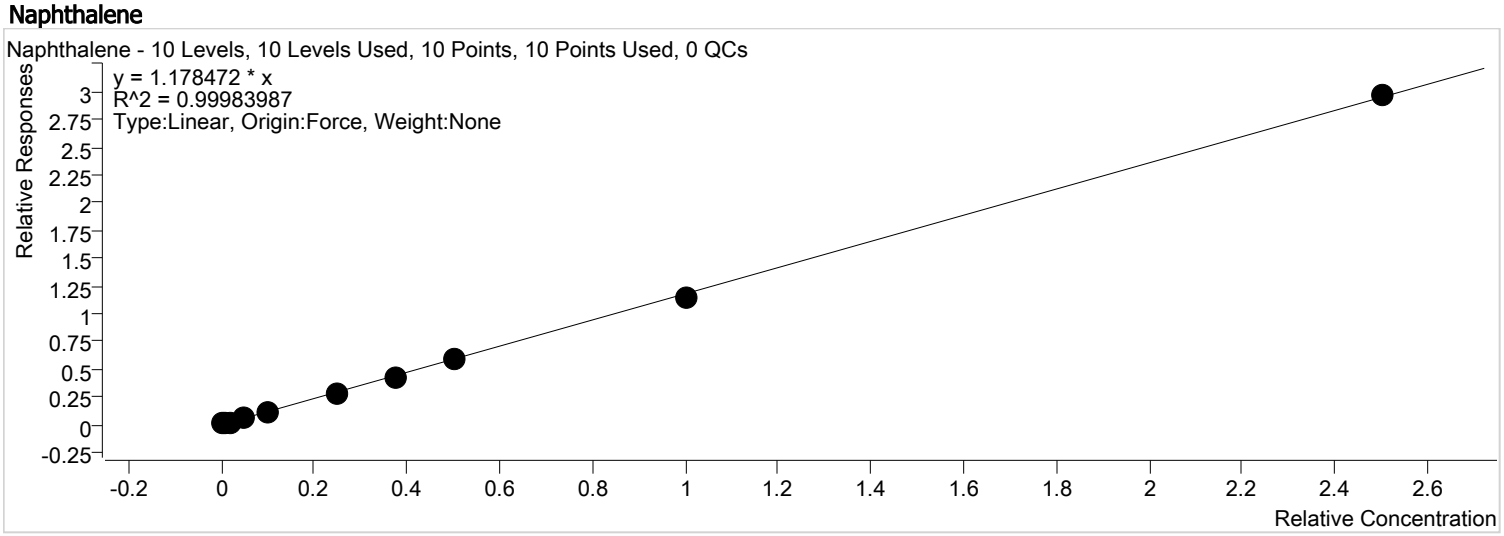
Signature: EM

Calibration Report

Agilent Technologies

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:10 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

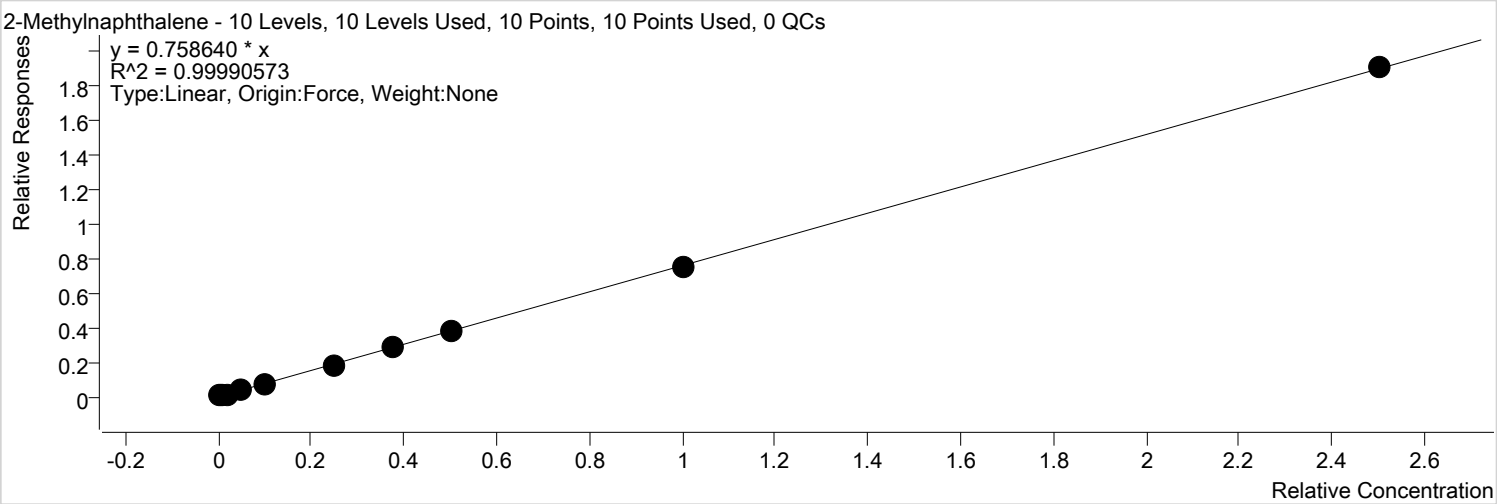
Naphthalene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	638	10.0000	1.3260
D:\GC-21\Data\061020\061006.D	Calibration	2	x	1214	20.0000	1.2985
D:\GC-21\Data\061020\061007.D	Calibration	3	x	2323	40.0000	1.2376
D:\GC-21\Data\061020\061008.D	Calibration	4	x	5525	100.0000	1.1504
D:\GC-21\Data\061020\061009.D	Calibration	5	x	11726	200.0000	1.1632
D:\GC-21\Data\061020\061010.D	Calibration	6	x	27183	500.0000	1.1207
D:\GC-21\Data\061020\061011.D	Calibration	7	x	41920	750.0000	1.1604
D:\GC-21\Data\061020\061012.D	Calibration	8	x	56639	1000.0000	1.1724
D:\GC-21\Data\061020\061013.D	Calibration	9	x	114022	2000.0000	1.1513
D:\GC-21\Data\061020\061014.D	Calibration	10	x	283981	5000.0000	1.1841

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

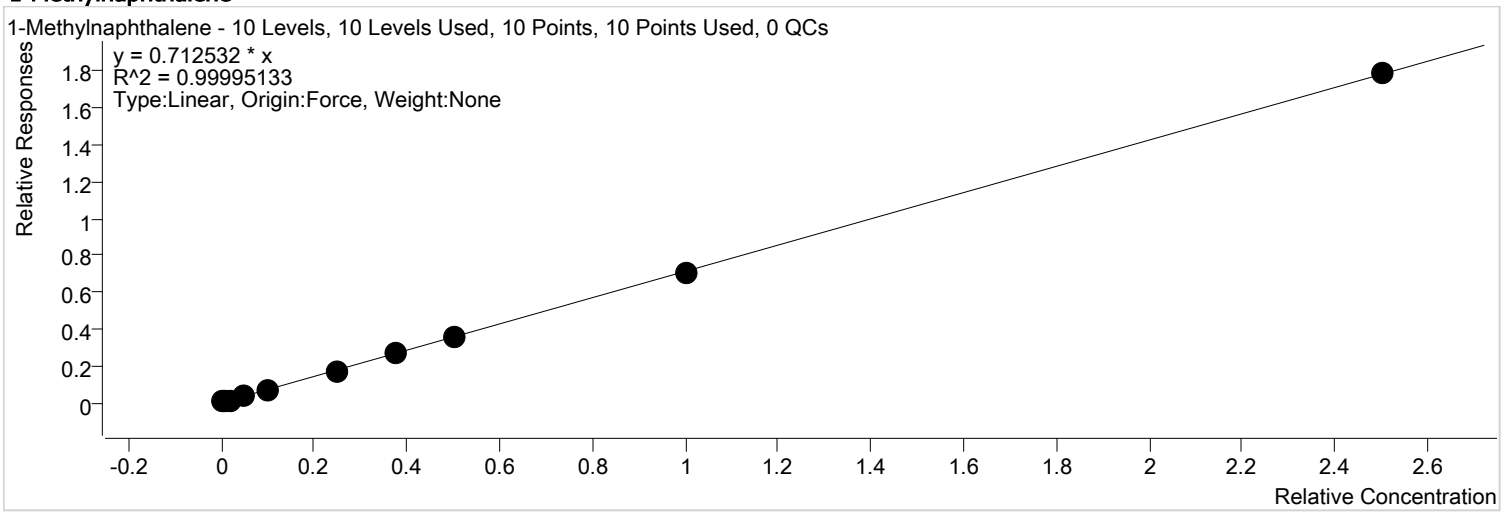
2-Methylnaphthalene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	383	10.0000	0.7955
D:\GC-21\Data\061020\061006.D	Calibration	2	x	770	20.0000	0.8233
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1480	40.0000	0.7882
D:\GC-21\Data\061020\061008.D	Calibration	4	x	3492	100.0000	0.7271
D:\GC-21\Data\061020\061009.D	Calibration	5	x	7531	200.0000	0.7471
D:\GC-21\Data\061020\061010.D	Calibration	6	x	17507	500.0000	0.7218
D:\GC-21\Data\061020\061011.D	Calibration	7	x	27068	750.0000	0.7493
D:\GC-21\Data\061020\061012.D	Calibration	8	x	36613	1000.0000	0.7579
D:\GC-21\Data\061020\061013.D	Calibration	9	x	73922	2000.0000	0.7464
D:\GC-21\Data\061020\061014.D	Calibration	10	x	182570	5000.0000	0.7612

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

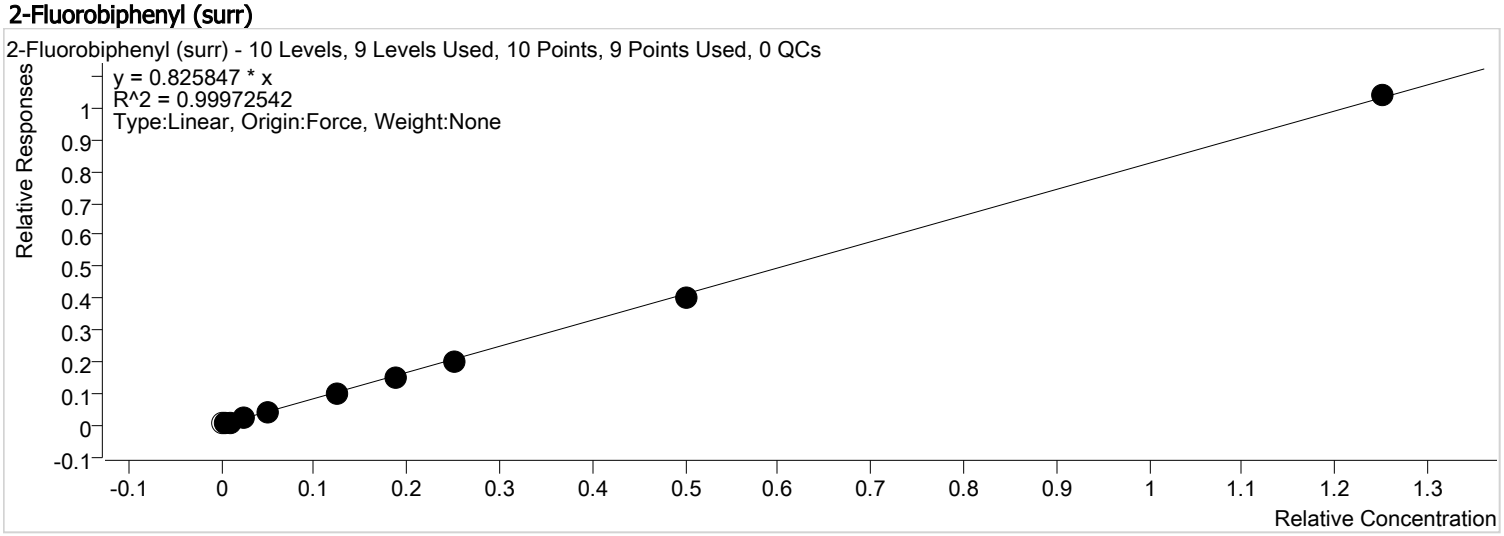
1-Methylnaphthalene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	392	10.0000	0.8147
D:\GC-21\Data\061020\061006.D	Calibration	2	x	753	20.0000	0.8057
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1446	40.0000	0.7700
D:\GC-21\Data\061020\061008.D	Calibration	4	x	3403	100.0000	0.7087
D:\GC-21\Data\061020\061009.D	Calibration	5	x	7259	200.0000	0.7201
D:\GC-21\Data\061020\061010.D	Calibration	6	x	16762	500.0000	0.6911
D:\GC-21\Data\061020\061011.D	Calibration	7	x	25843	750.0000	0.7154
D:\GC-21\Data\061020\061012.D	Calibration	8	x	34780	1000.0000	0.7199
D:\GC-21\Data\061020\061013.D	Calibration	9	x	69699	2000.0000	0.7037
D:\GC-21\Data\061020\061014.D	Calibration	10	x	171187	5000.0000	0.7138

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

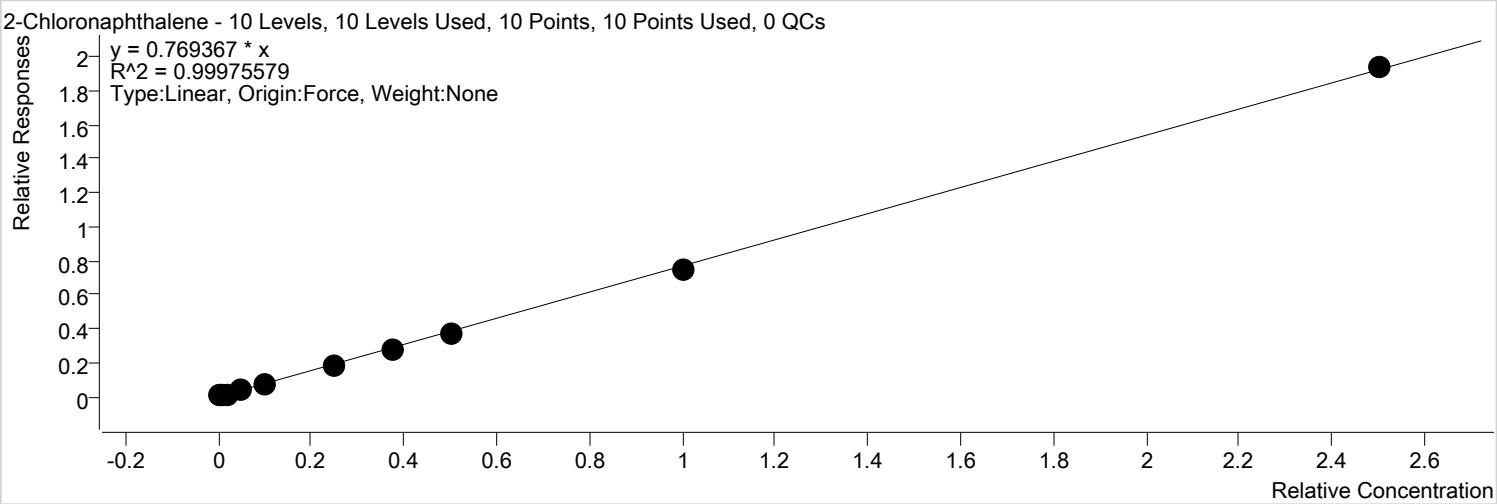
2-Fluorobiphenyl (surr)



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1		207	5.0000	0.8600
D:\GC-21\Data\061020\061006.D	Calibration	2	x	416	10.0000	0.8900
D:\GC-21\Data\061020\061007.D	Calibration	3	x	833	20.0000	0.8871
D:\GC-21\Data\061020\061008.D	Calibration	4	x	1922	50.0000	0.8004
D:\GC-21\Data\061020\061009.D	Calibration	5	x	4073	100.0000	0.8082
D:\GC-21\Data\061020\061010.D	Calibration	6	x	9483	250.0000	0.7819
D:\GC-21\Data\061020\061011.D	Calibration	7	x	14573	375.0000	0.8068
D:\GC-21\Data\061020\061012.D	Calibration	8	x	19553	500.0000	0.8095
D:\GC-21\Data\061020\061013.D	Calibration	9	x	39733	1000.0000	0.8023
D:\GC-21\Data\061020\061014.D	Calibration	10	x	99670	2500.0000	0.8312

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

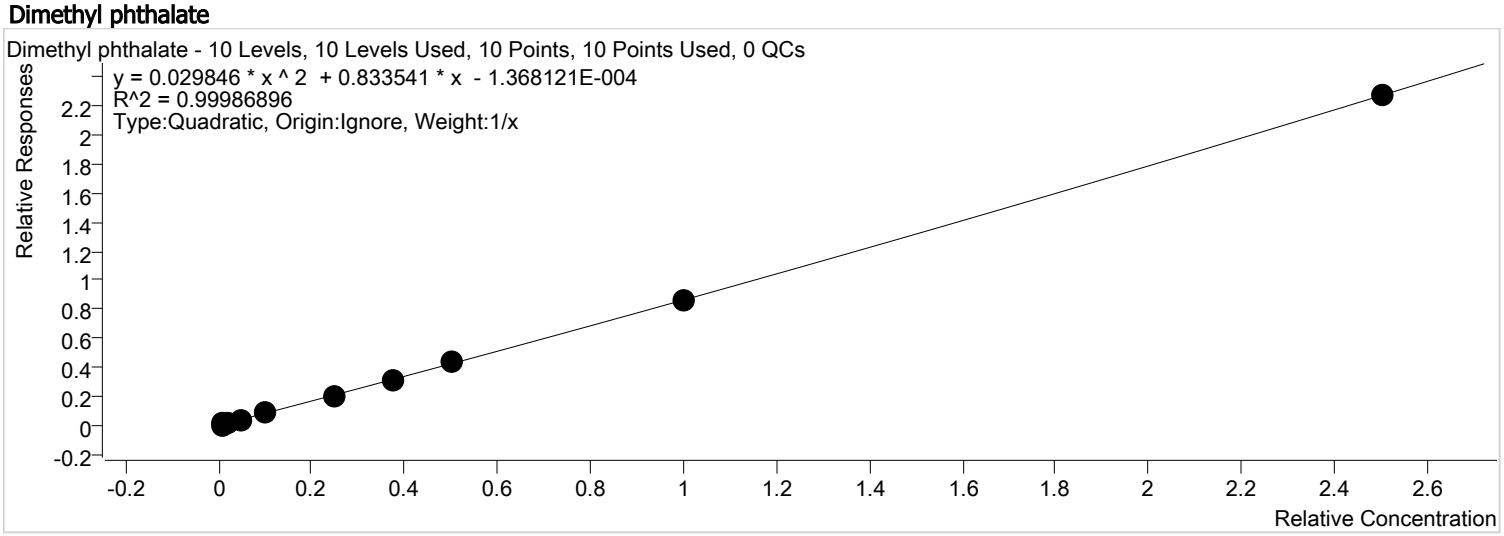
2-Chloronaphthalene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	387	10.0000	0.8054
D:\GC-21\Data\061020\061006.D	Calibration	2	x	779	20.0000	0.8332
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1507	40.0000	0.8029
D:\GC-21\Data\061020\061008.D	Calibration	4	x	3507	100.0000	0.7302
D:\GC-21\Data\061020\061009.D	Calibration	5	x	7519	200.0000	0.7459
D:\GC-21\Data\061020\061010.D	Calibration	6	x	17614	500.0000	0.7262
D:\GC-21\Data\061020\061011.D	Calibration	7	x	27256	750.0000	0.7545
D:\GC-21\Data\061020\061012.D	Calibration	8	x	36456	1000.0000	0.7546
D:\GC-21\Data\061020\061013.D	Calibration	9	x	74133	2000.0000	0.7485
D:\GC-21\Data\061020\061014.D	Calibration	10	x	185656	5000.0000	0.7741

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

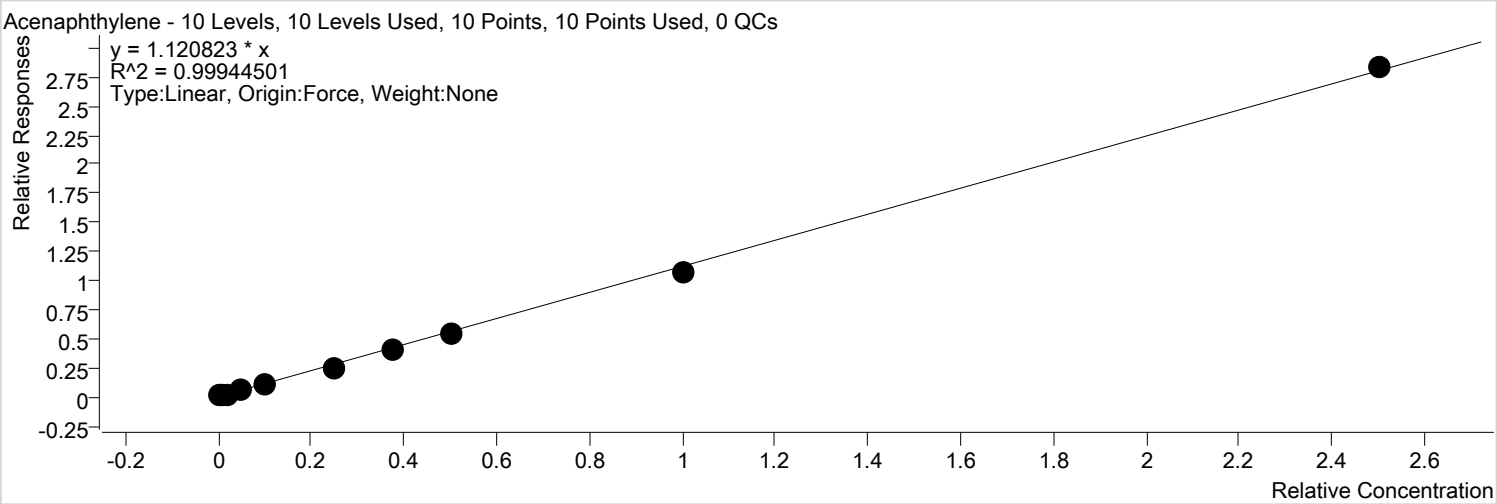
Dimethyl phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	395	10.0000	0.8216
D:\GC-21\Data\061020\061006.D	Calibration	2	x	793	20.0000	0.8484
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1585	40.0000	0.8441
D:\GC-21\Data\061020\061008.D	Calibration	4	x	3793	100.0000	0.7899
D:\GC-21\Data\061020\061009.D	Calibration	5	x	8307	200.0000	0.8241
D:\GC-21\Data\061020\061010.D	Calibration	6	x	19684	500.0000	0.8116
D:\GC-21\Data\061020\061011.D	Calibration	7	x	30694	750.0000	0.8497
D:\GC-21\Data\061020\061012.D	Calibration	8	x	41746	1000.0000	0.8641
D:\GC-21\Data\061020\061013.D	Calibration	9	x	85645	2000.0000	0.8647
D:\GC-21\Data\061020\061014.D	Calibration	10	x	217630	5000.0000	0.9074

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

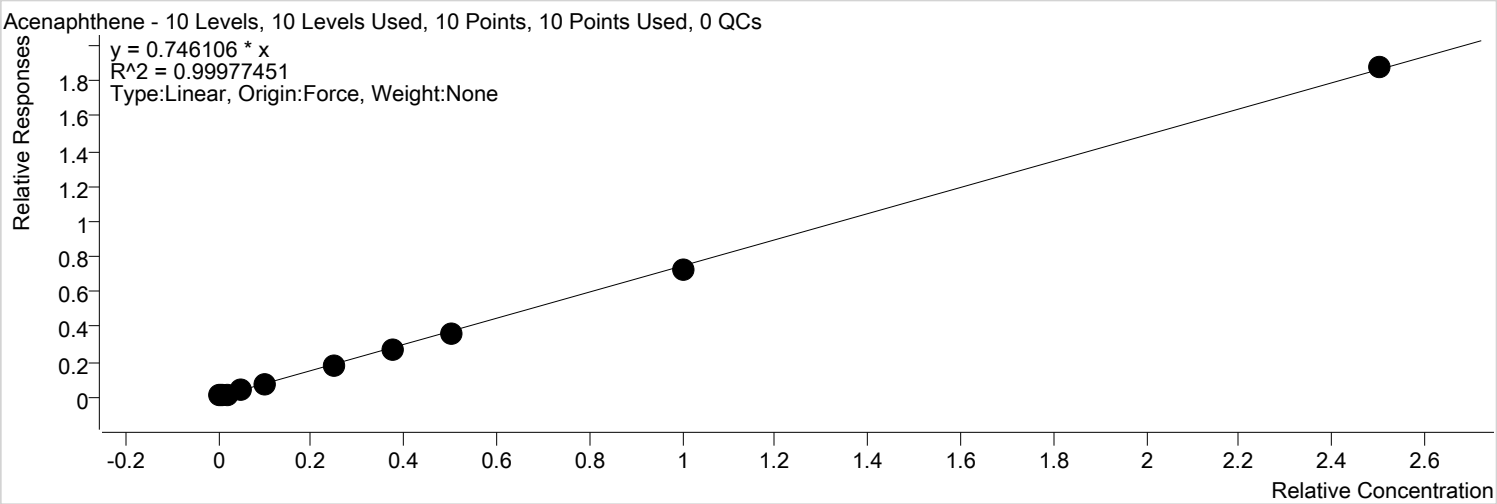
Acenaphthylene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	569	10.0000	1.1839
D:\GC-21\Data\061020\061006.D	Calibration	2	x	1073	20.0000	1.1475
D:\GC-21\Data\061020\061007.D	Calibration	3	x	2079	40.0000	1.1075
D:\GC-21\Data\061020\061008.D	Calibration	4	x	4935	100.0000	1.0276
D:\GC-21\Data\061020\061009.D	Calibration	5	x	10562	200.0000	1.0478
D:\GC-21\Data\061020\061010.D	Calibration	6	x	24765	500.0000	1.0210
D:\GC-21\Data\061020\061011.D	Calibration	7	x	38620	750.0000	1.0691
D:\GC-21\Data\061020\061012.D	Calibration	8	x	52373	1000.0000	1.0841
D:\GC-21\Data\061020\061013.D	Calibration	9	x	106889	2000.0000	1.0792
D:\GC-21\Data\061020\061014.D	Calibration	10	x	271313	5000.0000	1.1313

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

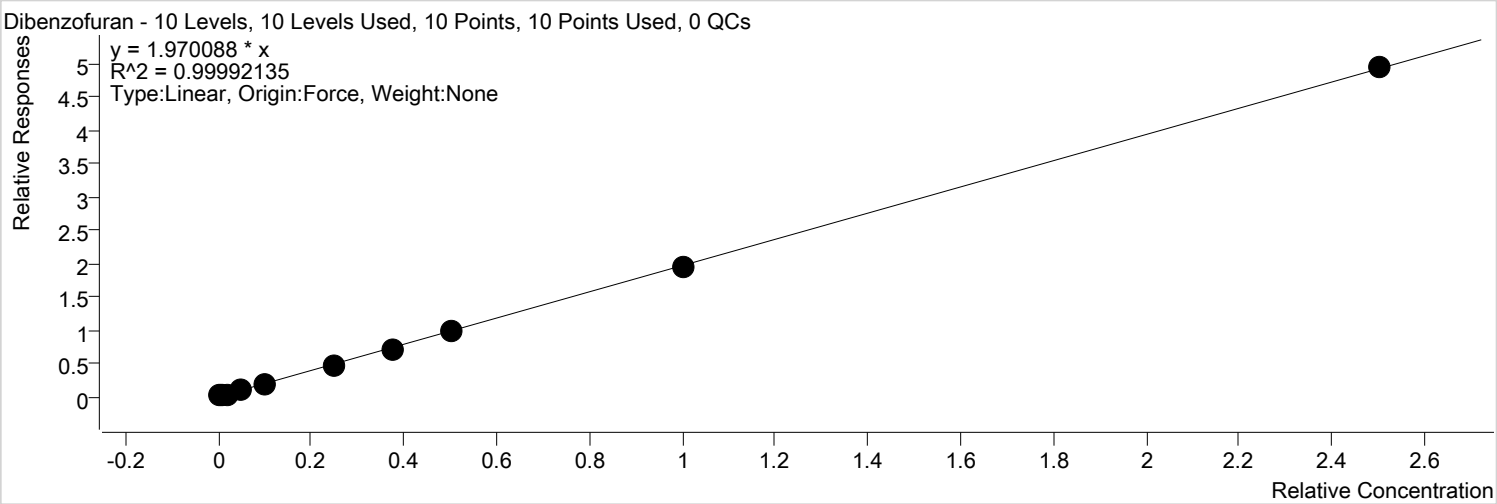
Acenaphthene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	404	10.0000	0.8403
D:\GC-21\Data\061020\061006.D	Calibration	2	x	772	20.0000	0.8258
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1487	40.0000	0.7922
D:\GC-21\Data\061020\061008.D	Calibration	4	x	3413	100.0000	0.7107
D:\GC-21\Data\061020\061009.D	Calibration	5	x	7396	200.0000	0.7337
D:\GC-21\Data\061020\061010.D	Calibration	6	x	17054	500.0000	0.7031
D:\GC-21\Data\061020\061011.D	Calibration	7	x	26565	750.0000	0.7354
D:\GC-21\Data\061020\061012.D	Calibration	8	x	35423	1000.0000	0.7332
D:\GC-21\Data\061020\061013.D	Calibration	9	x	71951	2000.0000	0.7265
D:\GC-21\Data\061020\061014.D	Calibration	10	x	179985	5000.0000	0.7505

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

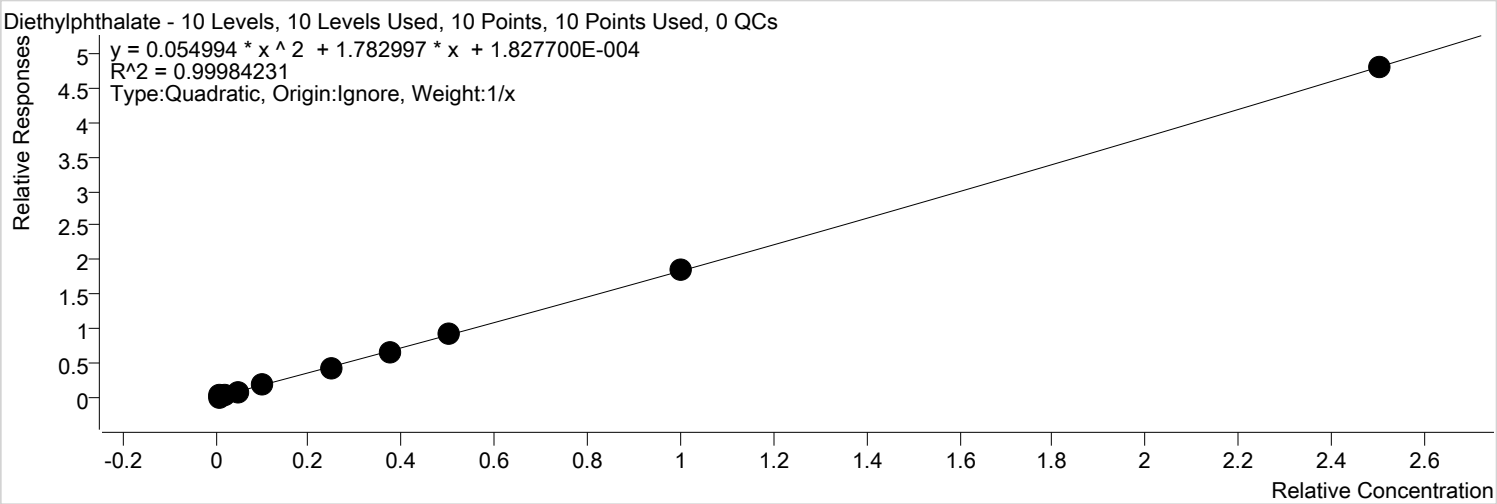
Dibenzofuran



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	512	10.0000	2.1542
D:\GC-21\Data\061020\061006.D	Calibration	2	x	994	20.0000	2.1623
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1932	40.0000	2.0604
D:\GC-21\Data\061020\061008.D	Calibration	4	x	4488	100.0000	1.8898
D:\GC-21\Data\061020\061009.D	Calibration	5	x	9738	200.0000	1.9450
D:\GC-21\Data\061020\061010.D	Calibration	6	x	22663	500.0000	1.8913
D:\GC-21\Data\061020\061011.D	Calibration	7	x	35069	750.0000	1.9322
D:\GC-21\Data\061020\061012.D	Calibration	8	x	47012	1000.0000	1.9550
D:\GC-21\Data\061020\061013.D	Calibration	9	x	95617	2000.0000	1.9434
D:\GC-21\Data\061020\061014.D	Calibration	10	x	237027	5000.0000	1.9767

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

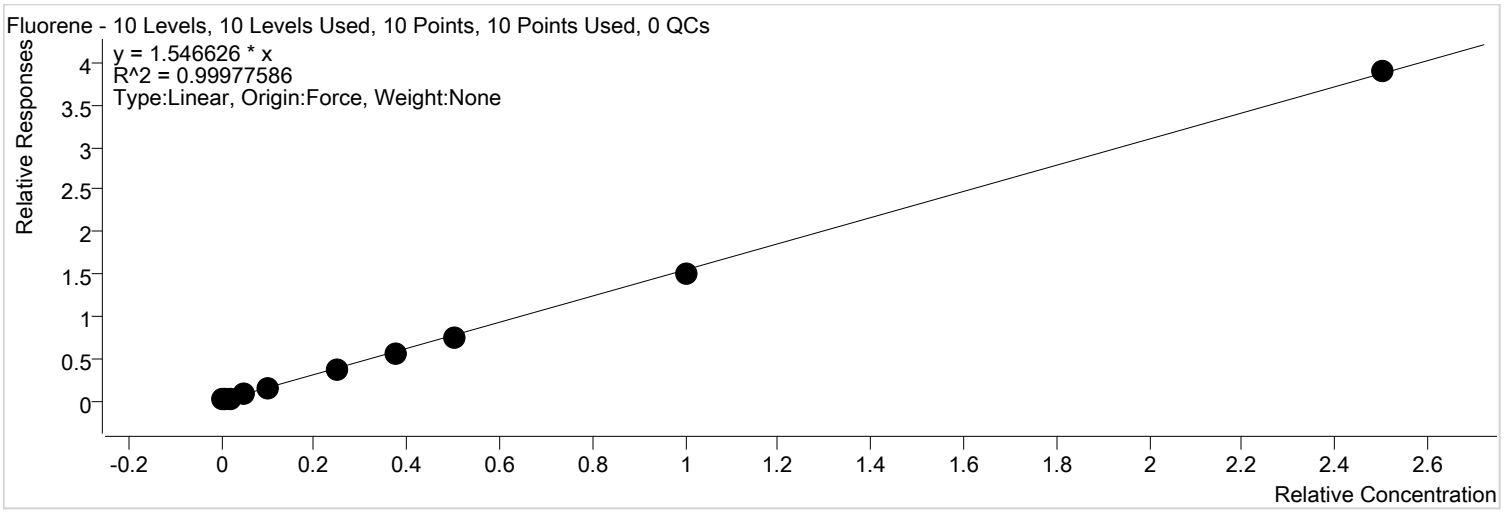
Diethylphthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	439	10.0000	1.8482
D:\GC-21\Data\061020\061006.D	Calibration	2	x	875	20.0000	1.9032
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1712	40.0000	1.8252
D:\GC-21\Data\061020\061008.D	Calibration	4	x	4032	100.0000	1.6977
D:\GC-21\Data\061020\061009.D	Calibration	5	x	8729	200.0000	1.7434
D:\GC-21\Data\061020\061010.D	Calibration	6	x	20838	500.0000	1.7390
D:\GC-21\Data\061020\061011.D	Calibration	7	x	32553	750.0000	1.7935
D:\GC-21\Data\061020\061012.D	Calibration	8	x	44256	1000.0000	1.8404
D:\GC-21\Data\061020\061013.D	Calibration	9	x	91416	2000.0000	1.8580
D:\GC-21\Data\061020\061014.D	Calibration	10	x	229889	5000.0000	1.9171

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

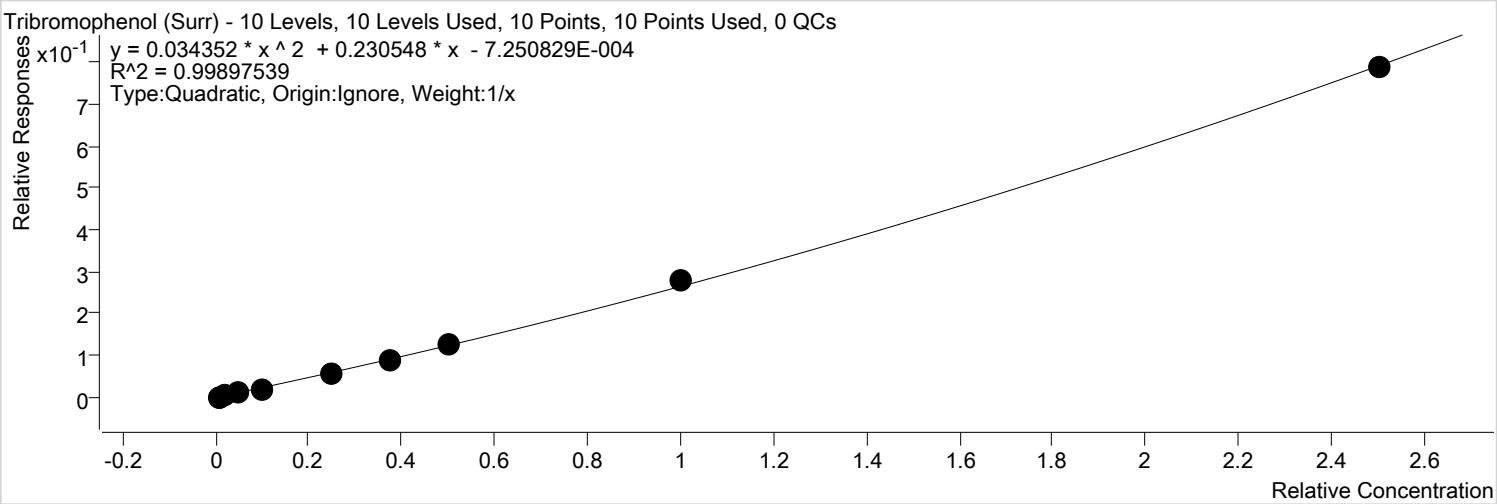
Fluorene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	394	10.0000	1.6588
D:\GC-21\Data\061020\061006.D	Calibration	2	x	745	20.0000	1.6206
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1496	40.0000	1.5956
D:\GC-21\Data\061020\061008.D	Calibration	4	x	3457	100.0000	1.4555
D:\GC-21\Data\061020\061009.D	Calibration	5	x	7404	200.0000	1.4787
D:\GC-21\Data\061020\061010.D	Calibration	6	x	17430	500.0000	1.4546
D:\GC-21\Data\061020\061011.D	Calibration	7	x	26937	750.0000	1.4841
D:\GC-21\Data\061020\061012.D	Calibration	8	x	36467	1000.0000	1.5165
D:\GC-21\Data\061020\061013.D	Calibration	9	x	74495	2000.0000	1.5141
D:\GC-21\Data\061020\061014.D	Calibration	10	x	186525	5000.0000	1.5555

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

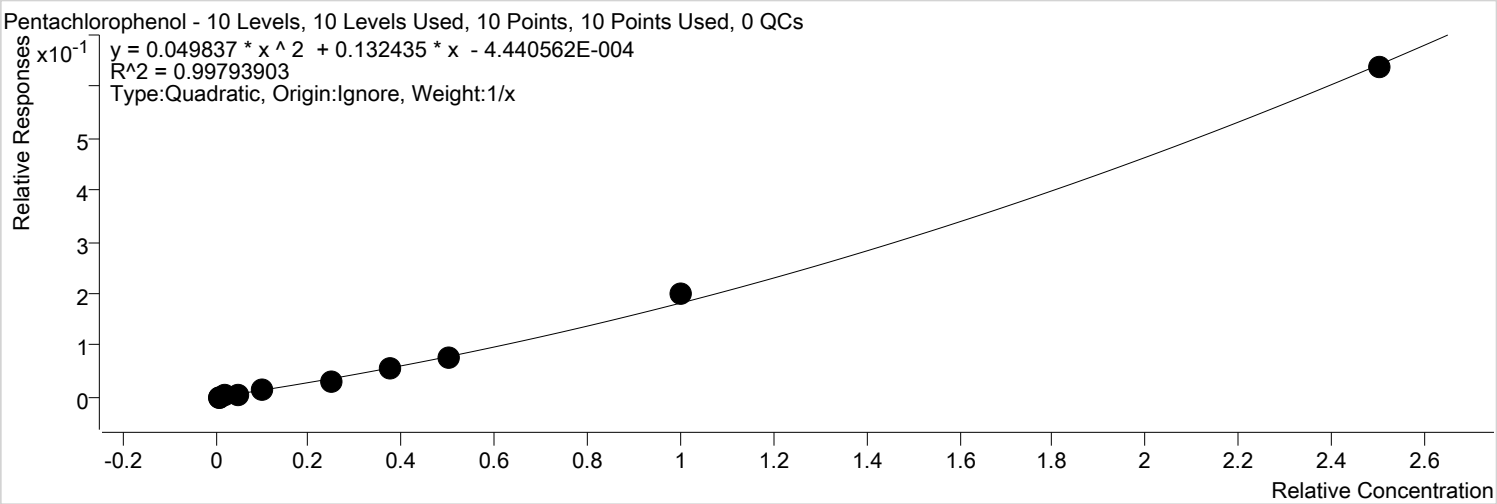
Tribromophenol (Surr)



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	37	10.0000	0.1565
D:\GC-21\Data\061020\061006.D	Calibration	2	x	78	20.0000	0.1704
D:\GC-21\Data\061020\061007.D	Calibration	3	x	167	40.0000	0.1777
D:\GC-21\Data\061020\061008.D	Calibration	4	x	426	100.0000	0.1795
D:\GC-21\Data\061020\061009.D	Calibration	5	x	1034	200.0000	0.2064
D:\GC-21\Data\061020\061010.D	Calibration	6	x	2595	500.0000	0.2166
D:\GC-21\Data\061020\061011.D	Calibration	7	x	4389	750.0000	0.2418
D:\GC-21\Data\061020\061012.D	Calibration	8	x	5979	1000.0000	0.2487
D:\GC-21\Data\061020\061013.D	Calibration	9	x	13576	2000.0000	0.2759
D:\GC-21\Data\061020\061014.D	Calibration	10	x	37701	5000.0000	0.3144

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

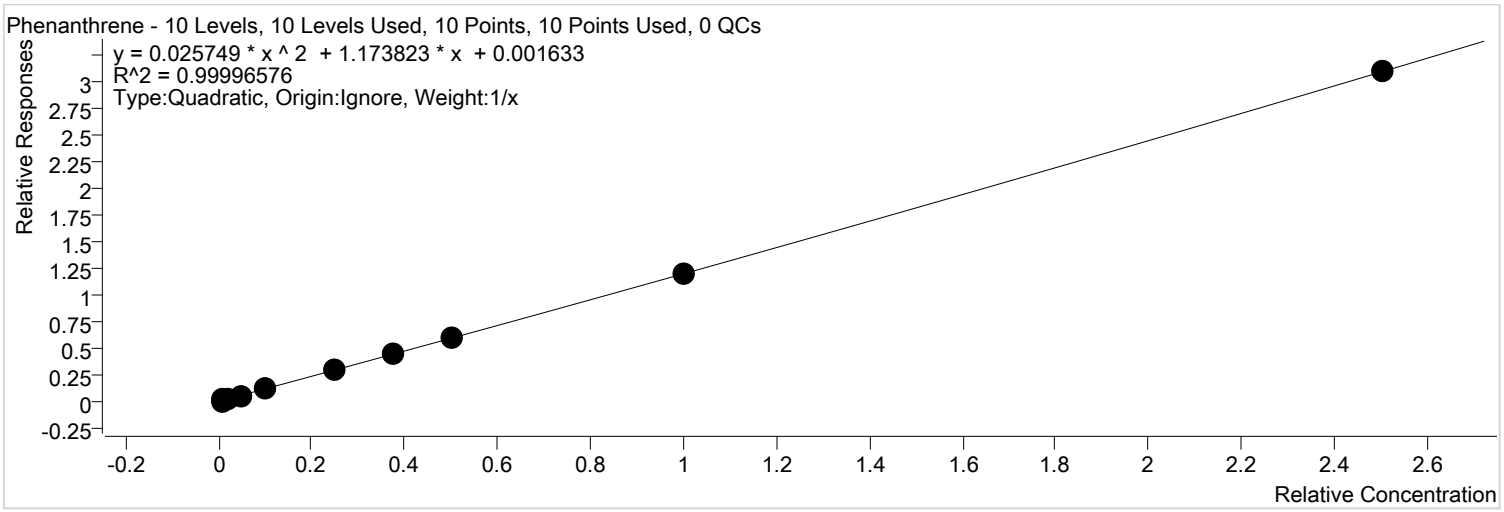
Pentachlorophenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	24	10.0000	0.1026
D:\GC-21\Data\061020\061006.D	Calibration	2	x	49	20.0000	0.1057
D:\GC-21\Data\061020\061007.D	Calibration	3	x	87	40.0000	0.0928
D:\GC-21\Data\061020\061008.D	Calibration	4	x	223	100.0000	0.0939
D:\GC-21\Data\061020\061009.D	Calibration	5	x	595	200.0000	0.1188
D:\GC-21\Data\061020\061010.D	Calibration	6	x	1500	500.0000	0.1252
D:\GC-21\Data\061020\061011.D	Calibration	7	x	2683	750.0000	0.1478
D:\GC-21\Data\061020\061012.D	Calibration	8	x	3641	1000.0000	0.1514
D:\GC-21\Data\061020\061013.D	Calibration	9	x	9730	2000.0000	0.1978
D:\GC-21\Data\061020\061014.D	Calibration	10	x	30550	5000.0000	0.2548

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

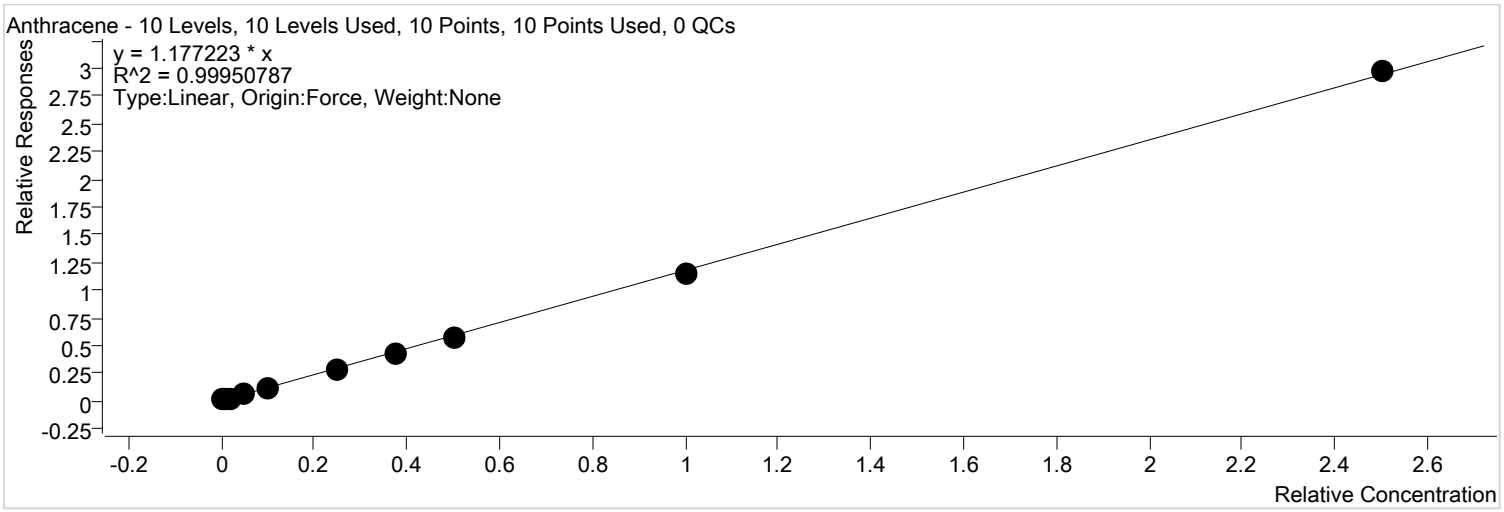
Phenanthrene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	572	10.0000	1.4692
D:\GC-21\Data\061020\061006.D	Calibration	2	x	967	20.0000	1.2828
D:\GC-21\Data\061020\061007.D	Calibration	3	x	2088	40.0000	1.3252
D:\GC-21\Data\061020\061008.D	Calibration	4	x	4794	100.0000	1.2171
D:\GC-21\Data\061020\061009.D	Calibration	5	x	9989	200.0000	1.2054
D:\GC-21\Data\061020\061010.D	Calibration	6	x	23611	500.0000	1.1844
D:\GC-21\Data\061020\061011.D	Calibration	7	x	36032	750.0000	1.1810
D:\GC-21\Data\061020\061012.D	Calibration	8	x	49268	1000.0000	1.1984
D:\GC-21\Data\061020\061013.D	Calibration	9	x	100676	2000.0000	1.1962
D:\GC-21\Data\061020\061014.D	Calibration	10	x	255138	5000.0000	1.2395

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

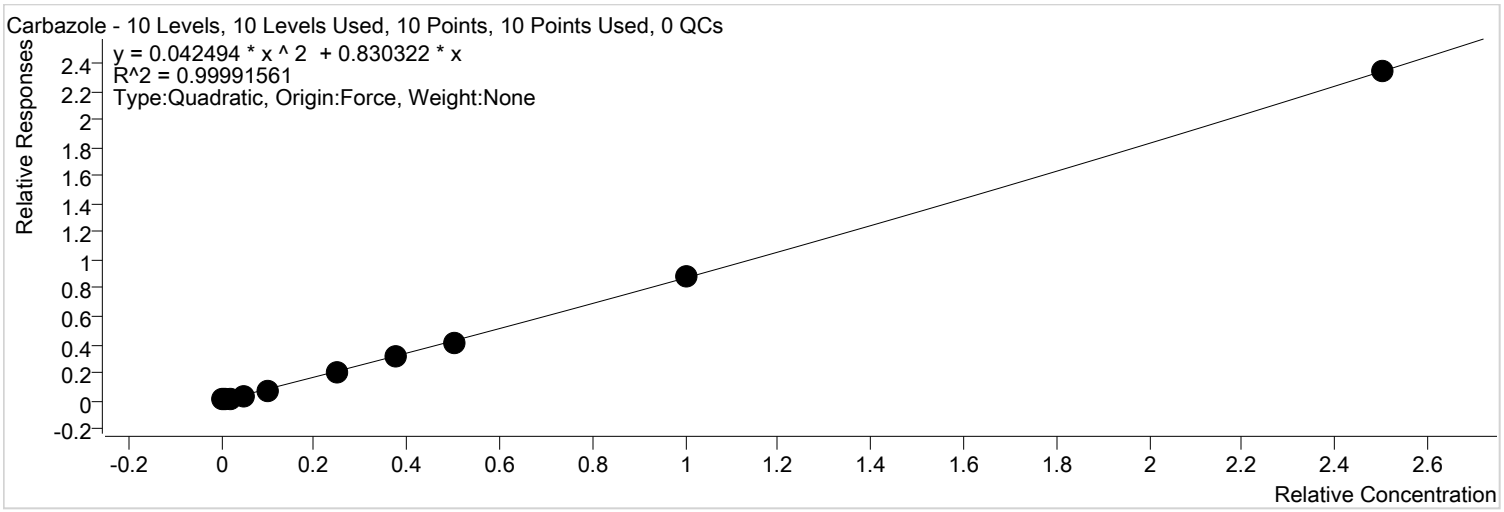
Anthracene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	485	10.0000	1.2460
D:\GC-21\Data\061020\061006.D	Calibration	2	x	972	20.0000	1.2890
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1876	40.0000	1.1906
D:\GC-21\Data\061020\061008.D	Calibration	4	x	4221	100.0000	1.0717
D:\GC-21\Data\061020\061009.D	Calibration	5	x	9141	200.0000	1.1031
D:\GC-21\Data\061020\061010.D	Calibration	6	x	22225	500.0000	1.1149
D:\GC-21\Data\061020\061011.D	Calibration	7	x	34151	750.0000	1.1194
D:\GC-21\Data\061020\061012.D	Calibration	8	x	46071	1000.0000	1.1206
D:\GC-21\Data\061020\061013.D	Calibration	9	x	95869	2000.0000	1.1391
D:\GC-21\Data\061020\061014.D	Calibration	10	x	244477	5000.0000	1.1877

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

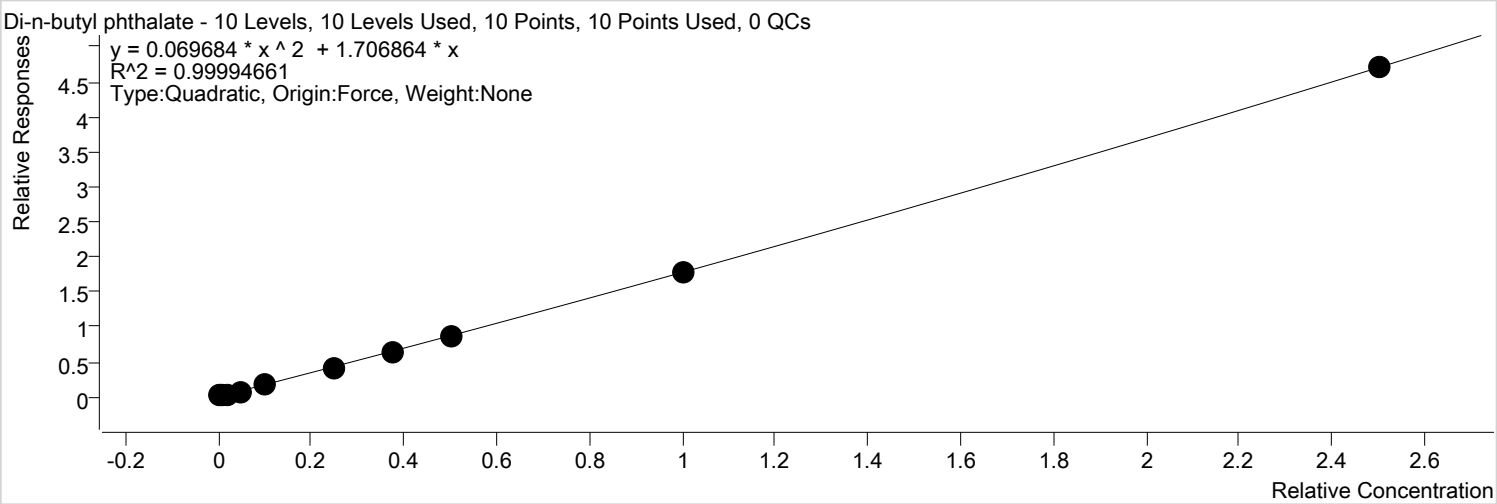
Carbazole



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	349	10.0000	0.8966
D:\GC-21\Data\061020\061006.D	Calibration	2	x	662	20.0000	0.8776
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1300	40.0000	0.8251
D:\GC-21\Data\061020\061008.D	Calibration	4	x	2991	100.0000	0.7595
D:\GC-21\Data\061020\061009.D	Calibration	5	x	6510	200.0000	0.7856
D:\GC-21\Data\061020\061010.D	Calibration	6	x	16087	500.0000	0.8070
D:\GC-21\Data\061020\061011.D	Calibration	7	x	25192	750.0000	0.8258
D:\GC-21\Data\061020\061012.D	Calibration	8	x	34409	1000.0000	0.8370
D:\GC-21\Data\061020\061013.D	Calibration	9	x	74571	2000.0000	0.8860
D:\GC-21\Data\061020\061014.D	Calibration	10	x	192658	5000.0000	0.9359

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

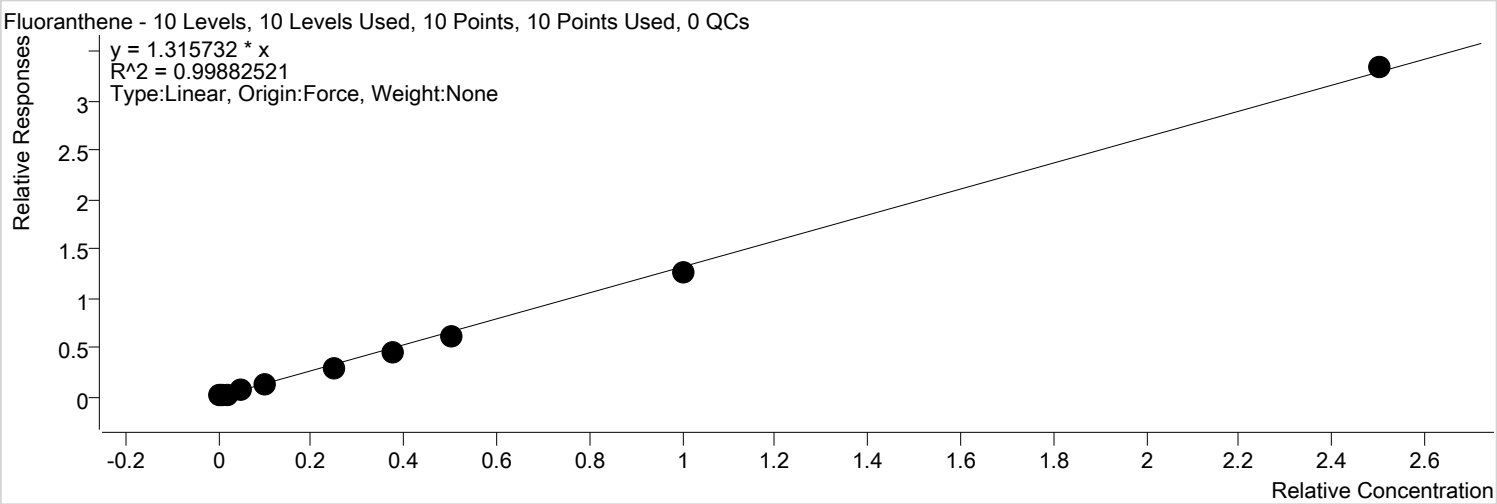
Di-n-butyl phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	694	10.0000	1.7831
D:\GC-21\Data\061020\061006.D	Calibration	2	x	1328	20.0000	1.7616
D:\GC-21\Data\061020\061007.D	Calibration	3	x	2615	40.0000	1.6595
D:\GC-21\Data\061020\061008.D	Calibration	4	x	6070	100.0000	1.5412
D:\GC-21\Data\061020\061009.D	Calibration	5	x	13454	200.0000	1.6235
D:\GC-21\Data\061020\061010.D	Calibration	6	x	32880	500.0000	1.6494
D:\GC-21\Data\061020\061011.D	Calibration	7	x	51918	750.0000	1.7018
D:\GC-21\Data\061020\061012.D	Calibration	8	x	71205	1000.0000	1.7320
D:\GC-21\Data\061020\061013.D	Calibration	9	x	151089	2000.0000	1.7952
D:\GC-21\Data\061020\061014.D	Calibration	10	x	387020	5000.0000	1.8801

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

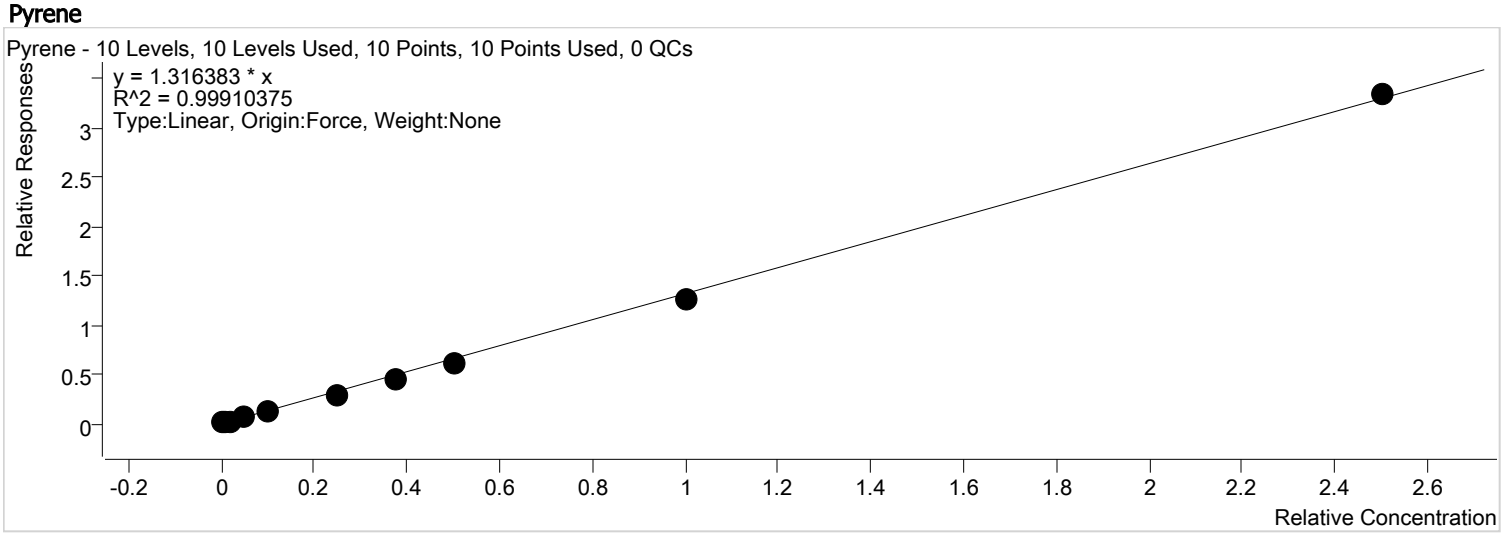
Fluoranthene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	545	10.0000	1.3998
D:\GC-21\Data\061020\061006.D	Calibration	2	x	1014	20.0000	1.3457
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1964	40.0000	1.2463
D:\GC-21\Data\061020\061008.D	Calibration	4	x	4619	100.0000	1.1728
D:\GC-21\Data\061020\061009.D	Calibration	5	x	9855	200.0000	1.1892
D:\GC-21\Data\061020\061010.D	Calibration	6	x	23468	500.0000	1.1772
D:\GC-21\Data\061020\061011.D	Calibration	7	x	36831	750.0000	1.2072
D:\GC-21\Data\061020\061012.D	Calibration	8	x	50038	1000.0000	1.2171
D:\GC-21\Data\061020\061013.D	Calibration	9	x	105582	2000.0000	1.2545
D:\GC-21\Data\061020\061014.D	Calibration	10	x	274509	5000.0000	1.3336

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

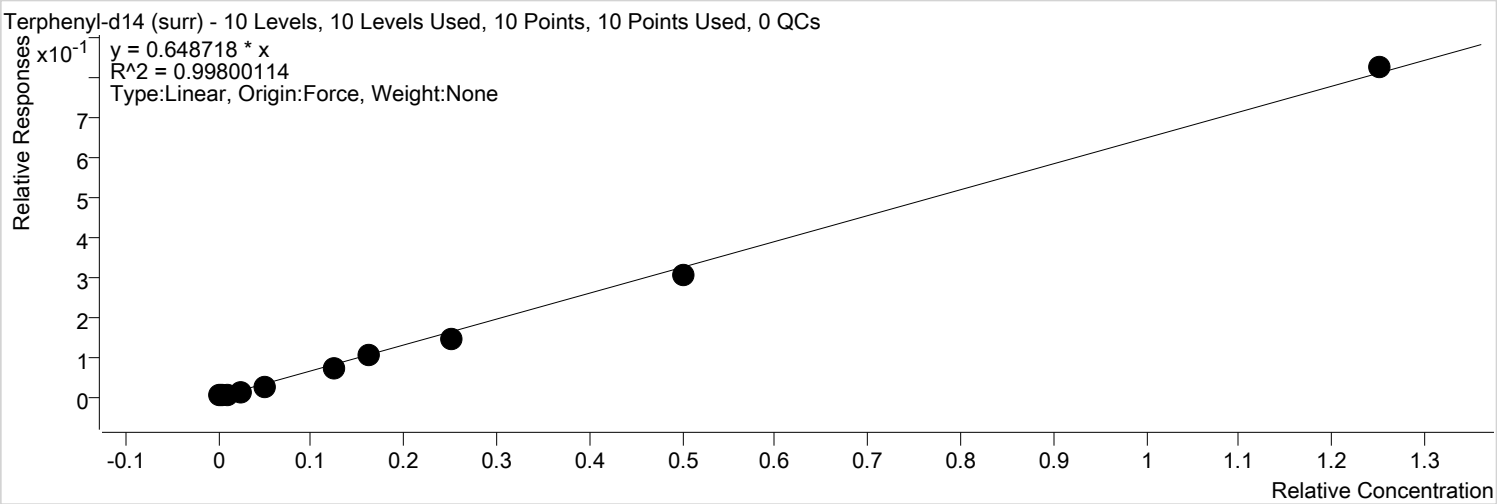
Pyrene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	554	10.0000	1.4233
D:\GC-21\Data\061020\061006.D	Calibration	2	x	1008	20.0000	1.3378
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1982	40.0000	1.2581
D:\GC-21\Data\061020\061008.D	Calibration	4	x	4622	100.0000	1.1736
D:\GC-21\Data\061020\061009.D	Calibration	5	x	10018	200.0000	1.2089
D:\GC-21\Data\061020\061010.D	Calibration	6	x	23616	500.0000	1.1846
D:\GC-21\Data\061020\061011.D	Calibration	7	x	37217	750.0000	1.2199
D:\GC-21\Data\061020\061012.D	Calibration	8	x	50255	1000.0000	1.2224
D:\GC-21\Data\061020\061013.D	Calibration	9	x	106718	2000.0000	1.2680
D:\GC-21\Data\061020\061014.D	Calibration	10	x	274105	5000.0000	1.3316

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

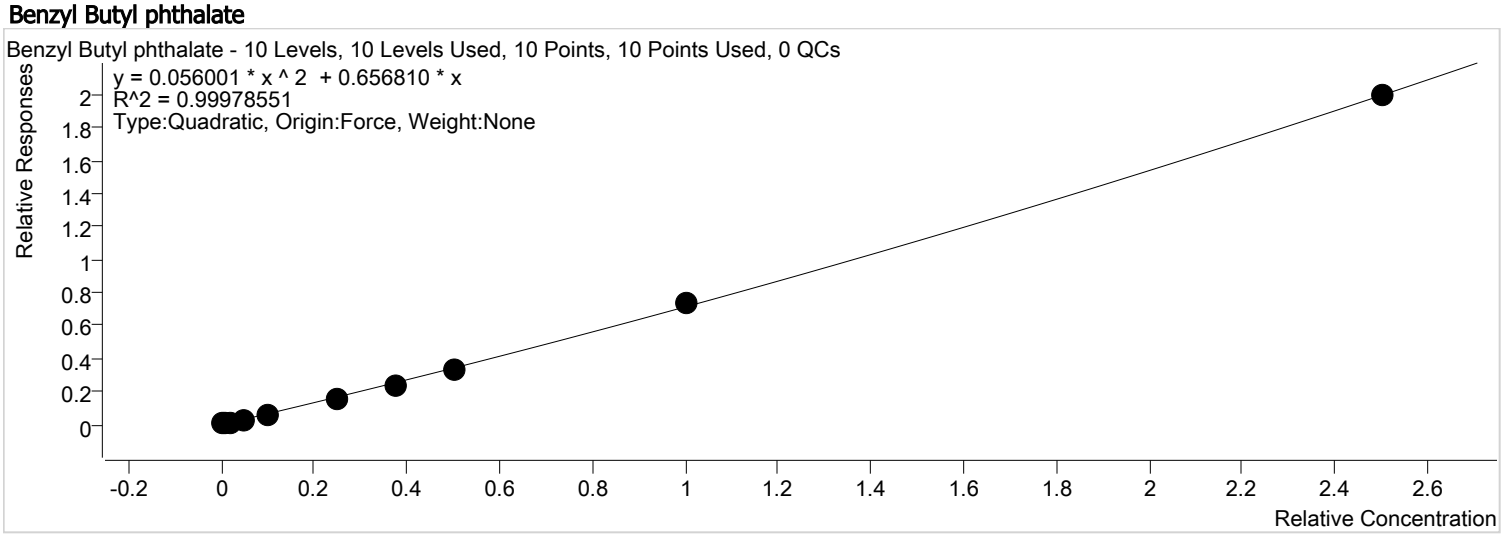
Terphenyl-d14 (surr)



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	122	5.0000	0.6249
D:\GC-21\Data\061020\061006.D	Calibration	2	x	237	10.0000	0.6285
D:\GC-21\Data\061020\061007.D	Calibration	3	x	477	20.0000	0.6056
D:\GC-21\Data\061020\061008.D	Calibration	4	x	1045	50.0000	0.5306
D:\GC-21\Data\061020\061009.D	Calibration	5	x	2294	100.0000	0.5537
D:\GC-21\Data\061020\061010.D	Calibration	6	x	5544	250.0000	0.5562
D:\GC-21\Data\061020\061011.D	Calibration	7	x	8646	325.0000	0.6540
D:\GC-21\Data\061020\061012.D	Calibration	8	x	11786	500.0000	0.5733
D:\GC-21\Data\061020\061013.D	Calibration	9	x	25491	1000.0000	0.6058
D:\GC-21\Data\061020\061014.D	Calibration	10	x	67892	2500.0000	0.6596

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

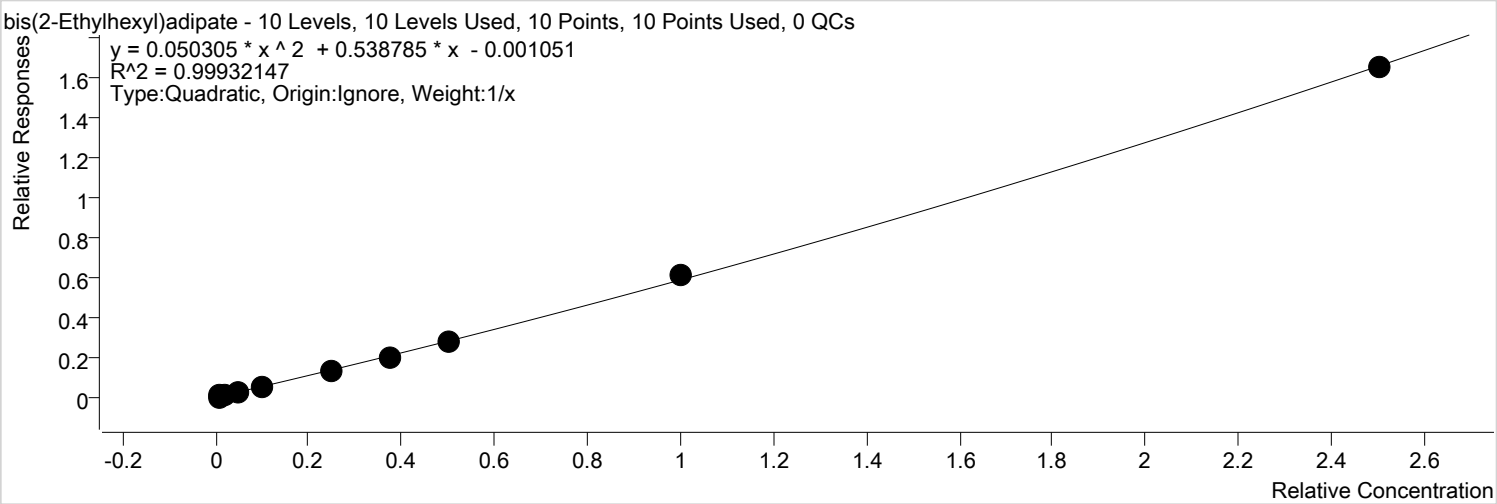
Benzyl Butyl phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	234	10.0000	0.6021
D:\GC-21\Data\061020\061006.D	Calibration	2	x	440	20.0000	0.5842
D:\GC-21\Data\061020\061007.D	Calibration	3	x	963	40.0000	0.6114
D:\GC-21\Data\061020\061008.D	Calibration	4	x	2213	100.0000	0.5618
D:\GC-21\Data\061020\061009.D	Calibration	5	x	4911	200.0000	0.5927
D:\GC-21\Data\061020\061010.D	Calibration	6	x	12333	500.0000	0.6186
D:\GC-21\Data\061020\061011.D	Calibration	7	x	19643	750.0000	0.6438
D:\GC-21\Data\061020\061012.D	Calibration	8	x	27681	1000.0000	0.6733
D:\GC-21\Data\061020\061013.D	Calibration	9	x	61428	2000.0000	0.7299
D:\GC-21\Data\061020\061014.D	Calibration	10	x	163850	5000.0000	0.7960

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

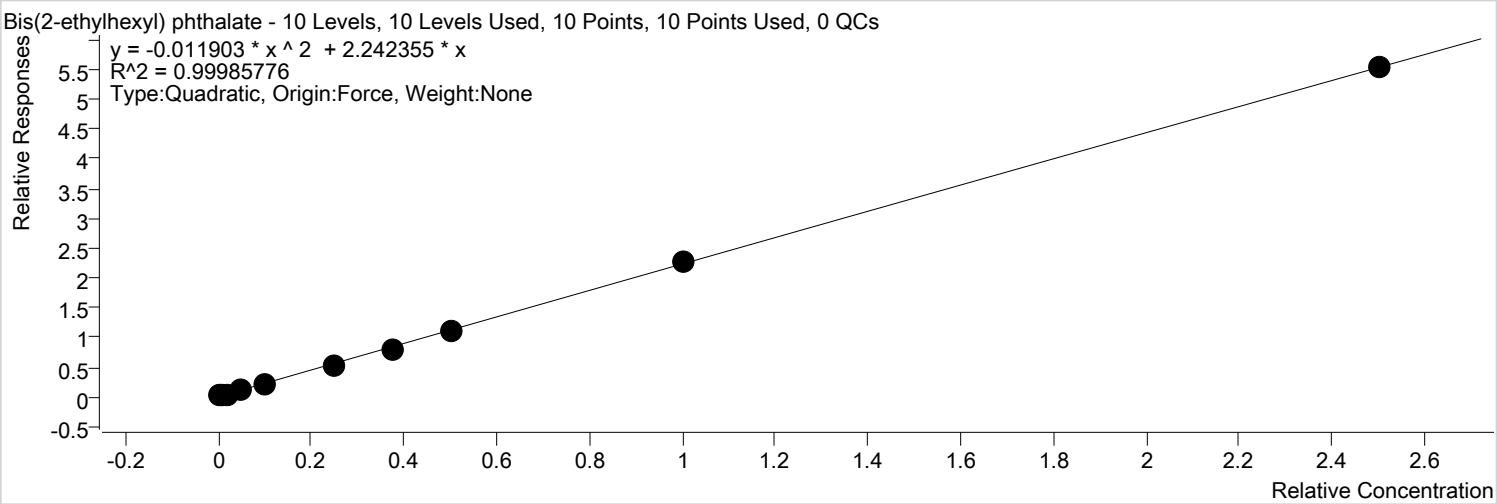
bis(2-Ethylhexyl)adipate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	131	10.0000	0.3357
D:\GC-21\Data\061020\061006.D	Calibration	2	x	401	20.0000	0.5322
D:\GC-21\Data\061020\061007.D	Calibration	3	x	783	40.0000	0.4967
D:\GC-21\Data\061020\061008.D	Calibration	4	x	1821	100.0000	0.4623
D:\GC-21\Data\061020\061009.D	Calibration	5	x	4065	200.0000	0.4906
D:\GC-21\Data\061020\061010.D	Calibration	6	x	10369	500.0000	0.5202
D:\GC-21\Data\061020\061011.D	Calibration	7	x	16642	750.0000	0.5455
D:\GC-21\Data\061020\061012.D	Calibration	8	x	23225	1000.0000	0.5649
D:\GC-21\Data\061020\061013.D	Calibration	9	x	51395	2000.0000	0.6107
D:\GC-21\Data\061020\061014.D	Calibration	10	x	136054	5000.0000	0.6610

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

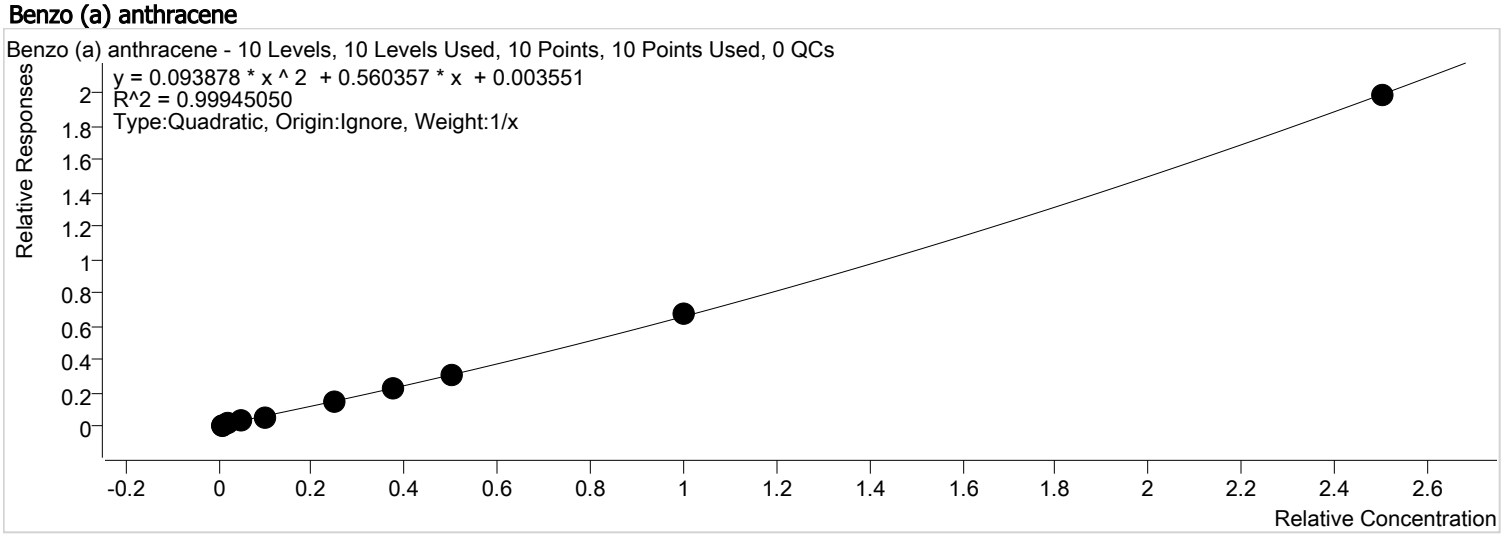
Bis(2-ethylhexyl) phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	353	10.0000	2.1439
D:\GC-21\Data\061020\061006.D	Calibration	2	x	658	20.0000	2.1169
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1388	40.0000	2.1037
D:\GC-21\Data\061020\061008.D	Calibration	4	x	3247	100.0000	1.9518
D:\GC-21\Data\061020\061009.D	Calibration	5	x	7362	200.0000	2.0877
D:\GC-21\Data\061020\061010.D	Calibration	6	x	18676	500.0000	2.1379
D:\GC-21\Data\061020\061011.D	Calibration	7	x	29805	750.0000	2.1398
D:\GC-21\Data\061020\061012.D	Calibration	8	x	41895	1000.0000	2.2270
D:\GC-21\Data\061020\061013.D	Calibration	9	x	92823	2000.0000	2.2664
D:\GC-21\Data\061020\061014.D	Calibration	10	x	243873	5000.0000	2.2108

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

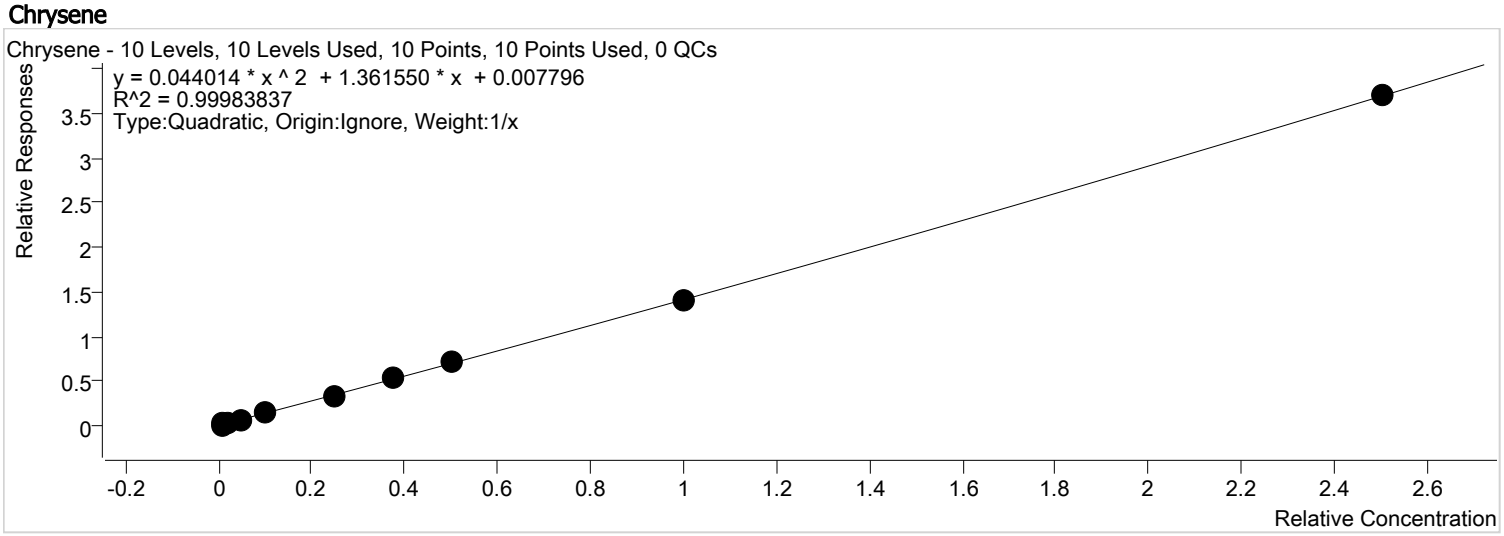
Benzo (a) anthracene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	555	10.0000	1.4258
D:\GC-21\Data\061020\061006.D	Calibration	2	x	689	20.0000	0.9140
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1119	40.0000	0.7102
D:\GC-21\Data\061020\061008.D	Calibration	4	x	2174	100.0000	0.5520
D:\GC-21\Data\061020\061009.D	Calibration	5	x	4790	200.0000	0.5780
D:\GC-21\Data\061020\061010.D	Calibration	6	x	11159	500.0000	0.5598
D:\GC-21\Data\061020\061011.D	Calibration	7	x	18521	750.0000	0.6071
D:\GC-21\Data\061020\061012.D	Calibration	8	x	25680	1000.0000	0.6246
D:\GC-21\Data\061020\061013.D	Calibration	9	x	56825	2000.0000	0.6752
D:\GC-21\Data\061020\061014.D	Calibration	10	x	163379	5000.0000	0.7937

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

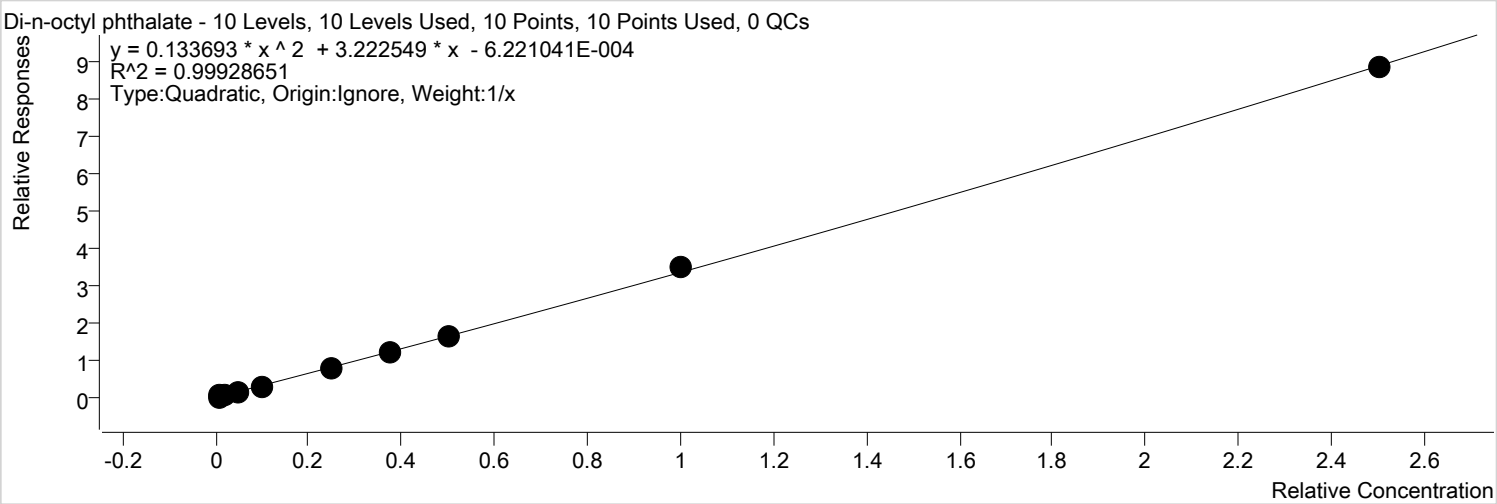
Chrysene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	484	10.0000	2.9394
D:\GC-21\Data\061020\061006.D	Calibration	2	x	635	20.0000	2.0439
D:\GC-21\Data\061020\061007.D	Calibration	3	x	1199	40.0000	1.8174
D:\GC-21\Data\061020\061008.D	Calibration	4	x	2509	100.0000	1.5080
D:\GC-21\Data\061020\061009.D	Calibration	5	x	5205	200.0000	1.4761
D:\GC-21\Data\061020\061010.D	Calibration	6	x	11934	500.0000	1.3661
D:\GC-21\Data\061020\061011.D	Calibration	7	x	19904	750.0000	1.4290
D:\GC-21\Data\061020\061012.D	Calibration	8	x	26663	1000.0000	1.4173
D:\GC-21\Data\061020\061013.D	Calibration	9	x	57113	2000.0000	1.3945
D:\GC-21\Data\061020\061014.D	Calibration	10	x	162887	5000.0000	1.4766

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

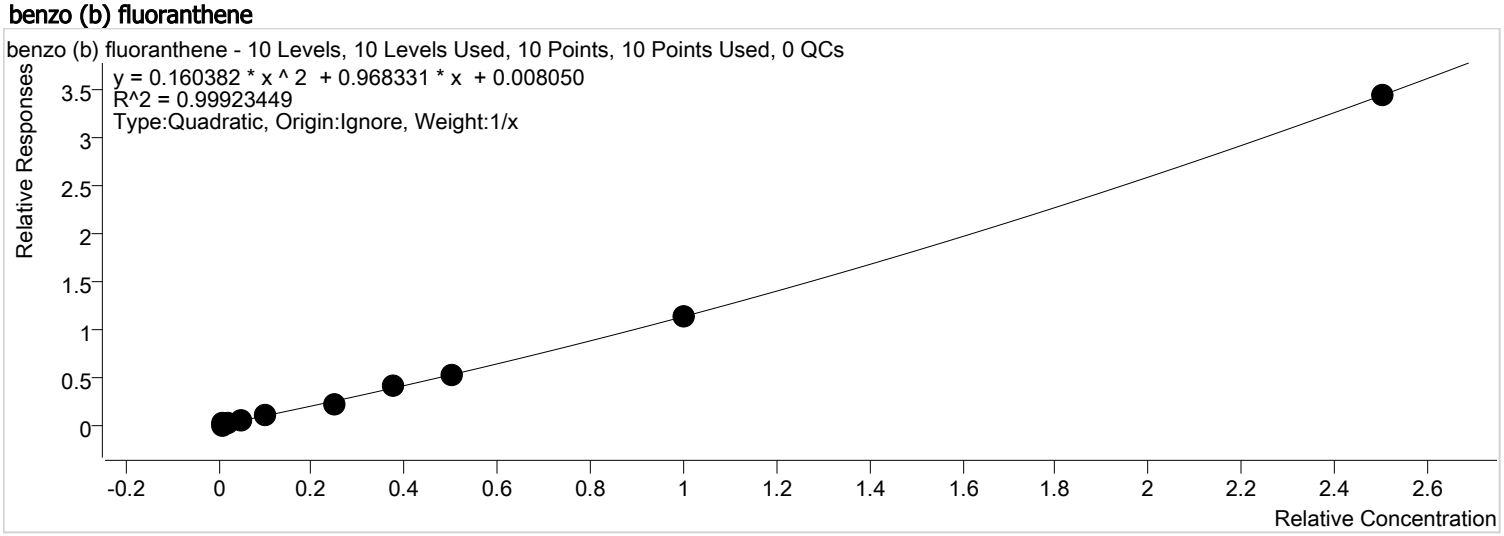
Di-n-octyl phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	564	10.0000	3.4259
D:\GC-21\Data\061020\061006.D	Calibration	2	x	1090	20.0000	3.5090
D:\GC-21\Data\061020\061007.D	Calibration	3	x	2089	40.0000	3.1663
D:\GC-21\Data\061020\061008.D	Calibration	4	x	4763	100.0000	2.8624
D:\GC-21\Data\061020\061009.D	Calibration	5	x	10601	200.0000	3.0064
D:\GC-21\Data\061020\061010.D	Calibration	6	x	27424	500.0000	3.1392
D:\GC-21\Data\061020\061011.D	Calibration	7	x	44287	750.0000	3.1795
D:\GC-21\Data\061020\061012.D	Calibration	8	x	62250	1000.0000	3.3089
D:\GC-21\Data\061020\061013.D	Calibration	9	x	142948	2000.0000	3.4903
D:\GC-21\Data\061020\061014.D	Calibration	10	x	390256	5000.0000	3.5378

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

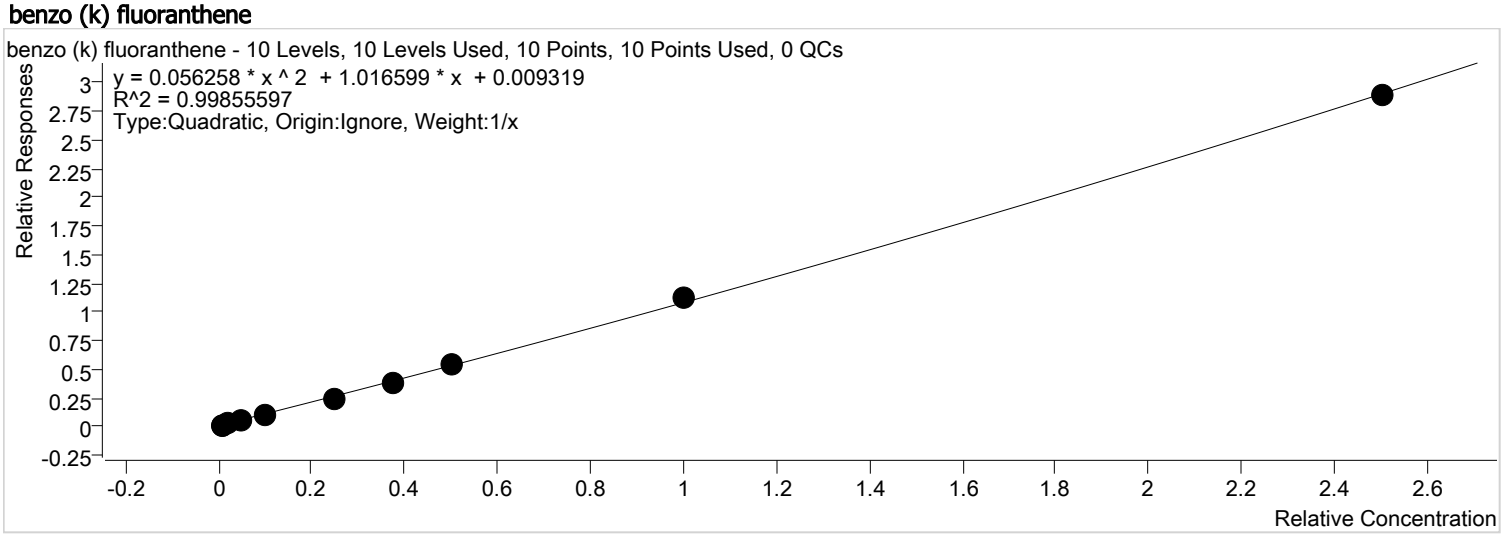
benzo (b) fluoranthene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	430	10.0000	2.6115
D:\GC-21\Data\061020\061006.D	Calibration	2	x	610	20.0000	1.9634
D:\GC-21\Data\061020\061007.D	Calibration	3	x	836	40.0000	1.2672
D:\GC-21\Data\061020\061008.D	Calibration	4	x	1725	100.0000	1.0368
D:\GC-21\Data\061020\061009.D	Calibration	5	x	3756	200.0000	1.0651
D:\GC-21\Data\061020\061010.D	Calibration	6	x	8271	500.0000	0.9468
D:\GC-21\Data\061020\061011.D	Calibration	7	x	15662	750.0000	1.1244
D:\GC-21\Data\061020\061012.D	Calibration	8	x	20169	1000.0000	1.0721
D:\GC-21\Data\061020\061013.D	Calibration	9	x	46513	2000.0000	1.1357
D:\GC-21\Data\061020\061014.D	Calibration	10	x	151309	5000.0000	1.3717

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

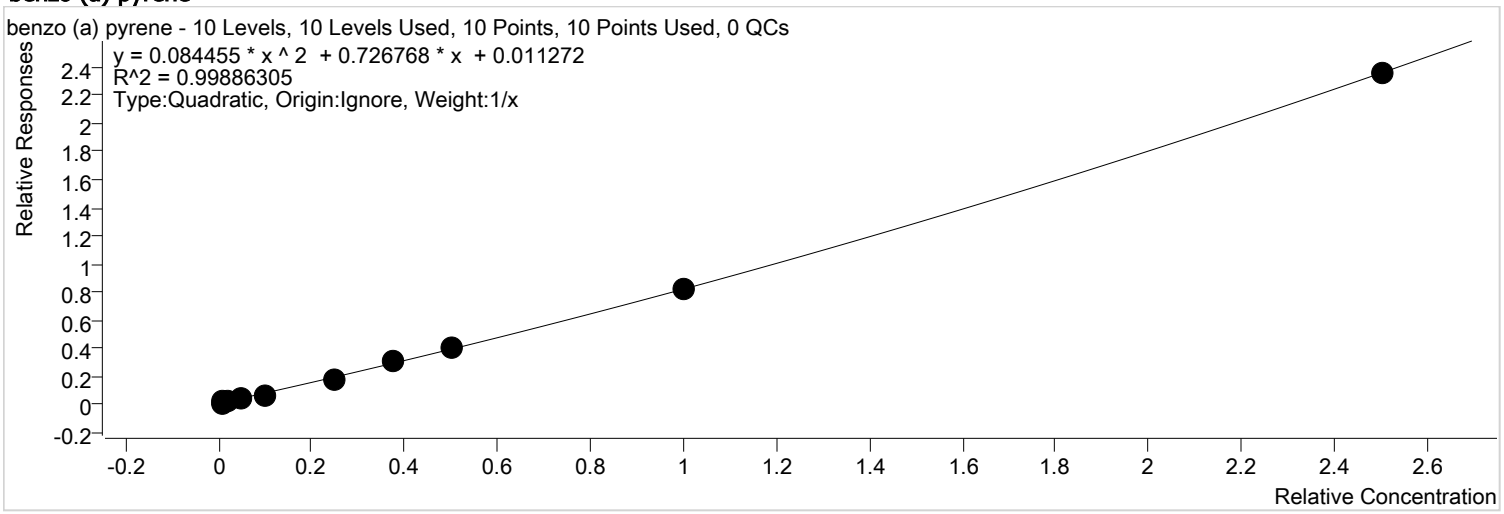
benzo (k) fluoranthene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	516	10.0000	3.1317
D:\GC-21\Data\061020\061006.D	Calibration	2	x	569	20.0000	1.8299
D:\GC-21\Data\061020\061007.D	Calibration	3	x	973	40.0000	1.4753
D:\GC-21\Data\061020\061008.D	Calibration	4	x	1955	100.0000	1.1749
D:\GC-21\Data\061020\061009.D	Calibration	5	x	3912	200.0000	1.1094
D:\GC-21\Data\061020\061010.D	Calibration	6	x	8099	500.0000	0.9271
D:\GC-21\Data\061020\061011.D	Calibration	7	x	14522	750.0000	1.0426
D:\GC-21\Data\061020\061012.D	Calibration	8	x	20761	1000.0000	1.1036
D:\GC-21\Data\061020\061013.D	Calibration	9	x	45970	2000.0000	1.1224
D:\GC-21\Data\061020\061014.D	Calibration	10	x	127385	5000.0000	1.1548

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

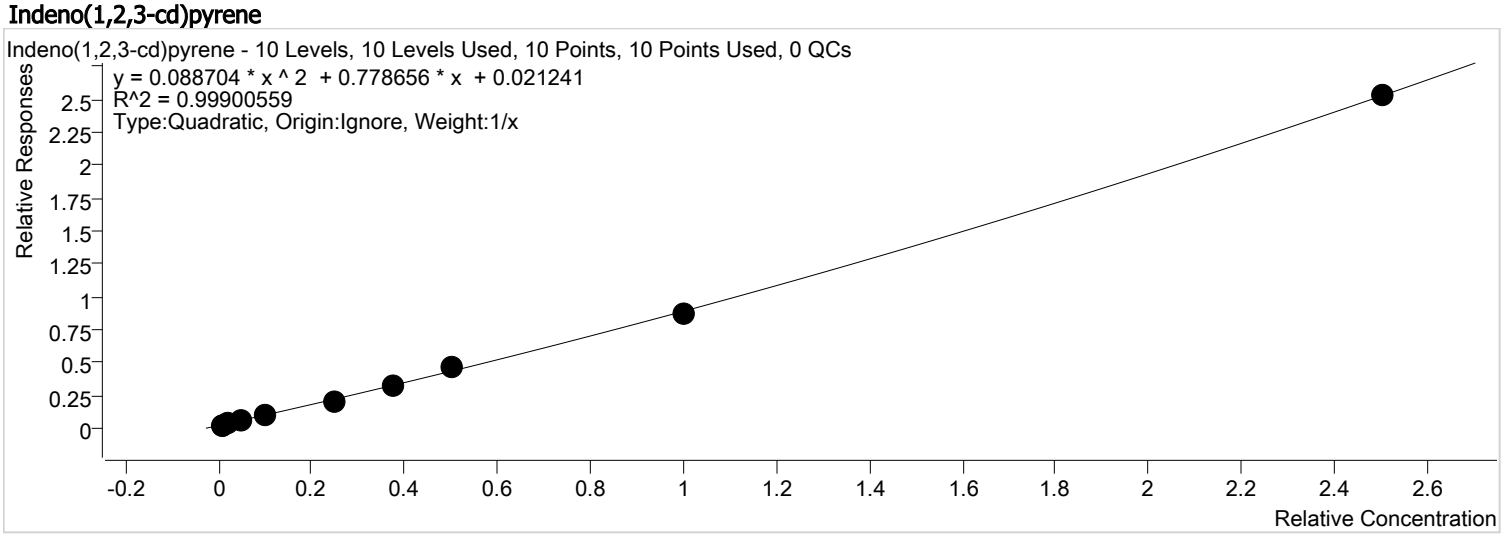
benzo (a) pyrene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	505	10.0000	3.0663
D:\GC-21\Data\061020\061006.D	Calibration	2	x	585	20.0000	1.8815
D:\GC-21\Data\061020\061007.D	Calibration	3	x	865	40.0000	1.3104
D:\GC-21\Data\061020\061008.D	Calibration	4	x	1565	100.0000	0.9406
D:\GC-21\Data\061020\061009.D	Calibration	5	x	2641	200.0000	0.7490
D:\GC-21\Data\061020\061010.D	Calibration	6	x	6186	500.0000	0.7081
D:\GC-21\Data\061020\061011.D	Calibration	7	x	11339	750.0000	0.8140
D:\GC-21\Data\061020\061012.D	Calibration	8	x	15635	1000.0000	0.8311
D:\GC-21\Data\061020\061013.D	Calibration	9	x	33983	2000.0000	0.8298
D:\GC-21\Data\061020\061014.D	Calibration	10	x	103702	5000.0000	0.9401

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

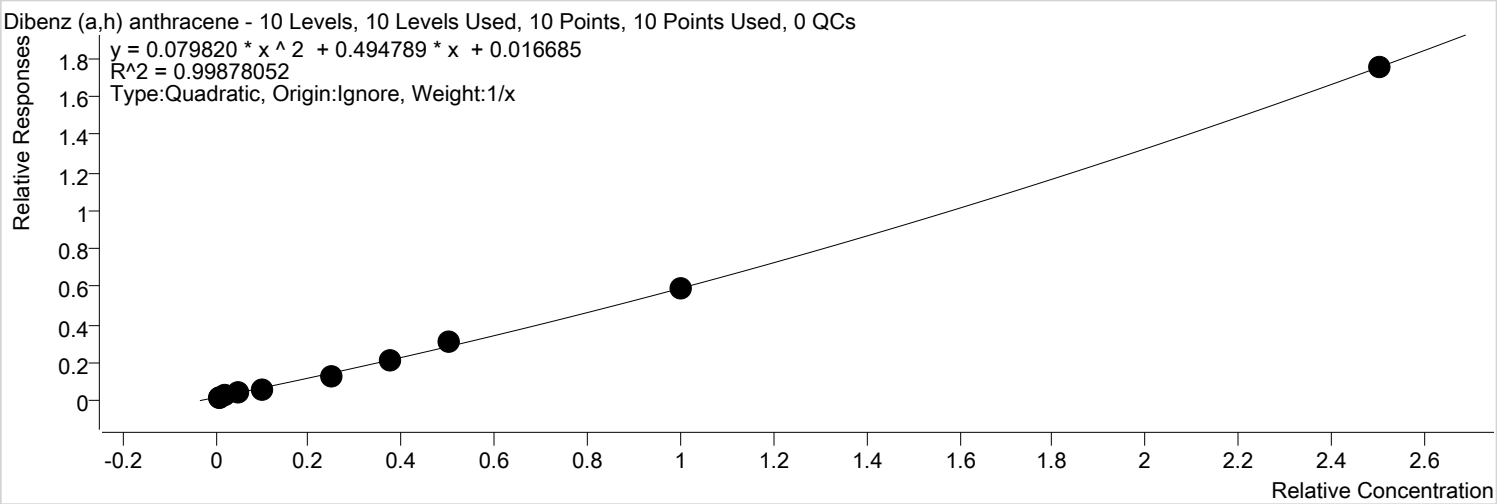
Indeno(1,2,3-cd)pyrene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	677	10.0000	5.2261
D:\GC-21\Data\061020\061006.D	Calibration	2	x	702	20.0000	2.8046
D:\GC-21\Data\061020\061007.D	Calibration	3	x	895	40.0000	1.7444
D:\GC-21\Data\061020\061008.D	Calibration	4	x	1570	100.0000	1.1825
D:\GC-21\Data\061020\061009.D	Calibration	5	x	2887	200.0000	1.0523
D:\GC-21\Data\061020\061010.D	Calibration	6	x	5519	500.0000	0.8074
D:\GC-21\Data\061020\061011.D	Calibration	7	x	10146	750.0000	0.8801
D:\GC-21\Data\061020\061012.D	Calibration	8	x	13867	1000.0000	0.9172
D:\GC-21\Data\061020\061013.D	Calibration	9	x	29179	2000.0000	0.8743
D:\GC-21\Data\061020\061014.D	Calibration	10	x	93264	5000.0000	1.0096

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

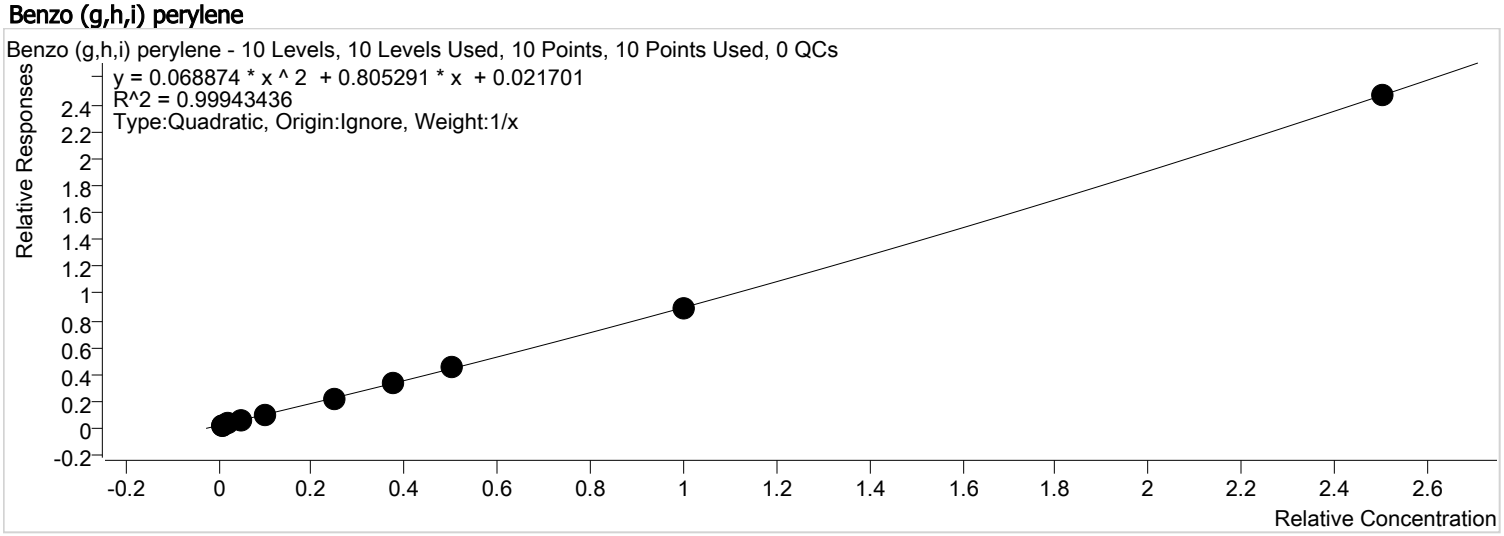
Dibenz (a,h) anthracene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	524	10.0000	4.0388
D:\GC-21\Data\061020\061006.D	Calibration	2	x	518	20.0000	2.0697
D:\GC-21\Data\061020\061007.D	Calibration	3	x	646	40.0000	1.2579
D:\GC-21\Data\061020\061008.D	Calibration	4	x	1138	100.0000	0.8567
D:\GC-21\Data\061020\061009.D	Calibration	5	x	1669	200.0000	0.6083
D:\GC-21\Data\061020\061010.D	Calibration	6	x	3649	500.0000	0.5339
D:\GC-21\Data\061020\061011.D	Calibration	7	x	6679	750.0000	0.5794
D:\GC-21\Data\061020\061012.D	Calibration	8	x	9188	1000.0000	0.6077
D:\GC-21\Data\061020\061013.D	Calibration	9	x	19603	2000.0000	0.5874
D:\GC-21\Data\061020\061014.D	Calibration	10	x	64701	5000.0000	0.7004

Batch Path	D:\GC-21\Data\061020\QuantResults\pah sim windows.batch.bin		
Analysis Time	6/10/2020 6:40:51 PM	**Analyst Name**	FA\lab
Report Time	6/10/2020 6:41:11 PM	**Reporter Name**	lab
Last Calib Update	6/10/2020 3:55:11 PM	**Batch State**	Processed

Benzo (g,h,i) perylene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\061020\061005.D	Calibration	1	x	693	10.0000	5.3437
D:\GC-21\Data\061020\061006.D	Calibration	2	x	744	20.0000	2.9718
D:\GC-21\Data\061020\061007.D	Calibration	3	x	922	40.0000	1.7966
D:\GC-21\Data\061020\061008.D	Calibration	4	x	1515	100.0000	1.1412
D:\GC-21\Data\061020\061009.D	Calibration	5	x	2835	200.0000	1.0330
D:\GC-21\Data\061020\061010.D	Calibration	6	x	5869	500.0000	0.8586
D:\GC-21\Data\061020\061011.D	Calibration	7	x	10590	750.0000	0.9187
D:\GC-21\Data\061020\061012.D	Calibration	8	x	13727	1000.0000	0.9080
D:\GC-21\Data\061020\061013.D	Calibration	9	x	29763	2000.0000	0.8918
D:\GC-21\Data\061020\061014.D	Calibration	10	x	91056	5000.0000	0.9857

PAH Calibration

FMT: 23845

Date: 06/09/20

Analyst: Sam Beerman

MeCl2: 2083/4997

Cal	ICV
8270 Megamix: 23290	**8270 Megamix:** ~~23290~~ 88619 23297
8270 Surrogate: 23842	**IS:** 23710

	Spike Conc. (ppb)	BN/Acid Surr Conc. (ppb)	2° Spike (uL)	B/N Surr (uL)	Internal Standard (uL)	Remove (uL)	Final Vol. (mL)	Comments
11	7	5/2.5	0.2		10	10.2	1	
12	10	10/5	1	--	10	11	1	
13	20	20/10	2	--	10	12	1	
14	40	40/20	4	--	10	14	1	
15	100	100/50	10	--	10	20	1	
16	200	200/100	20	--	10	30	1	
17	500	500/250	~~40~~ 50	--	10	60	1	
18	750	750/375	75	--	10	85	1	
19	1000	1000/500	100	--	10	110	1	
20	2000	2000/1000	200	--	10	210	1	
21	5000	5000/2500	500	--	10	510	1	
22	ICB	1000/500		1	10	11	1	
23	ICV (1000 ppb)	1000/500	~~100 (2° SS)~~ 88619	--	10	~~110~~ 11 88619	1	

	Mega Mix (uL)	8270 Surr (uL)	Final Volume (mL)
2° Intermediate (cal)	100	100	10
2° Intermediate (SS)	50	50	5

Signature and Date: 06/09/20

Signature: EM

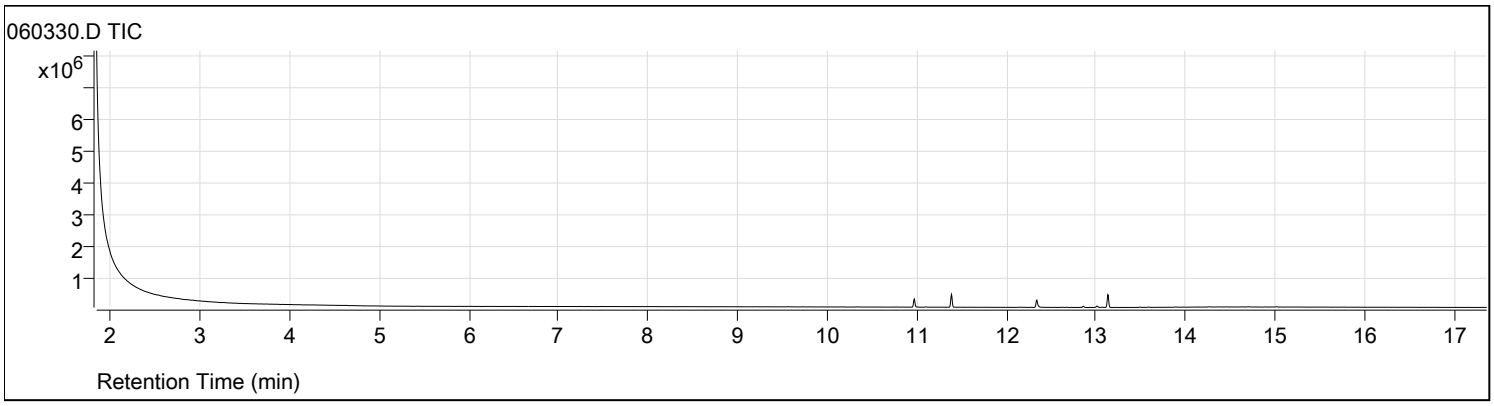
700 Building Calibration Template - PAH v1.1

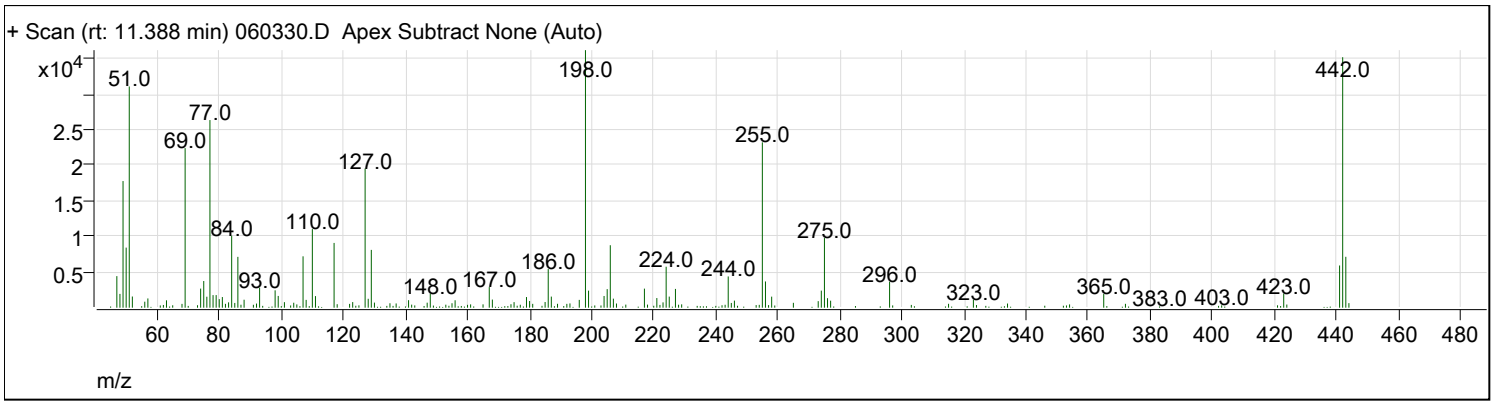
Official Approval: 11/14/2019

Tunes

Tune Evaluation Report

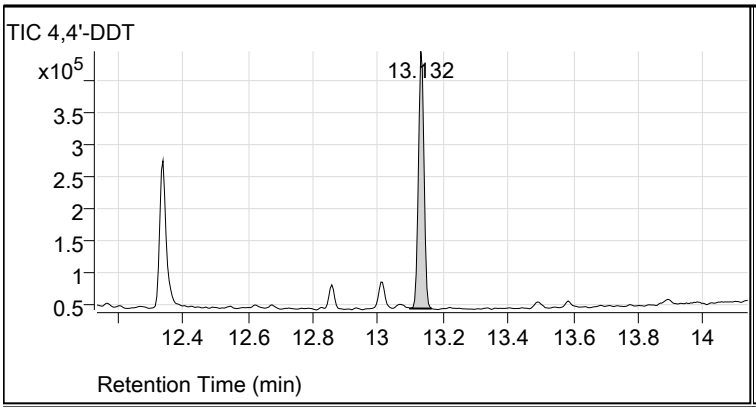
Data Path:	D:\GC-21\Data\060320\060330.D
Acq on:	6/3/2020 8:26:22 PM
Operator:	SNB
Sample:	TUNE
Inst Name:	GC-21
ALS Vial:	1
Method:	D:\MassHunter\Methods\Quant\DFTPPwBreak&TailingGC218270E.m

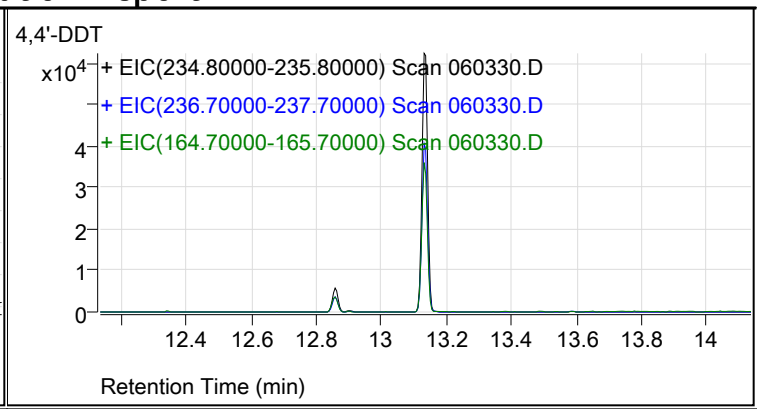


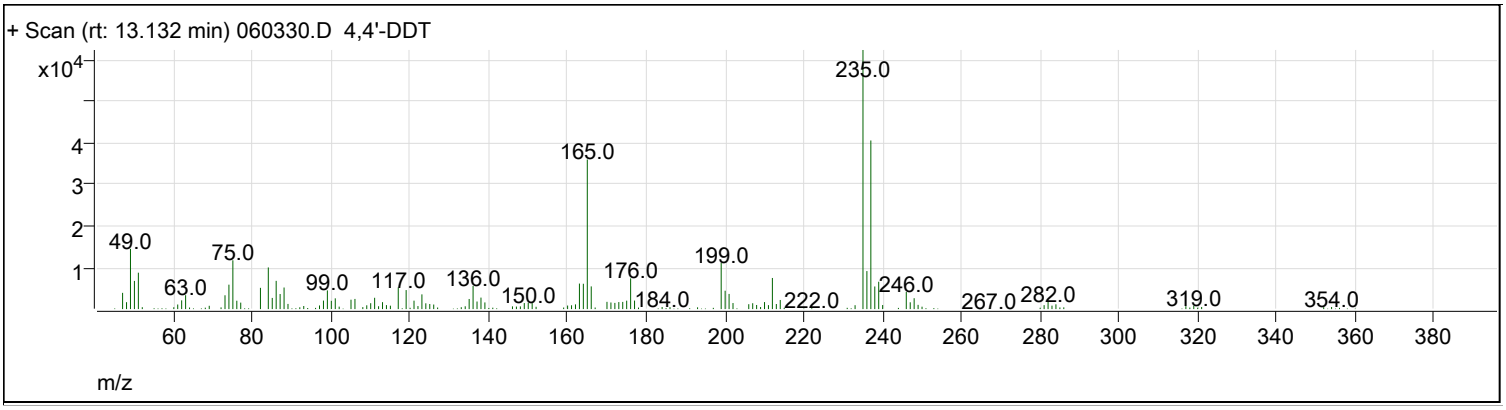


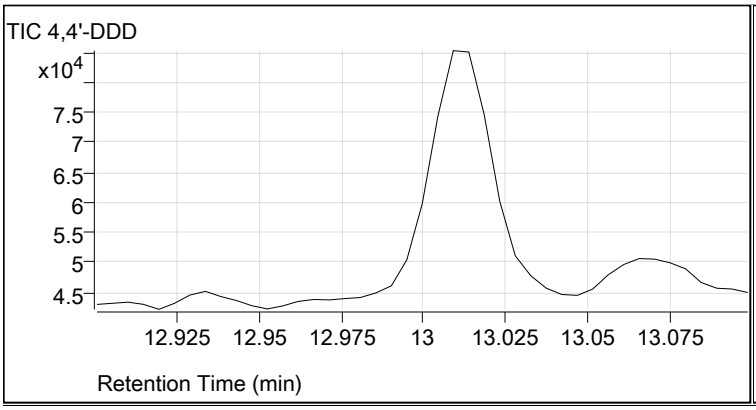
Target Mass	Rel. To Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Pass/Fail
68	69	0	2	2.4	536	Fail
70	69	0	2	1.1	250	Pass
197	198	0	2	0.0	0	Pass
198	198	100	100	100.0	36136	Pass
199	198	5	9	6.6	2393	Pass
365	198	1	100	5.3	1918	Pass
441	443	1E-10	150	82.9	5922	Pass
442	442	100	100	100.0	35144	Pass
443	442	15	24	20.3	7140	Pass
69	69	100	100	100.0	22392	Pass

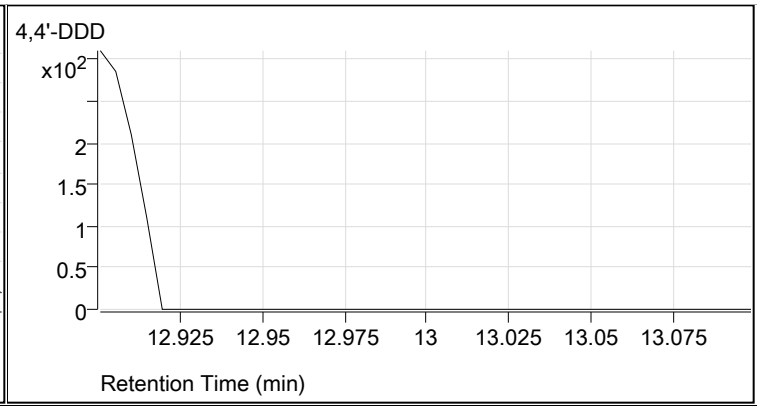
Tune Evaluation Report

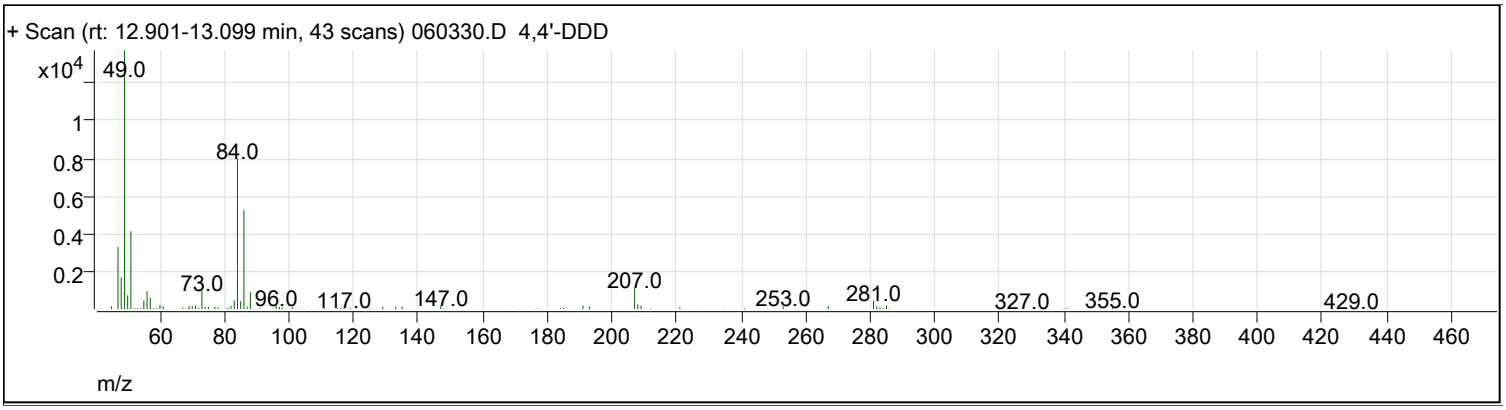






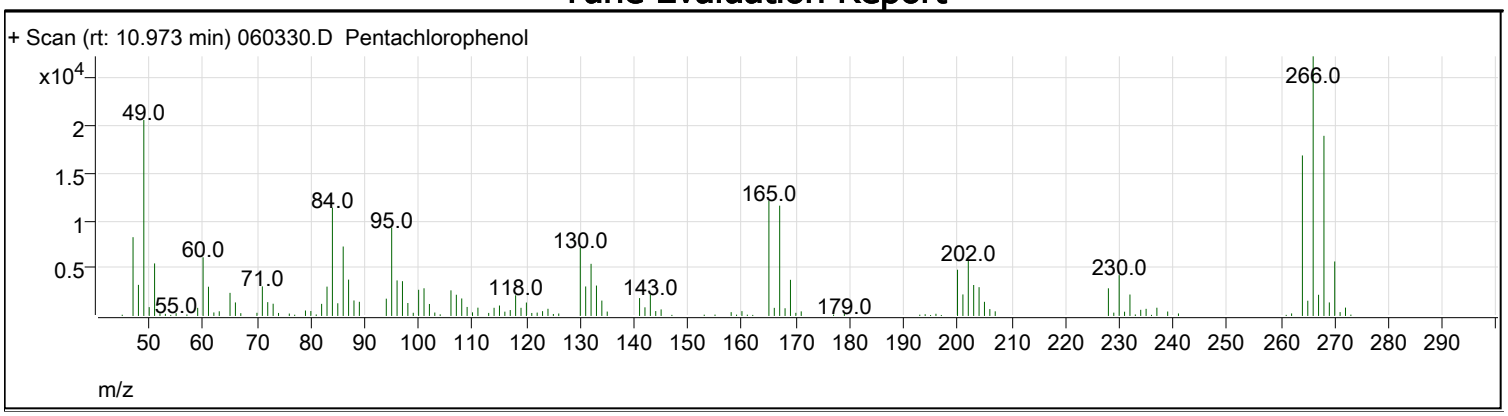


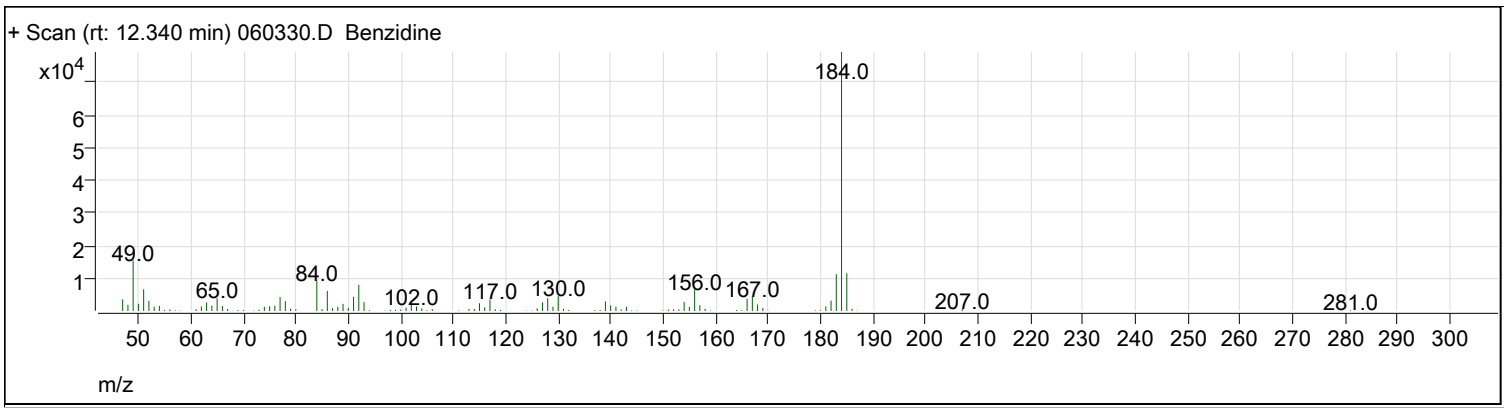




Compound Name	Expected RT	Observed RT	TIC Area	Breakdown %	Pass/Fail
4,4'-DDT	13.137	13.132	479583	0.0	Pass
4,4'-DDD	13.000	0.000	0		

Tune Evaluation Report

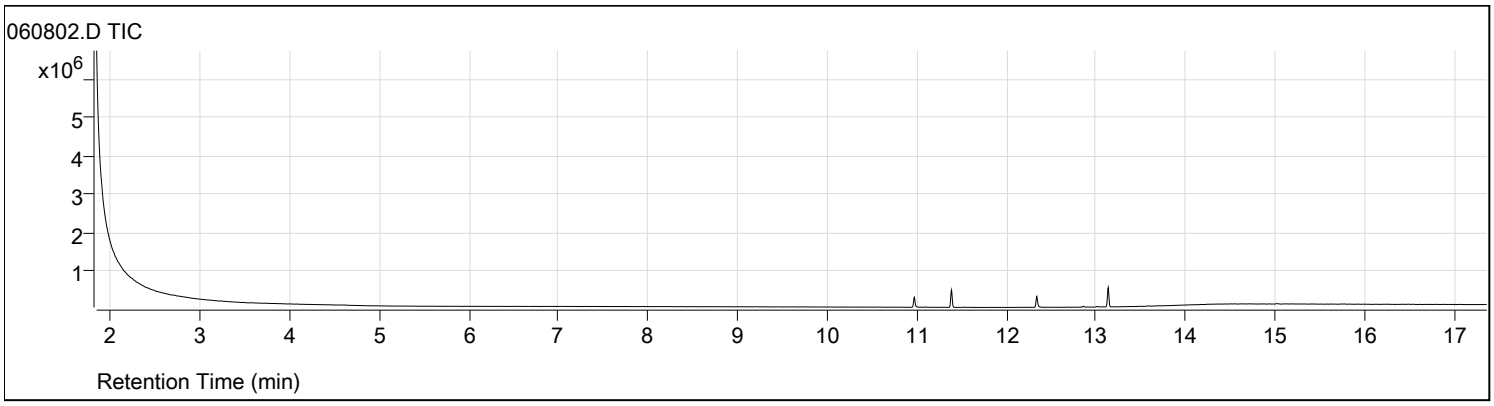


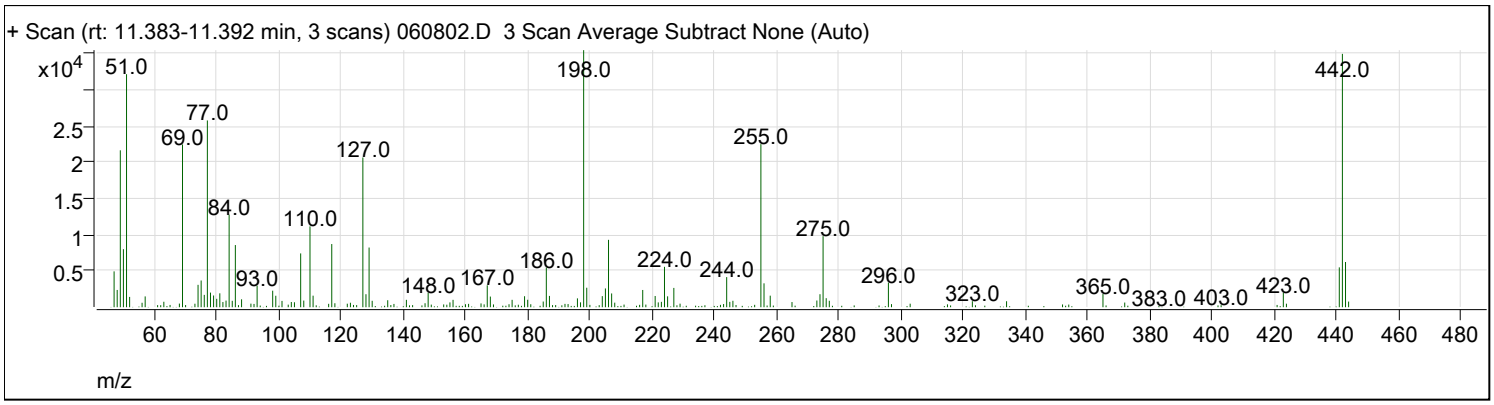


Compound Name	Expected RT	Observed RT	Tailing Factor	PGF	Pass/Fail
Pentachlorophenol	10.900	10.973	0.9	70.1	Pass
Benzidine	12.400	12.340	1.4	61.8	Pass

Tune Evaluation Report

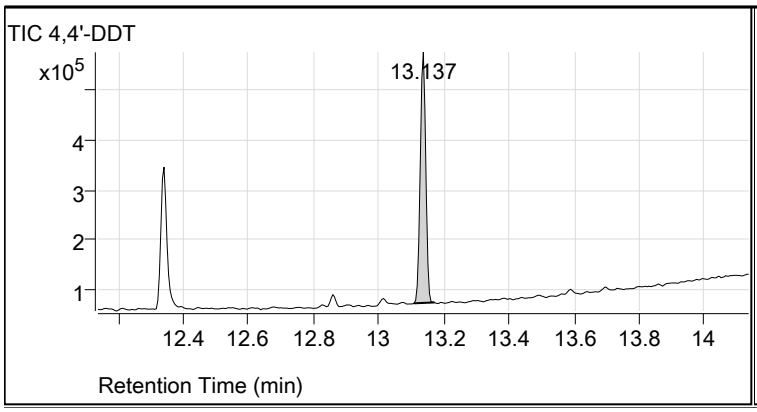
Data Path:	D:\GC-21\Data\060820\060802.D
Acq on:	6/8/2020 8:09:44 AM
Operator:	SNB
Sample:	TUNE
Inst Name:	GC-21
ALS Vial:	1
Method:	D:\MassHunter\Methods\Quant\DFTPPwBreak&TailingGC218270E.m

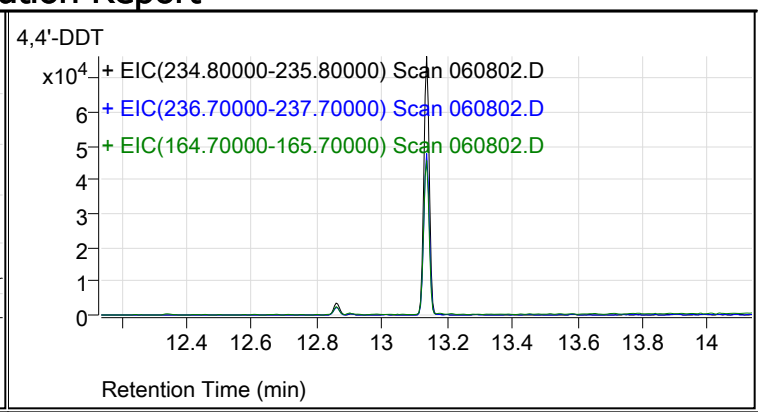


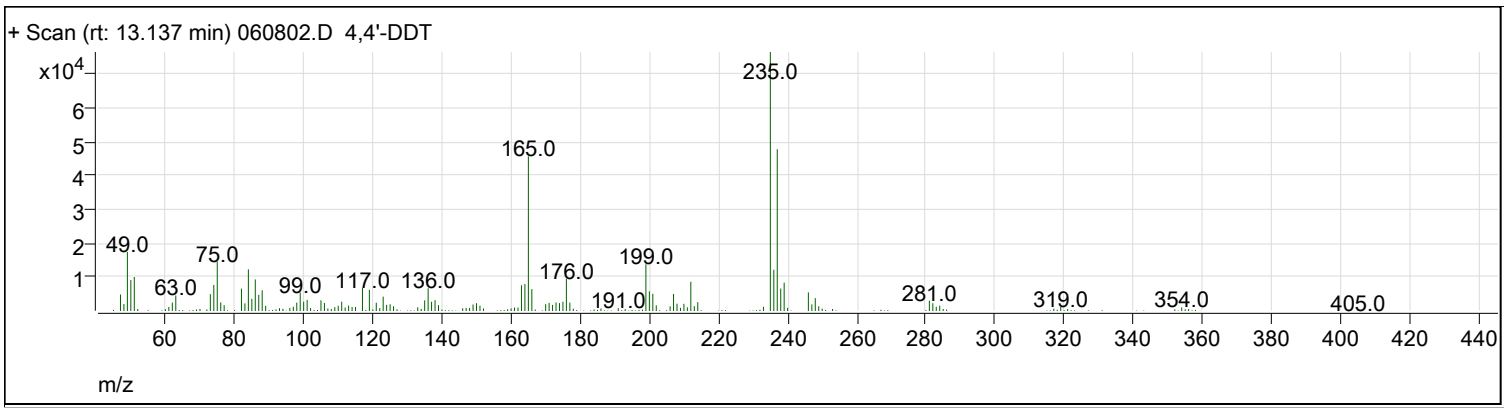


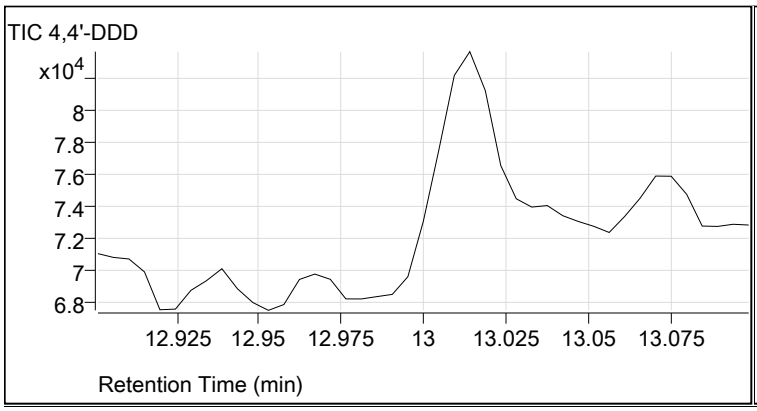
Target Mass	Rel. To Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Pass/Fail
68	69	0	2	2.2	501	Fail
70	69	0	2	1.3	299	Pass
197	198	0	2	1.9	672	Pass
198	198	100	100	100.0	35488	Pass
199	198	5	9	7.6	2690	Pass
365	198	1	100	5.1	1819	Pass
441	443	1E-10	150	88.1	5501	Pass
442	442	100	100	100.0	34976	Pass
443	442	15	24	17.8	6242	Pass
69	69	100	100	100.0	22461	Pass

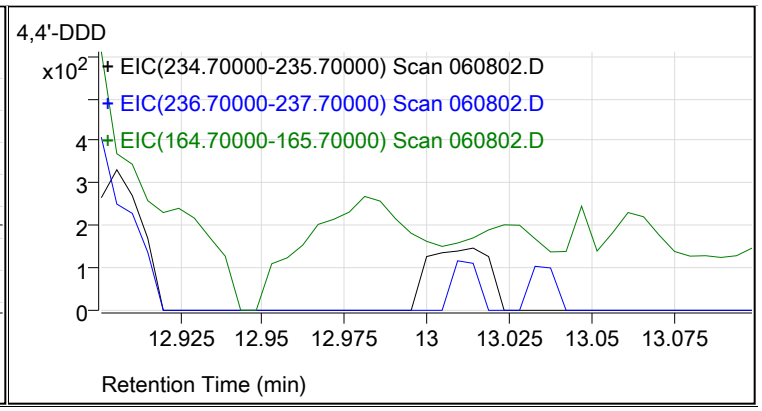
Tune Evaluation Report

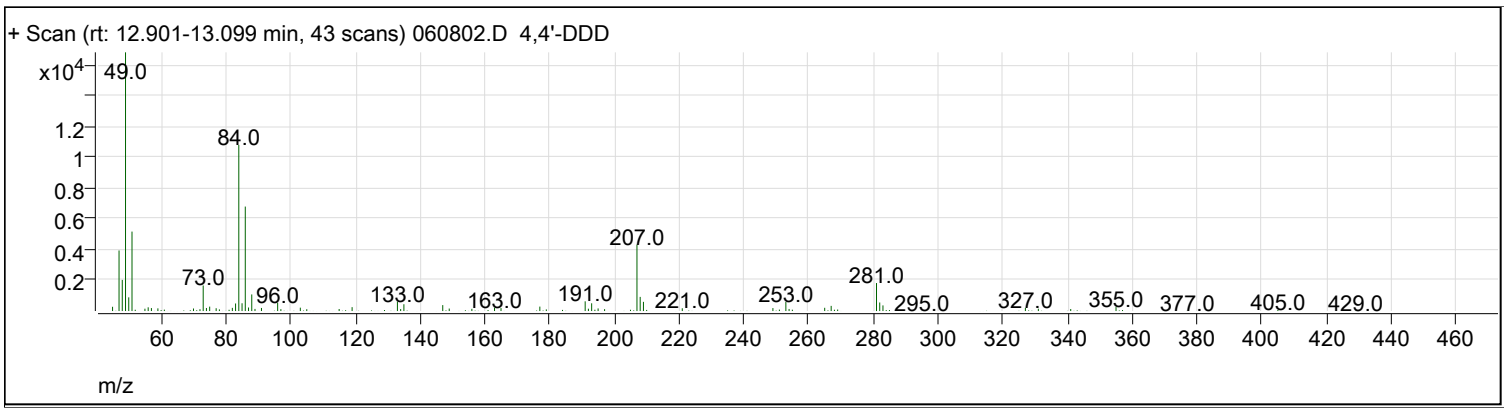






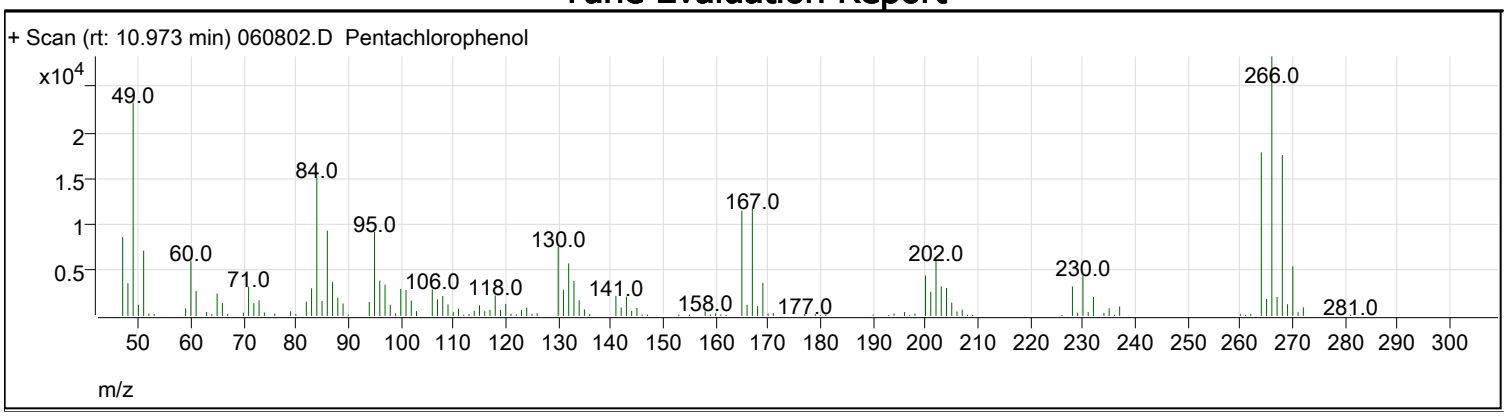


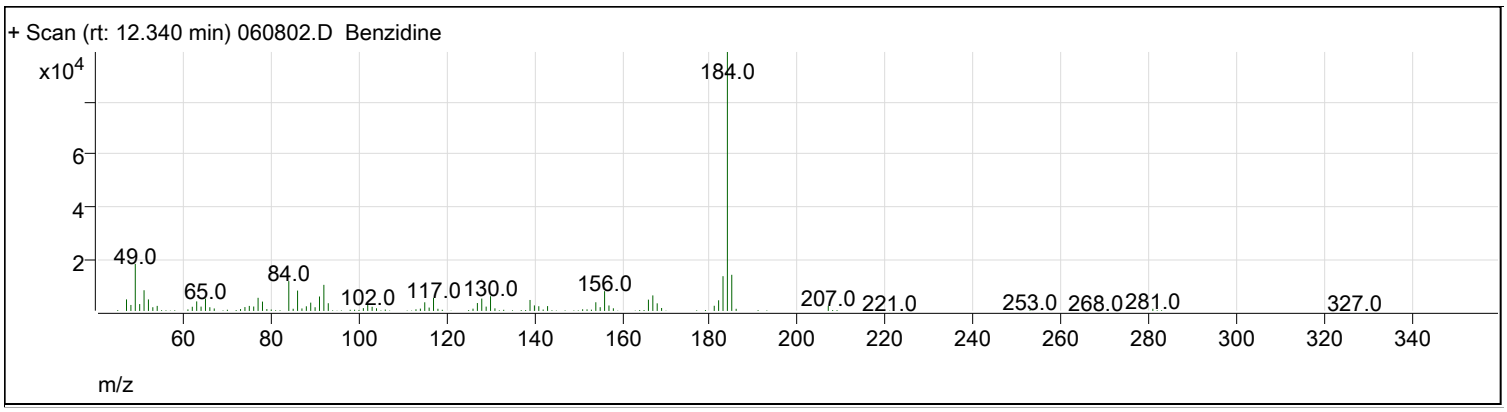




Compound Name	Expected RT	Observed RT	TIC Area	Breakdown %	Pass/Fail
4,4'-DDT	13.137	13.137	587854	0.0	Pass
4,4'-DDD	13.000	0.000	0		

Tune Evaluation Report

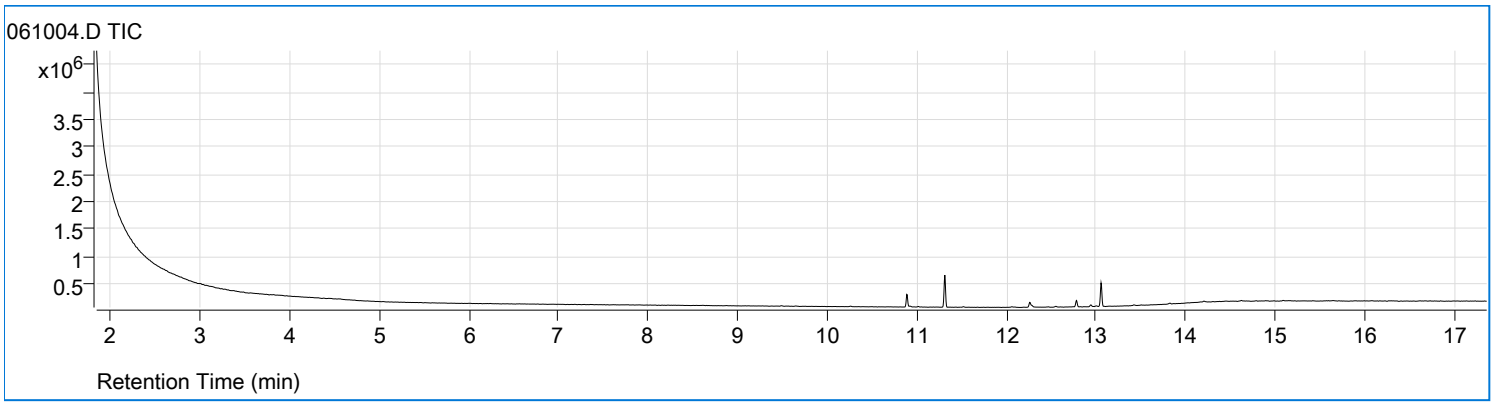


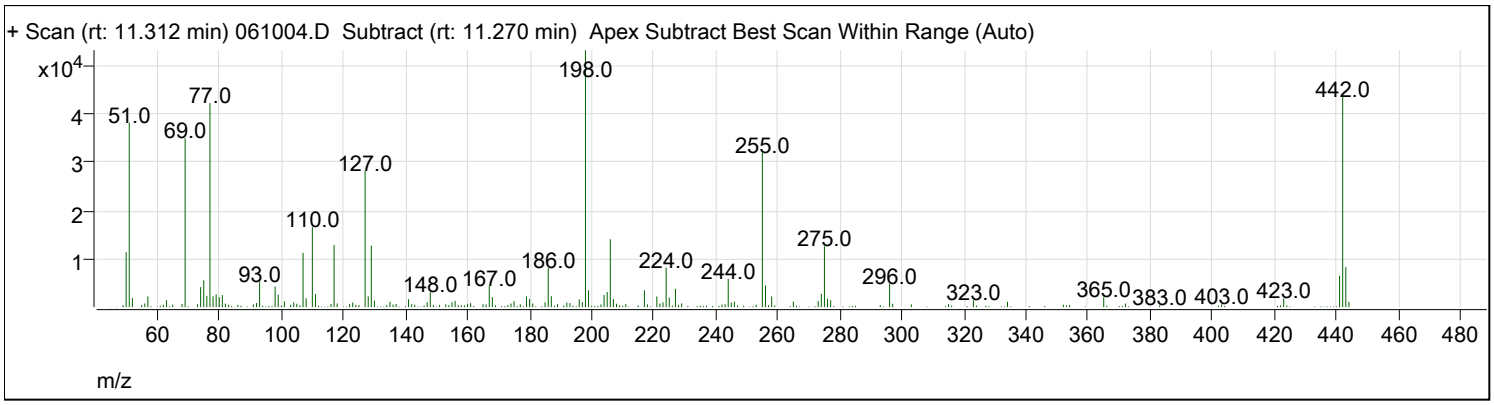


Compound Name	Expected RT	Observed RT	Tailing Factor	PGF	Pass/Fail
Pentachlorophenol	10.900	10.973	1.0	2.4	Pass
Benzidine	12.400	12.340	1.2	2.2	Pass

Tune Evaluation Report

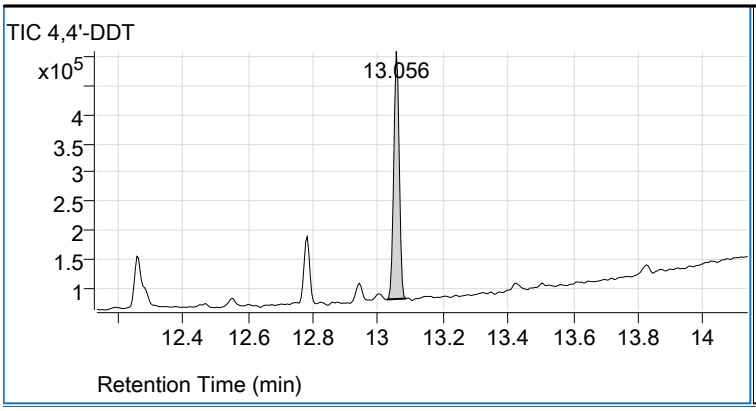
Data Path:	D:\GC-21\Data\061020\061004.D
Acq on:	6/10/2020 11:13:42 AM
Operator:	SNB
Sample:	TUNE
Inst Name:	GC-21
ALS Vial:	1
Method:	D:\MassHunter\Methods\Quant\DFTPPwBreak&TailingGC218270E.m

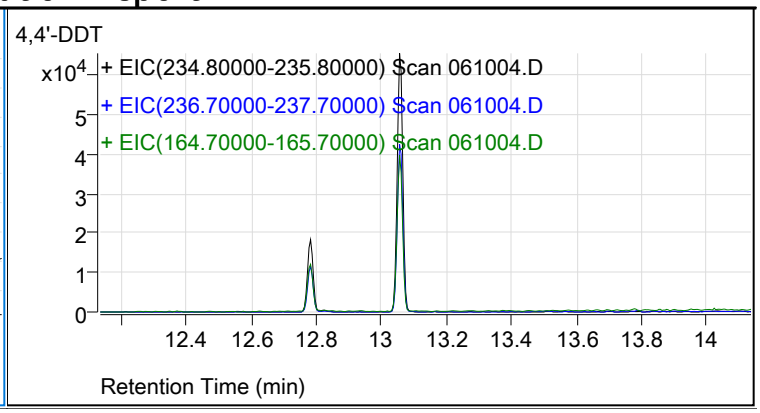


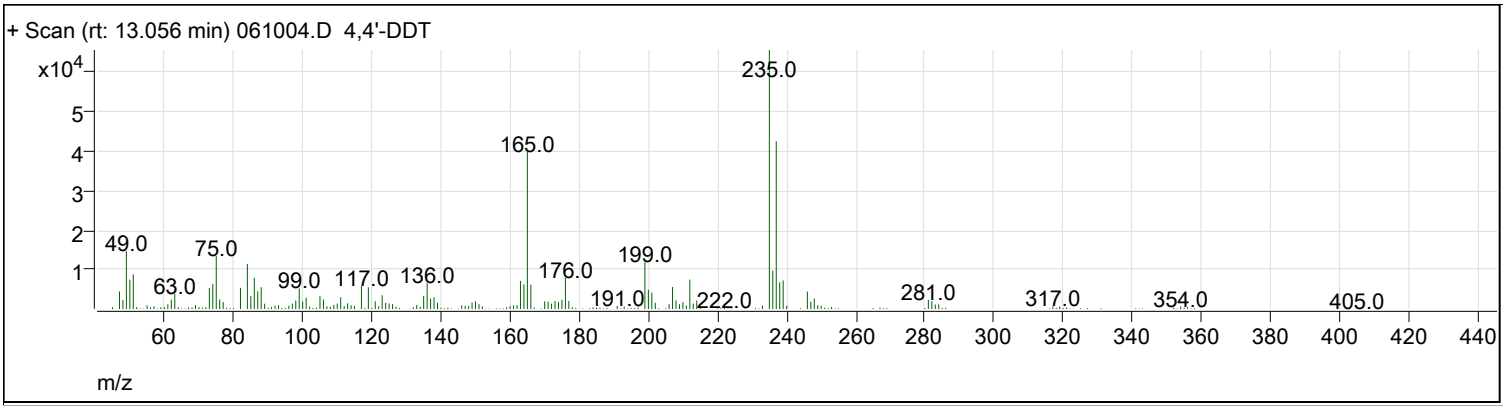


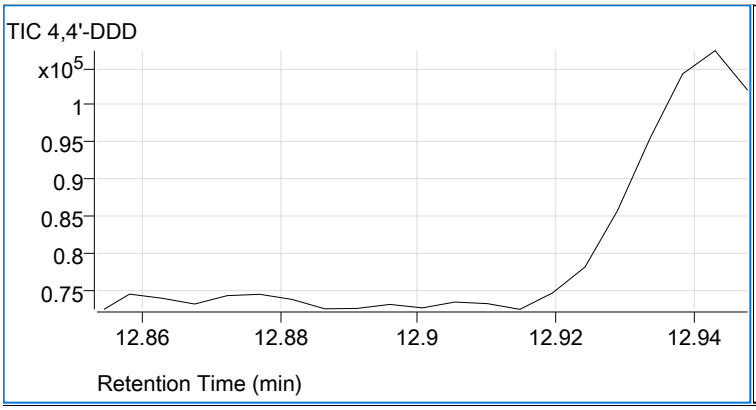
Target Mass	Rel. To Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Pass/Fail
68	69	0	2	1.9	664	Pass
70	69	0	2	0.5	185	Pass
197	198	0	2	2.0	1051	Pass
198	198	100	100	100.0	53232	Pass
199	198	5	9	6.6	3494	Pass
365	198	1	100	3.8	2034	Pass
441	443	1E-10	150	78.2	6504	Pass
442	442	100	100	100.0	43512	Pass
443	442	15	24	19.1	8313	Pass
69	69	100	100	100.0	34982	Pass

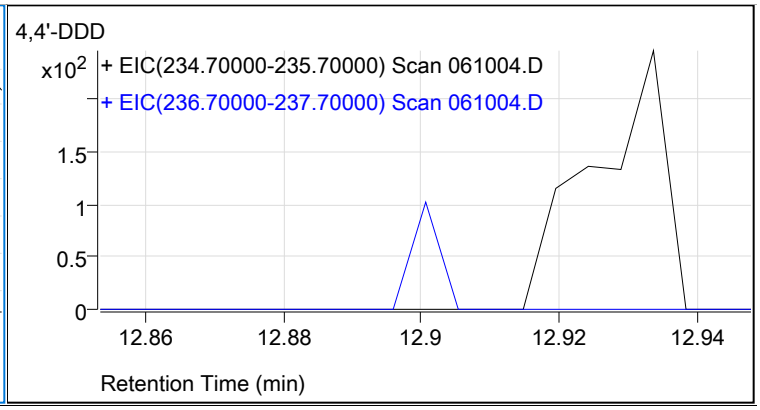
Tune Evaluation Report

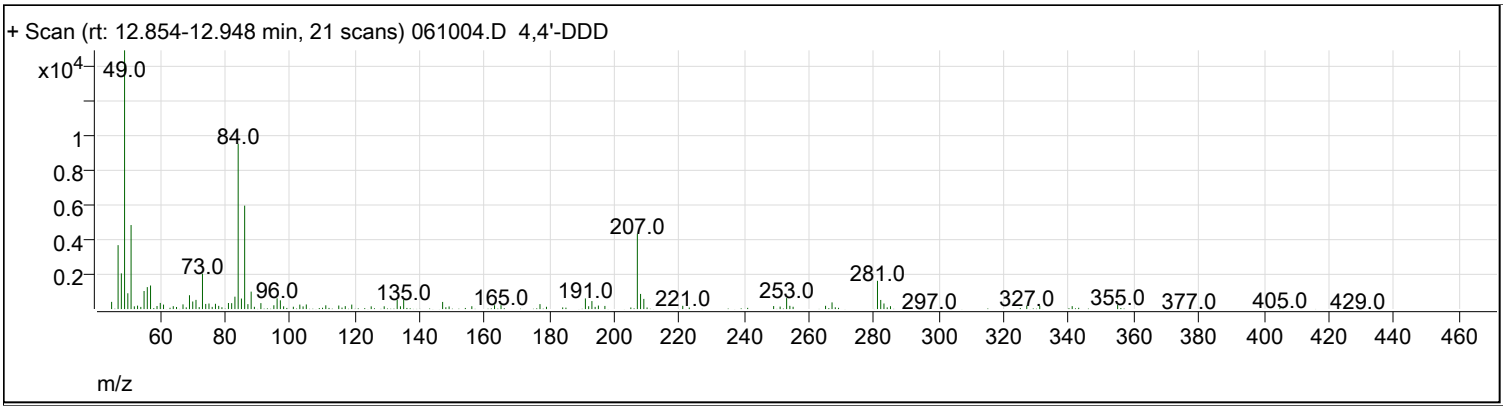






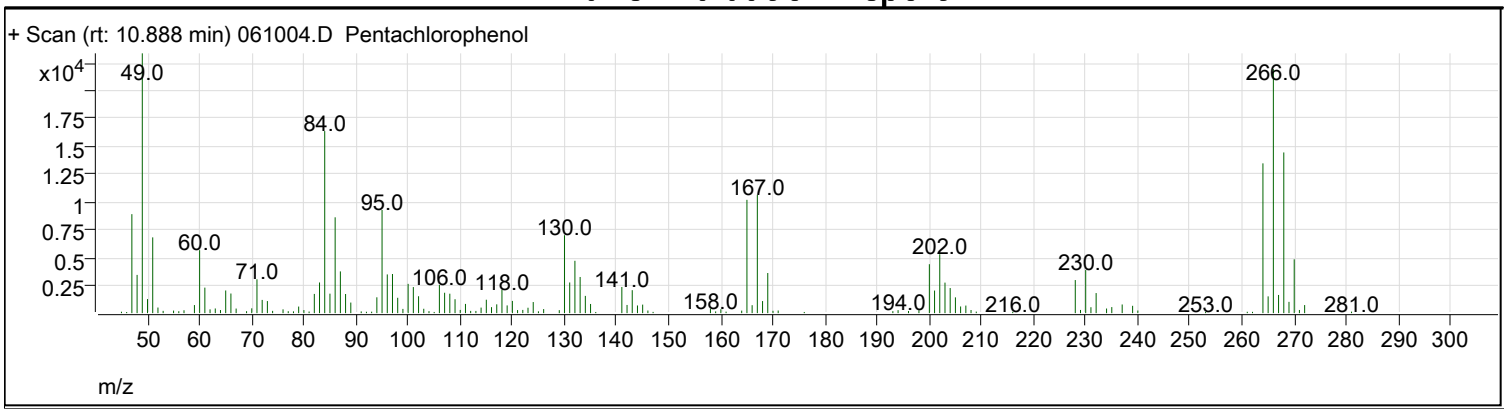


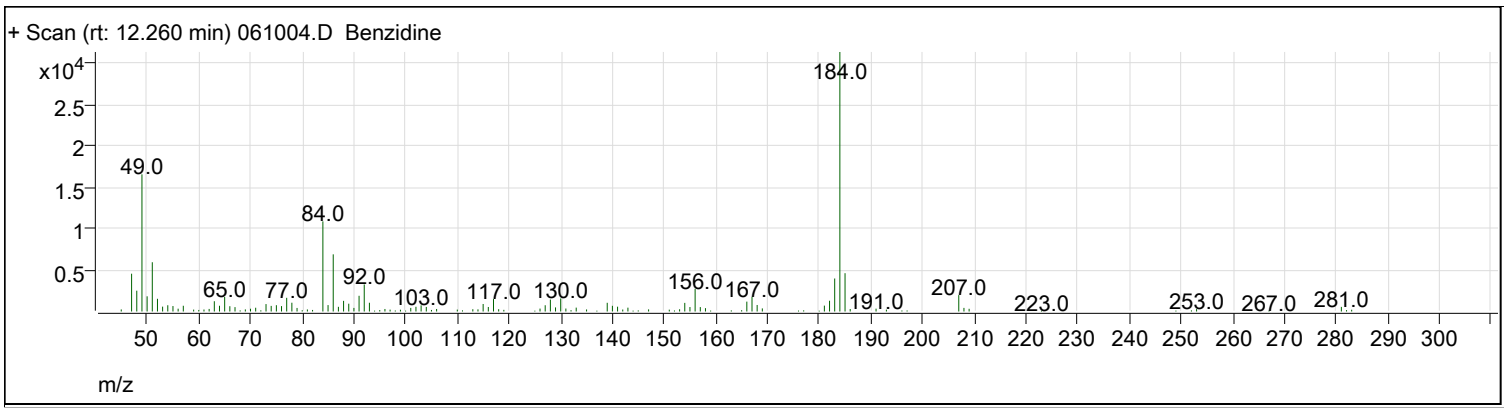




Compound Name	Expected RT	Observed RT	TIC Area	Breakdown %	Pass/Fail
4,4'-DDT	13.137	13.056	503120	0.0	Pass
4,4'-DDD	12.900	0.000	0		

Tune Evaluation Report





Compound Name	Expected RT	Observed RT	Tailing Factor	PGF	Pass/Fail
Pentachlorophenol	10.900	10.888	1.4	3.8	Pass
Benzidine	12.400	12.260	2.5	3.0	Fail

DATA SET for Review -- Deliverable Requirements

Semivolatiles Analysis by EPA 8270

Fremont Analytical Work Order No. 2006085

Libby Environmental

Project Name: Hardel Site

Project No. L200603-7

This Data contains the following:

- Analytical Sequence Summary for **Work Order 2006085**
- Calibration Information for **Work Order 2006085**
- Tune Information for **Work Order 2006085**

Injection Log

Data Directory: D:\GC-21\Data\061220\

SampleName	MiscInfo	Vial	Multiplier	Injection Time
1) 061201.D				
CO		2	1.000	12 Jun 2020 08:46 am
2) 061202.D				
TUNE		1	1.000	12 Jun 2020 09:57 am
3) 061203.D				
CCV-28605		2	1.000	12 Jun 2020 10:19 am
4) 061204.D				
CCV-28601		4	1.000	12 Jun 2020 10:44 am
5) 061205.D				
MB-28605		101	1.000	12 Jun 2020 11:05 am
6) 061206.D				
LCS-28605		102	1.000	12 Jun 2020 11:28 am
7) 061207.D				
2006077-001A		103	1.000	12 Jun 2020 11:50 am
8) 061208.D				
2006085-014A		104	1.000	12 Jun 2020 12:13 pm
9) 061209.D				
2006085-015A		105	1.000	12 Jun 2020 12:35 pm
10) 061210.D				
2006085-015ADUP		106	1.000	12 Jun 2020 12:57 pm
11) 061211.D				
2006085-015AMS		107	1.000	12 Jun 2020 01:20 pm
12) 061212.D				
2006085-015AMSD		108	1.000	12 Jun 2020 01:42 pm
13) 061213.D				
2006085-016A		109	1.000	12 Jun 2020 02:04 pm
14) 061214.D				
QCS-28605		2	1.000	12 Jun 2020 02:27 pm

Injection Log

Data Directory: D:\GC-21\Data\061520\

SampleName	MiscInfo	Vial	Multiplier	Injection Time
1) 061501.D				
CO		2	1.000	15 Jun 2020 09:33 am
2) 061502.D				
TUNE		1	1.000	15 Jun 2020 09:55 am
3) 061503.D				
CCV-CHECK		2	1.000	15 Jun 2020 10:18 am
4) 061504.D				
CCV-EXT-28620		3	1.000	15 Jun 2020 11:08 am
5) 061505.D				
MB-28620		11	1.000	15 Jun 2020 11:38 am
6) 061506.D				
LCS2-28620		27	1.000	15 Jun 2020 12:08 pm
7) 061507.D				
2004011-036A		22	1.000	15 Jun 2020 12:38 pm
8) 061508.D				
MDL 2 EXT-50 PPB		23	1.000	15 Jun 2020 01:08 pm
9) 061509.D				
MDL 2 EXT-100 PPB		24	1.000	15 Jun 2020 01:38 pm
10) 061510.D				
PAH CHECK		2	1.000	15 Jun 2020 02:09 pm
11) 061511.D				
MDL 2 EXT-500 PPB		25	1.000	15 Jun 2020 02:31 pm
12) 061512.D				
MDL 2 EXT-1000 PPB		26	1.000	15 Jun 2020 03:01 pm
13) 061513.D				
QCS-EXT-28620		3	1.000	15 Jun 2020 03:31 pm
14) 061514.D				
MB-28620		11	1.000	15 Jun 2020 04:02 pm
15) 061515.D				
LCS-28620		12	1.000	15 Jun 2020 04:25 pm
16) 061516.D				
LCSD-28620		13	1.000	15 Jun 2020 04:47 pm
17) 061517.D				
2006085-001A		14	1.000	15 Jun 2020 05:10 pm
18) 061518.D				
2006085-001ADUP		15	1.000	15 Jun 2020 05:33 pm
19) 061519.D				
2006085-002A		16	1.000	15 Jun 2020 05:55 pm
20) 061520.D				
2006085-003A		17	1.000	15 Jun 2020 06:18 pm
21) 061521.D				
2006085-004A		18	1.000	15 Jun 2020 06:40 pm

22) 061522.D
2006085-005A 19 1.000 15 Jun 2020 07:03 pm

23) 061523.D
2006085-006A 20 1.000 15 Jun 2020 07:25 pm

24) 061524.D
2006085-007A 21 1.000 15 Jun 2020 07:48 pm

25) 061525.D
QCS-28620 2 1.000 15 Jun 2020 08:10 pm

Calibration

Initial Calibration Report

Agilent Technologies

Method Path	D:\GC-21\Methods\Quant Methods\SEMI
Method File	SEMI_060420.m
Batch Name	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin
Last Calib Update	6/4/2020 10:23:34 AM

Level Name	Calibration Files	Acq. Date-Time	Level Last Update Time
1	D:\GC-21\Data\060320\060318.D	6/3/2020 3:55:09 PM	6/4/2020 10:23:34 AM
2	D:\GC-21\Data\060320\060319.D	6/3/2020 4:17:50 PM	6/4/2020 10:23:34 AM
3	D:\GC-21\Data\060320\060320.D	6/3/2020 4:40:31 PM	6/4/2020 10:23:34 AM
4	D:\GC-21\Data\060320\060321.D	6/3/2020 5:03:07 PM	6/4/2020 10:23:34 AM
5	D:\GC-21\Data\060320\060322.D	6/3/2020 5:25:43 PM	6/4/2020 10:23:34 AM
6	D:\GC-21\Data\060320\060323.D	6/3/2020 5:48:25 PM	6/4/2020 10:23:34 AM
7	D:\GC-21\Data\060320\060324.D	6/3/2020 6:11:02 PM	6/4/2020 10:23:34 AM
8	D:\GC-21\Data\060320\060325.D	6/3/2020 6:33:33 PM	6/4/2020 10:23:34 AM
9	D:\GC-21\Data\060320\060326.D	6/3/2020 6:56:06 PM	6/4/2020 10:23:34 AM
10	D:\GC-21\Data\060320\060327.D	6/3/2020 7:18:37 PM	6/4/2020 10:23:34 AM

	Compound	1	2	3	4	5	6	7	8	9	10	Avg RF	%RSD
I	1,4-Dichlorobenz-d4(IS)	---------- ISTD ----------											
T	Pyridine	1.6776	1.6942	1.4551	1.1705	1.1320	1.2763	1.0514	1.0521	0.9902	1.1792	1.2678	20.212
T	N-nitrosodimethylamine		2.2024	1.5336	1.1385	1.1523	1.0319	0.9646	1.0073	0.9661	1.0208	1.2241	33.240
S	2-Fluorophenol (surr)	1.0227	1.3043	1.4864	1.2149	1.3270	1.2656	1.1837	1.2009	1.2324	1.3109	1.2549	9.521
S	Phenol-d6 (surr)	2.3994	1.7390	1.8661	1.4247	1.6505	1.5761	1.5342	1.4365	1.6157	1.6372	1.6879	16.738
T	Phenol	1.9410	2.4983	1.6400	2.1319	1.9748	2.0646	2.0023	1.9385	2.0469	2.0943	2.0333	10.464
T	Aniline	2.5324	3.3691	2.2861	2.5059	2.2577	2.3372	2.2451	2.2336	2.1947	2.3408	2.4303	14.341
T	Bis(2-chloroethyl) ether	1.4112	1.8658	1.3242	1.4405	1.5887	1.4865	1.3375	1.3102	1.3498	1.4277	1.4542	11.539
T	2-Chlorophenol		2.4125	1.4333	1.6212	1.5841	1.4198	1.4073	1.4096	1.5050	1.5512	1.5938	19.910
T	1,3-Dichlorobenzene	1.1352	1.4170	1.9193	1.5556	1.5505	1.5861	1.5114	1.5820	1.5973	1.6408	1.5495	12.552
T	1,4-Dichlorobenzene	2.4568	2.1920	1.4206	1.6811	1.7519	1.8218	1.5540	1.5338	1.6087	1.6711	1.7692	18.082
T	Benzyl alcohol	1.4374	1.3147	0.9802	0.9947	0.9801	1.0103	0.8971	0.8867	0.9107	0.9850	1.0397	17.768
T	1,2-Dichlorobenzene	2.2105	1.3199	1.4510	1.3719	1.6364	1.5913	1.5039	1.4679	1.4886	1.5681	1.5609	15.862
T	2-Methylphenol (o-cresol)	2.2285	1.2737	1.1646	1.1217	1.1643	1.1898	1.1488	1.1809	1.1893	1.2869	1.2948	25.648
T	2,2'-oxybis(1-chloropropane)		0.6905	0.3262	0.4609	0.4408	0.4710	0.4796	0.4255	0.4576	0.4898	0.4713	20.245
T	3+4-Methylphenol	1.9830	2.0775	1.3994	1.5202	1.4567	1.5695	1.4950	1.4907	1.5774	1.6387	1.6208	14.001
T	N-Nitrosodipropylamine	4.4694	2.9535	1.7131	1.2314	1.3022	1.3445	1.2566	1.2569	1.3580	1.3890	1.8275	58.224
T	Hexachloroethane		1.0562	0.5466	0.7275	0.6845	0.7214	0.7099	0.7915	0.7476	0.7846	0.7522	17.911
S	Nitrobenzene-d5 (surr)		2.1491	2.8840	1.9533	1.7746	1.9407	1.6043	1.6148	1.6319	1.7466	1.9221	21.055
T	Nitrobenzene	2.7113	2.4041	1.8897	2.0510	2.0178	1.9906	1.9612	1.9276	1.9545	2.0115	2.0919	12.433
T	Isophorone	9.7067	5.6031	3.5863	3.7876	3.4461	3.3467	3.4258	3.2770	3.4036	3.4847	4.3068	46.836
T	2-Nitrophenol	0.2934	0.5644	0.4992	0.7107	0.6588	0.6991	0.6145	0.6710	0.6700	0.7845	0.6166	22.451
T	2,4-Dimethylphenol	1.6216	1.7644	1.7385	1.4096	1.5664	1.5540	1.5521	1.4665	1.5427	1.5965	1.5812	6.865
T	Benzoic Acid		0.0759	0.2213	0.4117	0.5578	0.6255	0.5938	0.6335	0.7350	0.9265	0.5312	48.880
T	Bis(2-chloroethoxy)methane	3.4324	2.5386	1.6907	2.0202	1.9042	1.9195	1.9456	1.7820	1.8852	1.9521	2.1071	24.533

T	2,4-Dichlorophenol	0.6114	0.7942	1.1168	1.0712	1.2495	1.1123	1.0540	1.0776	1.1128	1.1966	1.0396	18.462
T	1,2,4-Trichlorobenzene	1.1650	1.5393	0.9005	1.2759	1.2915	1.2340	1.2251	1.1700	1.2322	1.3046	1.2338	12.770
I	Naphthalene-d8 (IS)	---------- ISTD ----------											
T	Naphthalene	1.6247	1.1840	1.1767	0.9771	1.1098	1.1101	1.0924	1.1081	1.0551	1.0609	1.1499	15.403
T	4-Chloroanaline	0.6971	0.3185	0.4206	0.4264	0.4722	0.4435	0.4119	0.4117	0.4096	0.4125	0.4424	22.053
T	Hexachlorobutadiene	0.1479	0.2114	0.2085	0.1583	0.2308	0.2016	0.1929	0.2001	0.1892	0.1972	0.1938	12.629
T	4-Chloro-3-methylphenol	0.4057	0.3500	0.2899	0.3384	0.3712	0.3371	0.3125	0.3105	0.3411	0.3605	0.3417	9.715
T	2-Methylnaphthalene	1.0815	0.7518	0.6864	0.6916	0.7369	0.7134	0.7330	0.6990	0.7254	0.7041	0.7523	15.628
T	1-Methylnaphthalene	0.5503	0.8138	0.6745	0.6965	0.7085	0.6709	0.6572	0.6497	0.6807	0.6663	0.6768	9.531
T	Hexachlorocyclopentadiene		0.2241	0.1967	0.1528	0.1869	0.1502	0.1769	0.1621	0.1769	0.1929	0.1800	13.031
T	2,4,6-Trichlorophenol		0.1820	0.2589	0.2134	0.2180	0.1910	0.1770	0.2050	0.1948	0.2012	0.2046	11.933
T	2,4,5-Trichlorophenol		0.1539	0.2589	0.2246	0.2342	0.1916	0.2141	0.1965	0.2095	0.2112	0.2105	13.917
S	2-Fluorobiphenyl (surr)	0.2812	0.5698	0.5739	0.6986	0.6476	0.6920	0.6403	0.6299	0.6426	0.6462	0.6022	19.968
T	2-Chloronaphthalene	1.0499	0.6745	0.6382	0.6268	0.6926	0.6437	0.6024	0.5929	0.6229	0.6404	0.6784	19.734
T	2-Nitroanaline	0.3244	0.3041	0.3446	0.2578	0.2914	0.2524	0.2568	0.2606	0.2722	0.2884	0.2853	11.006
T	1,4-Dinitrobenzene		0.1117	0.0916	0.1144	0.1367	0.1524	0.1356	0.1492	0.1510	0.1677	0.1345	17.983
T	Dimethyl phthalate	0.9322	0.9095	0.8129	0.7357	0.7835	0.7924	0.7368	0.7254	0.7381	0.7653	0.7932	9.231
T	1,3-Dinitrobenzene		0.0827	0.1275	0.0815	0.1307	0.0981	0.1007	0.1053	0.1030	0.1157	0.1050	16.491
T	2,6-Dinitrotoluene		0.1462	0.1762	0.1726	0.1768	0.1532	0.1638	0.1431	0.1719	0.1738	0.1642	8.102
T	Acenaphthylene	1.4830	1.0346	1.0667	0.9468	1.0389	0.9984	0.9715	0.9687	0.9957	1.0139	1.0518	14.812
T	1,2-Dinitrobenzene			0.0346	0.0621	0.0648	0.0758	0.0710	0.0655	0.0757	0.0797	0.0662	21.429
T	3-Nitroaniline	0.2522	0.2066	0.1616	0.1405	0.1661	0.1538	0.1631	0.1638	0.1631	0.1597	0.1731	18.737
T	Acenaphthene	0.7837	0.9617	0.8462	0.7285	0.6721	0.7029	0.7043	0.7499	0.6779	0.6846	0.7512	12.192
I	Acenaphthene-d10 (IS)	---------- ISTD ----------											
T	2,4-Dinitrophenol			0.0160	0.0295	0.0776	0.0724	0.0773	0.0870	0.1019	0.1306	0.0740	49.806
T	4-Nitrophenol			0.1314	0.1084	0.1220	0.1937	0.1980	0.1981	0.2303	0.2663	0.1810	30.723
T	Dibenzofuran	2.2865	2.0475	1.5352	1.7854	1.8655	1.6720	1.7218	1.6561	1.6092	1.7667	1.7946	12.501
T	2,4-Dinitrotoluene	0.2798	0.3161	0.3639	0.3681	0.3680	0.3490	0.3826	0.3851	0.4073	0.4607	0.3681	13.278
T	2,3,4,6-Tetrachlorophenol		0.3217	0.3518	0.3139	0.3598	0.2854	0.3236	0.3070	0.3158	0.3566	0.3262	7.685
T	2,3,5,6-Tetrachlorophenol		0.3575	0.3442	0.2515	0.3598	0.2872	0.3328	0.3175	0.3241	0.3752	0.3278	11.837
T	Diethylphthalate	2.2830	1.7913	1.5593	1.6601	1.5926	1.5339	1.5108	1.5267	1.4986	1.6542	1.6610	14.219
T	4-Chlorophenyl phenyl ether	0.5933	0.9224	0.8590	0.7254	0.6498	0.6409	0.6611	0.5868	0.6242	0.6856	0.6949	16.111
T	Fluorene	2.2467	1.4717	1.2398	1.4773	1.4266	1.3860	1.3809	1.3425	1.2824	1.4145	1.4668	19.384
T	4-Nitroaniline		0.2777	0.3176	0.5104	0.4260	0.4358	0.4392	0.4264	0.3776	0.2727	0.3871	21.094
T	4,6-Dinitro-2-methylphenol			0.0778	0.0855	0.1178	0.1162	0.1207	0.1329	0.1373	0.1968	0.1231	29.583
T	Diphenylamine	1.4803	1.4173	1.2962	1.0147	1.1618	1.1438	1.1468	1.0864	1.1130	1.1916	1.2052	12.280
T	Azobenzene	3.0757	2.7930	2.3399	2.0442	2.1187	2.0990	2.1561	2.0276	2.0862	2.2549	2.2995	15.394
S	Tribromophenol (Surr)		0.1560	0.1080	0.1849	0.2243	0.2178	0.2242	0.2366	0.2234	0.2723	0.2053	23.731
T	4-Bromophenyl phenyl ether	0.4953	0.2561	0.5038	0.3946	0.4579	0.4167	0.4125	0.4128	0.4079	0.4418	0.4199	16.341
T	Hexachlorobenzene	0.3180	0.6884	0.5559	0.5837	0.5684	0.5661	0.5205	0.5082	0.5059	0.5408	0.5356	17.308
T	Pentachlorophenol		0.1628	0.1240	0.2346	0.2496	0.2737	0.2478	0.2361	0.2612	0.3026	0.2325	23.852

I	Phenanthrene-d10 (IS)	---------- ISTD ----------											
T	Phenanthrene	1.5782	1.2169	1.1819	1.1638	1.1614	1.1776	1.0733	1.0318	1.0357	1.1025	1.1723	13.340
T	Anthracene	1.5782	1.2227	1.0881	1.1086	1.1303	1.1389	1.0599	1.0827	1.0760	1.1269	1.1612	13.220
T	Carbazole	1.4991	1.3803	0.7995	0.9658	1.0448	1.0129	0.8752	0.9024	0.9071	0.8826	1.0270	22.428
T	Di-n-butyl phthalate	1.8004	1.9657	1.5189	1.4996	1.5812	1.4476	1.4144	1.4623	1.4679	1.5822	1.5740	11.177
T	Fluoranthene	1.7091	1.2237	1.0876	1.0363	1.1746	1.0777	1.1263	1.1142	1.1072	1.1741	1.1831	16.284
T	Pyrene	1.1217	1.4471	0.9933	1.1366	1.2070	1.1310	1.1151	1.1865	1.1150	1.1730	1.1626	9.937
S	p-Terphenyl	1.1732	0.7762	0.8714	0.8352	0.8636	0.8599	0.8572	0.8142	0.8052	0.8955	0.8752	12.630
T	Benzyl Butyl phthalate	0.7306	0.6875	0.5215	0.5919	0.5818	0.6156	0.6040	0.5917	0.5986	0.6644	0.6188	9.671
T	bis(2-Ethylhexyl)adipate	0.7304	0.4565	0.6155	0.5730	0.5201	0.5579	0.5337	0.5262	0.5424	0.6029	0.5659	12.940
T	Benzo (a) anthracene	1.4403	1.3604	1.1064	1.0084	0.9248	0.9798	0.9599	0.9254	0.9202	0.9615	1.0587	17.860
I	Chrysene-d12 (IS)	---------- ISTD ----------											
T	Bis(2-ethylhexyl) phthalate	2.6584	1.8496	1.1418	1.2510	1.2155	1.1304	1.1062	1.0750	1.0933	1.1821	1.3703	36.939
T	Chrysene	1.7589	1.3629	1.3101	1.3118	1.2710	1.1939	1.2332	1.1994	1.1629	1.1949	1.2999	13.357
T	Di-n-octyl phthalate	2.3397	1.5516	1.6102	1.5359	1.5607	1.6024	1.5872	1.7098	1.7241	1.9126	1.7134	14.454
T	benzo (b) fluoranthene	2.9506	1.5918	1.2912	1.0650	1.0420	1.1655	1.1219	1.1090	1.1110	1.2369	1.3685	42.263
T	benzo (k) fluoranthene	2.8516	2.0883	1.5894	1.4373	1.4344	1.3184	1.5257	1.2971	1.2910	1.2875	1.6121	30.857
T	benzo (a) pyrene	2.0944	1.2292	1.2195	1.2673	1.3247	1.0435	1.0704	1.1131	1.1000	1.1564	1.2619	24.264
I	Perylene-d12 (IS)	---------- ISTD ----------											
T	Indeno(1,2,3-cd)pyrene	1.1733	0.8638	0.7958	1.0224	1.1125	1.1520	1.1894	1.1610	1.2398	1.3689	1.1079	15.504
T	Dibenz (a,h) anthracene		0.1646	0.5199	0.7375	0.8651	0.7467	0.9025	0.9009	0.9300	1.1139	0.7646	36.353
T	Benzo (g,h,i) perylene	0.9777	0.8670	0.9366	0.9507	1.0755	1.0233	1.0765	1.0565	1.0659	1.1716	1.0201	8.624

(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Compounds with Curve fitting not using Avg Response Factor:

	Compound	Curve Fit	Curve Fit Formula	Curve Fit R2
T	Pyridine	Quadratic	y = 0.058799 * x ^ 2 + 1.017250 * x + 0.005699	0.995944
T	N-nitrosodimethylamine	Quadratic	y = 0.026889 * x ^ 2 + 0.946165 * x + 0.012483	0.999557
S	2-Fluorophenol (surr)	Linear	y = 1.294438 * x	0.998963
S	Phenol-d6 (surr)	Linear	y = 1.625484 * x	0.999215
T	Phenol	Quadratic	y = 0.043296 * x ^ 2 + 1.986692 * x	0.999919
T	Aniline	Quadratic	y = 0.053129 * x ^ 2 + 2.197483 * x + 0.005313	0.999323
T	Bis(2-chloroethyl) ether	Quadratic	y = 0.029628 * x ^ 2 + 1.346751 * x + 0.002390	0.998503
T	2-Chlorophenol	Quadratic	y = 0.061156 * x ^ 2 + 1.398882 * x + 0.007683	0.999296
T	1,3-Dichlorobenzene	Quadratic	y = 0.033730 * x ^ 2 + 1.556764 * x	0.999957
T	1,4-Dichlorobenzene	Linear	y = 1.657741 * x	0.999284
T	Benzyl alcohol	Quadratic	y = 0.036148 * x ^ 2 + 0.889917 * x + 0.003394	0.999058
T	1,2-Dichlorobenzene	Linear	y = 1.553565 * x	0.999394
T	2-Methylphenol (o-cresol)	Quadratic	y = 0.063345 * x ^ 2 + 1.126990 * x + 0.003522	0.999658
T	2,2'-oxybis(1-chloropropane)	Quadratic	y = 0.019761 * x ^ 2 + 0.439407 * x + 0.001011	0.998391
T	3+4-Methylphenol	Quadratic	y = 0.061412 * x ^ 2 + 1.486934 * x + 0.002675	0.999593
T	N-Nitrosodipropylamine	Quadratic	y = 0.067126 * x ^ 2 + 1.222346 * x + 0.014686	0.998604
T	Hexachloroethane	Quadratic	y = 0.023286 * x ^ 2 + 0.726864 * x + 6.112337E-004	0.998622
S	Nitrobenzene-d5 (surr)	Quadratic	y = 0.093921 * x ^ 2 + 1.615993 * x + 0.006655	0.997171
T	Nitrobenzene	Quadratic	y = 0.033698 * x ^ 2 + 1.926883 * x	0.999976
T	Isophorone	Quadratic	y = 0.096170 * x ^ 2 + 3.239425 * x + 0.026177	0.999363
T	2-Nitrophenol	Quadratic	y = 0.060254 * x ^ 2 + 0.631348 * x - 0.001122	0.998931
T	2,4-Dimethylphenol	Quadratic	y = 0.038022 * x ^ 2 + 1.500172 * x + 0.001609	0.999629
T	Benzoic Acid	Quadratic	y = 0.068358 * x ^ 2 + 0.588839 * x - 0.012368	0.999596
T	Bis(2-chloroethoxy)methane	Quadratic	y = 0.047377 * x ^ 2 + 1.830138 * x + 0.006515	0.999297
T	2,4-Dichlorophenol	Quadratic	y = 0.047004 * x ^ 2 + 1.077116 * x - 0.001541	0.999184
T	1,2,4-Trichlorobenzene	Quadratic	y = 0.049128 * x ^ 2 + 1.181671 * x	0.999924
T	Naphthalene	Quadratic	y = -0.007920 * x ^ 2 + 1.079974 * x	0.999886
T	4-Chloroanaline	Quadratic	y = -0.002614 * x ^ 2 + 0.417729 * x + 6.651353E-004	0.998910
T	Hexachlorobutadiene	Quadratic	y = 2.204945E-004 * x ^ 2 + 0.195830 * x - 5.487966E-005	0.998422
T	4-Chloro-3-methylphenol	Quadratic	y = 0.017127 * x ^ 2 + 0.317746 * x + 4.027627E-004	0.998978
T	2-Methylnaphthalene	Quadratic	y = -0.009171 * x ^ 2 + 0.727347 * x	0.999917
T	1-Methylnaphthalene	Quadratic	y = -0.002688 * x ^ 2 + 0.673418 * x	0.999886
T	Hexachlorocyclopentadiene	Quadratic	y = 0.013046 * x ^ 2 + 0.160386 * x + 5.968139E-004	0.998740
T	2,4,6-Trichlorophenol	Quadratic	y = 0.003701 * x ^ 2 + 0.191582 * x + 5.219279E-004	0.998285
T	2,4,5-Trichlorophenol	Quadratic	y = 0.002571 * x ^ 2 + 0.204705 * x + 2.098610E-004	0.998411
S	2-Fluorobiphenyl (surr)	Quadratic	y = -0.006195 * x ^ 2 + 0.652985 * x - 6.318496E-004	0.999424
T	2-Chloronaphthalene	Quadratic	y = 0.013963 * x ^ 2 + 0.604467 * x + 0.001724	0.999325
T	2-Nitroanaline	Quadratic	y = 0.013112 * x ^ 2 + 0.255589 * x + 5.990773E-004	0.999395
T	1,4-Dinitrobenzene	Quadratic	y = 0.010525 * x ^ 2 + 0.141574 * x - 6.022889E-004	0.999194

T	Dimethyl phthalate	Quadratic	y = 0.011791 * x ^ 2 + 0.733635 * x + 0.001381	0.999587
T	1,3-Dinitrobenzene	Quadratic	y = 0.006294 * x ^ 2 + 0.099553 * x + 9.980415E-005	0.997367
T	2,6-Dinitrotoluene	Quadratic	y = 0.007100 * x ^ 2 + 0.156610 * x + 1.783658E-004	0.997764
T	Acenaphthylene	Quadratic	y = 0.017483 * x ^ 2 + 0.969929 * x + 0.001884	0.999799
T	1,2-Dinitrobenzene	Quadratic	y = 0.003552 * x ^ 2 + 0.071195 * x - 6.354522E-004	0.998658
T	3-Nitroaniline	Quadratic	y = -2.908526E-004 * x ^ 2 + 0.160746 * x + 3.193466E-004	0.999378
T	Acenaphthene	Linear	y = 0.686395 * x	0.999530
T	2,4-Dinitrophenol	Quadratic	y = 0.010576 * x ^ 2 + 0.078756 * x - 0.003091	0.998797
T	4-Nitrophenol	Quadratic	y = 0.030099 * x ^ 2 + 0.193417 * x - 0.002701	0.998053
T	Dibenzofuran	Linear	y = 1.741278 * x	0.998563
T	2,4-Dinitrotoluene	Quadratic	y = 0.038582 * x ^ 2 + 0.364999 * x - 3.972339E-004	0.999783
T	2,3,4,6-Tetrachlorophenol	Quadratic	y = 0.023134 * x ^ 2 + 0.297628 * x + 7.673635E-004	0.998913
T	2,3,5,6-Tetrachlorophenol	Quadratic	y = 0.029541 * x ^ 2 + 0.300464 * x + 5.461504E-004	0.998576
T	Diethylphthalate	Quadratic	y = 0.072520 * x ^ 2 + 1.465590 * x + 0.004116	0.999655
T	4-Chlorophenyl phenyl ether	Linear	y = 0.673624 * x	0.997863
T	Fluorene	Quadratic	y = 0.039867 * x ^ 2 + 1.305077 * x + 0.003655	0.998909
T	4-Nitroaniline	Quadratic	y = -0.076870 * x ^ 2 + 0.464536 * x - 0.001726	0.998919
T	4,6-Dinitro-2-methylphenol	Quadratic	y = 0.034926 * x ^ 2 + 0.109116 * x - 6.148887E-004	0.999291
T	Diphenylamine	Quadratic	y = 0.044612 * x ^ 2 + 1.079468 * x	0.999891
T	Azobenzene	Quadratic	y = 0.093121 * x ^ 2 + 2.015532 * x + 0.006132	0.999709
S	Tribromophenol (Surr)	Quadratic	y = 0.022923 * x ^ 2 + 0.214008 * x - 9.933265E-004	0.998674
T	4-Bromophenyl phenyl ether	Quadratic	y = 0.017975 * x ^ 2 + 0.396588 * x	0.999878
T	Hexachlorobenzene	Quadratic	y = 0.016110 * x ^ 2 + 0.499983 * x	0.999715
T	Pentachlorophenol	Quadratic	y = 0.024446 * x ^ 2 + 0.241098 * x - 0.001026	0.998611
T	Phenanthrene	Quadratic	y = 0.017535 * x ^ 2 + 1.051689 * x + 0.002876	0.998876
T	Anthracene	Quadratic	y = 0.026984 * x ^ 2 + 1.058892 * x	0.999921
T	Carbazole	Quadratic	y = -0.016934 * x ^ 2 + 0.922704 * x + 0.002882	0.998521
T	Di-n-butyl phthalate	Quadratic	y = 0.066731 * x ^ 2 + 1.411769 * x + 0.003336	0.999690
T	Fluoranthene	Quadratic	y = 0.036183 * x ^ 2 + 1.081563 * x + 0.002156	0.999680
T	Pyrene	Quadratic	y = 0.023568 * x ^ 2 + 1.113219 * x	0.999791
S	p-Terphenyl	Quadratic	y = 0.069827 * x ^ 2 + 0.803165 * x + 7.076872E-004	0.999191
T	Benzyl Butyl phthalate	Quadratic	y = 0.034538 * x ^ 2 + 0.576174 * x + 6.656123E-004	0.999664
T	bis(2-Ethylhexyl)adipate	Quadratic	y = 0.034105 * x ^ 2 + 0.515987 * x + 8.580964E-004	0.999531
T	Bis(2-ethylhexyl) phthalate	Quadratic	y = 0.049105 * x ^ 2 + 1.053680 * x + 0.007512	0.999431
T	Benzo (a) anthracene	Quadratic	y = 0.014397 * x ^ 2 + 0.921588 * x + 0.003338	0.999651
T	Chrysene	Quadratic	y = -6.669929E-005 * x ^ 2 + 1.190104 * x + 0.002816	0.999682
T	Di-n-octyl phthalate	Quadratic	y = 0.125403 * x ^ 2 + 1.599186 * x	0.999941
T	benzo (b) fluoranthene	Quadratic	y = 0.073744 * x ^ 2 + 1.048207 * x + 0.007302	0.999183
T	benzo (k) fluoranthene	Quadratic	y = -0.026074 * x ^ 2 + 1.345526 * x + 0.007155	0.998119
T	benzo (a) pyrene	Quadratic	y = 0.031754 * x ^ 2 + 1.073479 * x + 0.004438	0.998795
T	Indeno(1,2,3-cd)pyrene	Quadratic	y = 0.094896 * x ^ 2 + 1.134224 * x - 0.001845	0.999607
T	Dibenz (a,h) anthracene	Quadratic	y = 0.110977 * x ^ 2 + 0.837859 * x - 0.006276	0.999183

T	Benzo (g,h,i) perylene	Quadratic	y = 0.057960 * x ^ 2 + 1.025213 * x - 8.447227E-004	0.999766

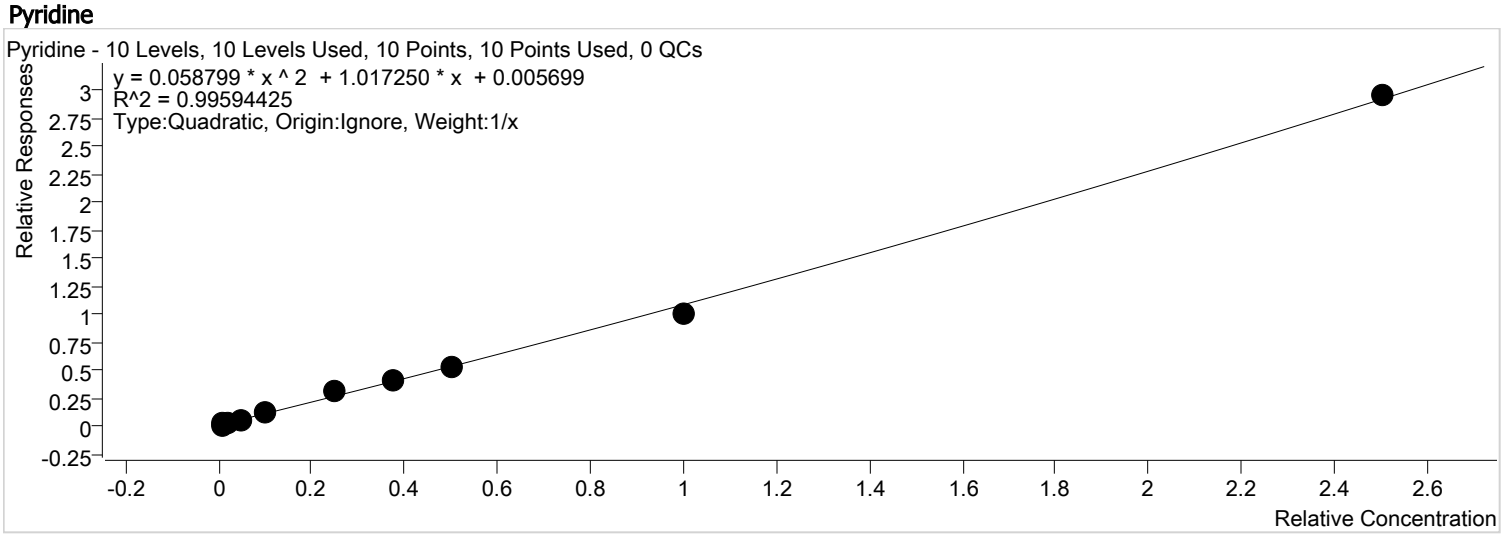
(RedFont and #) = Outlier Flag; (I) = Internal Standard; (T) = Target; (S) = Surrogate; (M) = Matrix Spike

Calibration Report

Agilent Technologies

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:42 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

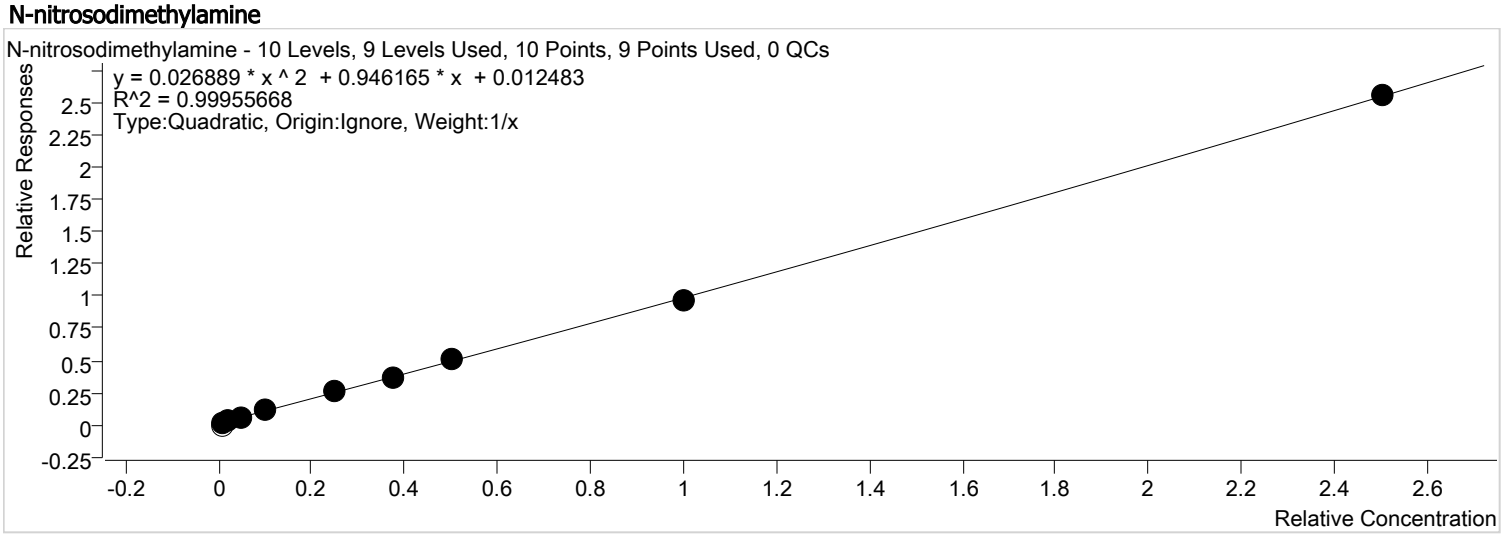
Pyridine



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	181	10.0000	1.6776
D:\GC-21\Data\060320\060319.D	Calibration	2	x	360	20.0000	1.6942
D:\GC-21\Data\060320\060320.D	Calibration	3	x	665	40.0000	1.4551
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1348	100.0000	1.1705
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2633	200.0000	1.1320
D:\GC-21\Data\060320\060323.D	Calibration	6	x	7274	500.0000	1.2763
D:\GC-21\Data\060320\060324.D	Calibration	7	x	9661	750.0000	1.0514
D:\GC-21\Data\060320\060325.D	Calibration	8	x	12605	1000.0000	1.0521
D:\GC-21\Data\060320\060326.D	Calibration	9	x	23264	2000.0000	0.9902
D:\GC-21\Data\060320\060327.D	Calibration	10	x	66885	5000.0000	1.1792

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:43 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

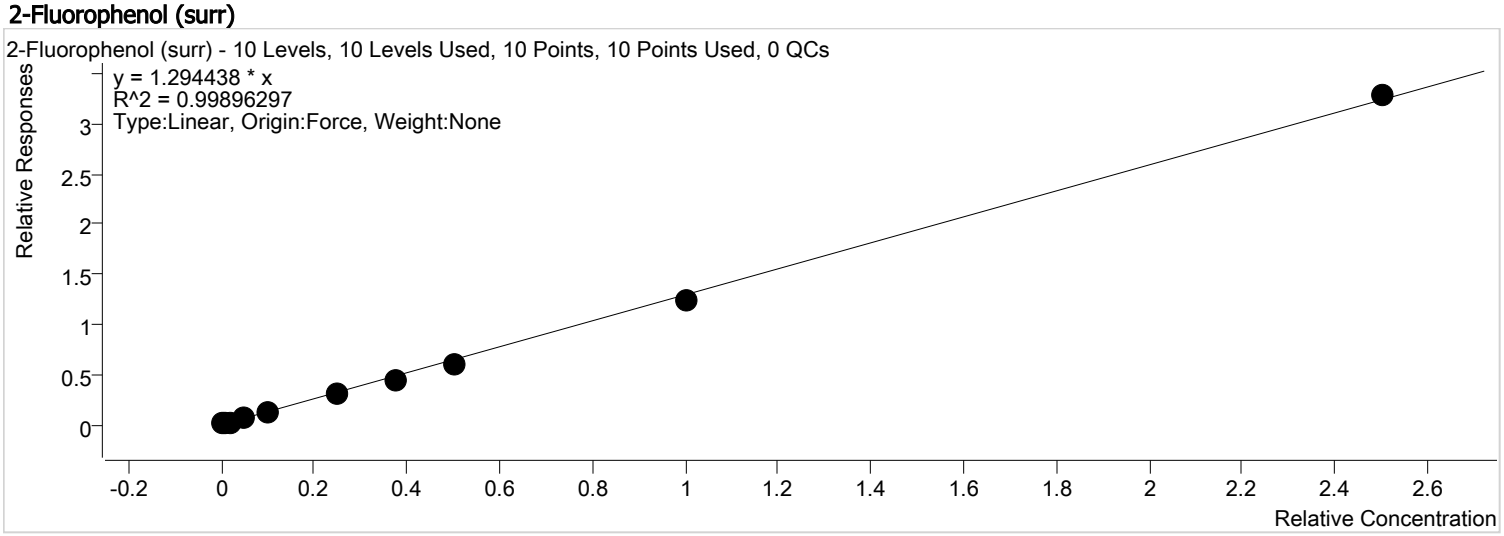
N-nitrosodimethylamine



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1		0	10.0000	0.0000
D:\GC-21\Data\060320\060319.D	Calibration	2	x	468	20.0000	2.2024
D:\GC-21\Data\060320\060320.D	Calibration	3	x	701	40.0000	1.5336
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1312	100.0000	1.1385
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2680	200.0000	1.1523
D:\GC-21\Data\060320\060323.D	Calibration	6	x	5881	500.0000	1.0319
D:\GC-21\Data\060320\060324.D	Calibration	7	x	8864	750.0000	0.9646
D:\GC-21\Data\060320\060325.D	Calibration	8	x	12068	1000.0000	1.0073
D:\GC-21\Data\060320\060326.D	Calibration	9	x	22696	2000.0000	0.9661
D:\GC-21\Data\060320\060327.D	Calibration	10	x	57900	5000.0000	1.0208

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:43 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

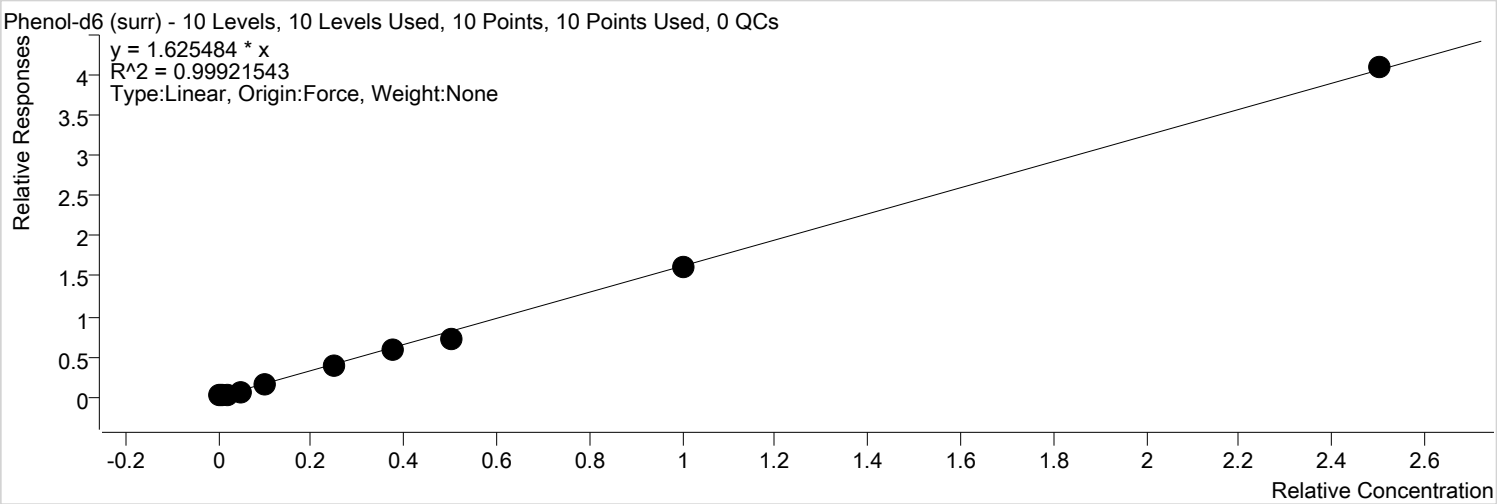
2-Fluorophenol (surr)



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	110	10.0000	1.0227
D:\GC-21\Data\060320\060319.D	Calibration	2	x	277	20.0000	1.3043
D:\GC-21\Data\060320\060320.D	Calibration	3	x	680	40.0000	1.4864
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1400	100.0000	1.2149
D:\GC-21\Data\060320\060322.D	Calibration	5	x	3086	200.0000	1.3270
D:\GC-21\Data\060320\060323.D	Calibration	6	x	7213	500.0000	1.2656
D:\GC-21\Data\060320\060324.D	Calibration	7	x	10876	750.0000	1.1837
D:\GC-21\Data\060320\060325.D	Calibration	8	x	14387	1000.0000	1.2009
D:\GC-21\Data\060320\060326.D	Calibration	9	x	28953	2000.0000	1.2324
D:\GC-21\Data\060320\060327.D	Calibration	10	x	74355	5000.0000	1.3109

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

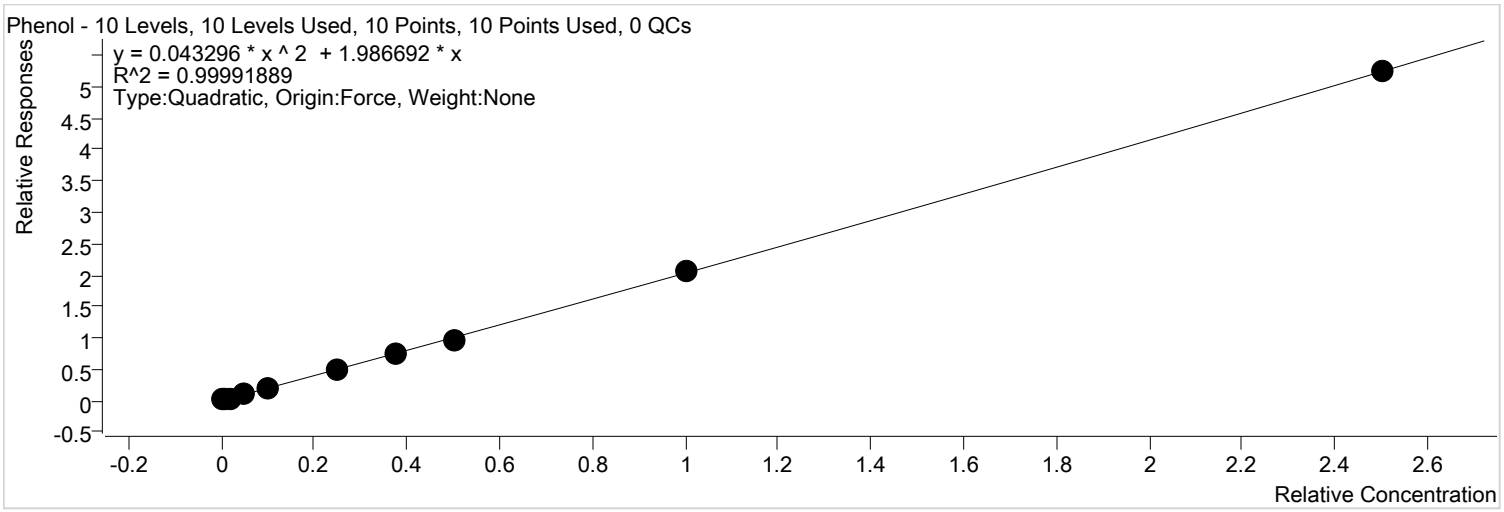
Phenol-d6 (surr)



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	259	10.0000	2.3994
D:\GC-21\Data\060320\060319.D	Calibration	2	x	370	20.0000	1.7390
D:\GC-21\Data\060320\060320.D	Calibration	3	x	853	40.0000	1.8661
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1641	100.0000	1.4247
D:\GC-21\Data\060320\060322.D	Calibration	5	x	3838	200.0000	1.6505
D:\GC-21\Data\060320\060323.D	Calibration	6	x	8983	500.0000	1.5761
D:\GC-21\Data\060320\060324.D	Calibration	7	x	14097	750.0000	1.5342
D:\GC-21\Data\060320\060325.D	Calibration	8	x	17210	1000.0000	1.4365
D:\GC-21\Data\060320\060326.D	Calibration	9	x	37957	2000.0000	1.6157
D:\GC-21\Data\060320\060327.D	Calibration	10	x	92865	5000.0000	1.6372

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

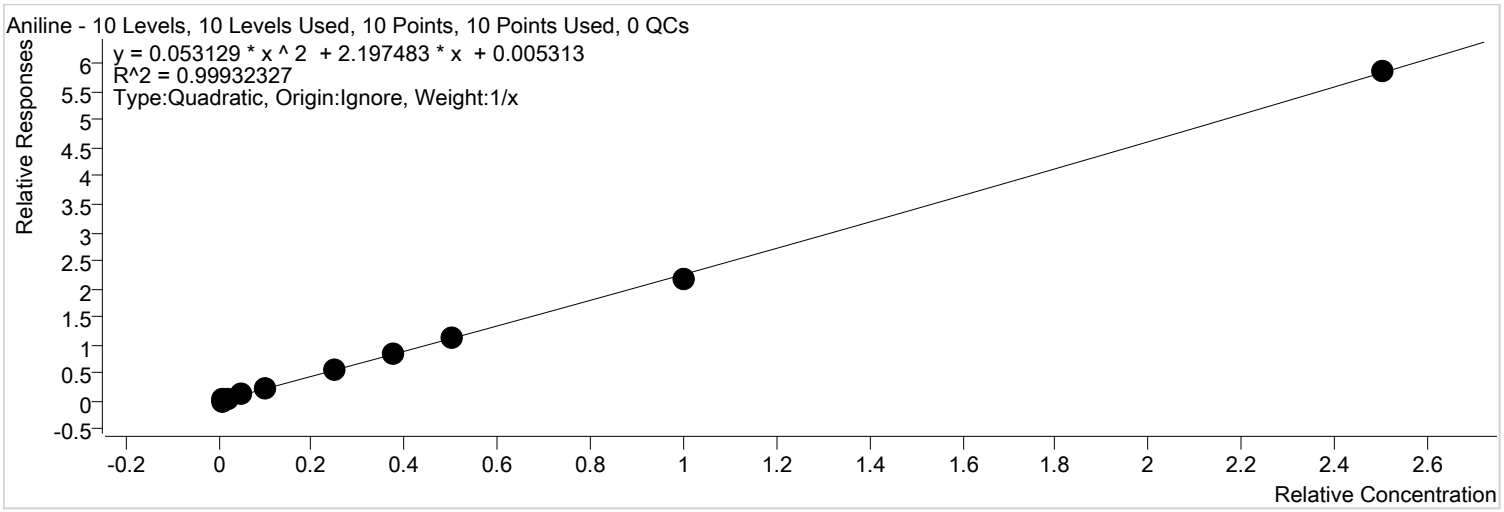
Phenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	209	10.0000	1.9410
D:\GC-21\Data\060320\060319.D	Calibration	2	x	531	20.0000	2.4983
D:\GC-21\Data\060320\060320.D	Calibration	3	x	750	40.0000	1.6400
D:\GC-21\Data\060320\060321.D	Calibration	4	x	2456	100.0000	2.1319
D:\GC-21\Data\060320\060322.D	Calibration	5	x	4592	200.0000	1.9748
D:\GC-21\Data\060320\060323.D	Calibration	6	x	11768	500.0000	2.0646
D:\GC-21\Data\060320\060324.D	Calibration	7	x	18398	750.0000	2.0023
D:\GC-21\Data\060320\060325.D	Calibration	8	x	23225	1000.0000	1.9385
D:\GC-21\Data\060320\060326.D	Calibration	9	x	48089	2000.0000	2.0469
D:\GC-21\Data\060320\060327.D	Calibration	10	x	118796	5000.0000	2.0943

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

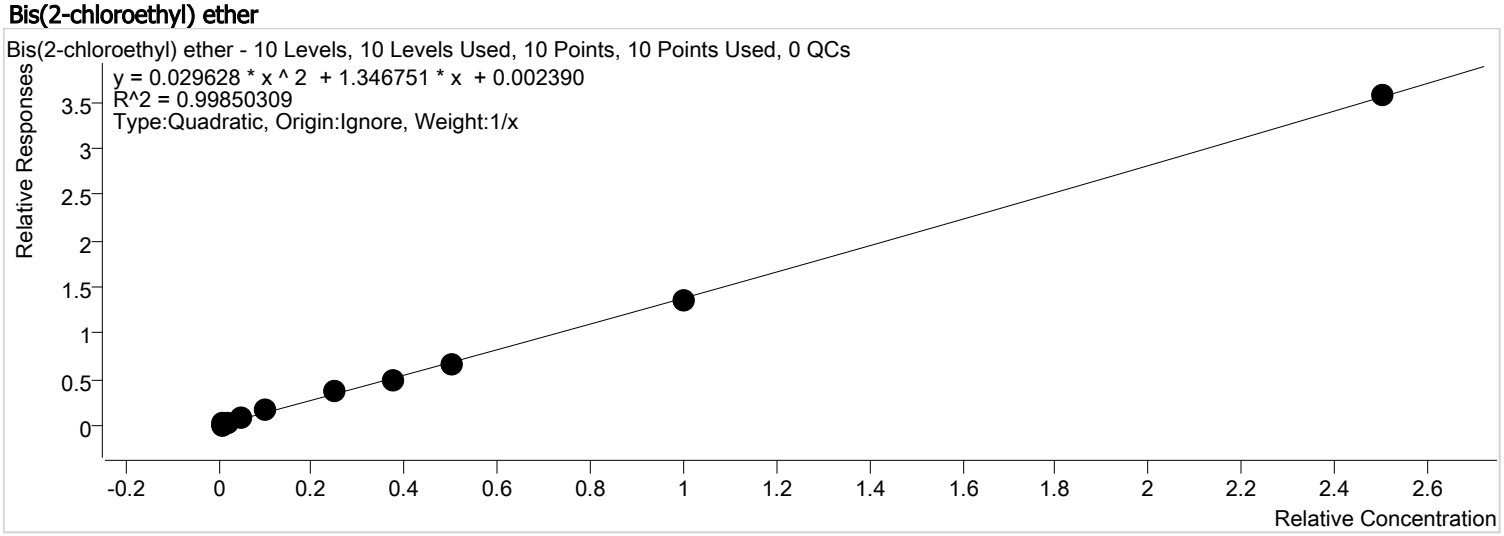
Aniline



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	273	10.0000	2.5324
D:\GC-21\Data\060320\060319.D	Calibration	2	x	716	20.0000	3.3691
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1045	40.0000	2.2861
D:\GC-21\Data\060320\060321.D	Calibration	4	x	2887	100.0000	2.5059
D:\GC-21\Data\060320\060322.D	Calibration	5	x	5250	200.0000	2.2577
D:\GC-21\Data\060320\060323.D	Calibration	6	x	13322	500.0000	2.3372
D:\GC-21\Data\060320\060324.D	Calibration	7	x	20629	750.0000	2.2451
D:\GC-21\Data\060320\060325.D	Calibration	8	x	26760	1000.0000	2.2336
D:\GC-21\Data\060320\060326.D	Calibration	9	x	51562	2000.0000	2.1947
D:\GC-21\Data\060320\060327.D	Calibration	10	x	132778	5000.0000	2.3408

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

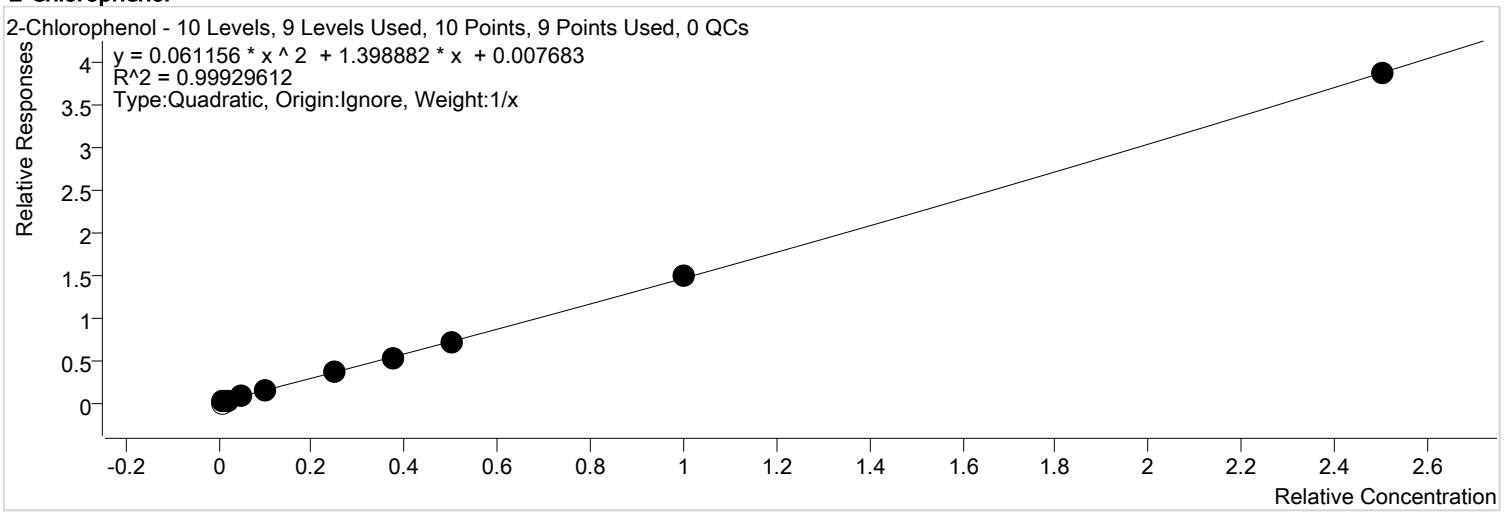
Bis(2-chloroethyl) ether



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	152	10.0000	1.4112
D:\GC-21\Data\060320\060319.D	Calibration	2	x	397	20.0000	1.8658
D:\GC-21\Data\060320\060320.D	Calibration	3	x	605	40.0000	1.3242
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1660	100.0000	1.4405
D:\GC-21\Data\060320\060322.D	Calibration	5	x	3695	200.0000	1.5887
D:\GC-21\Data\060320\060323.D	Calibration	6	x	8473	500.0000	1.4865
D:\GC-21\Data\060320\060324.D	Calibration	7	x	12290	750.0000	1.3375
D:\GC-21\Data\060320\060325.D	Calibration	8	x	15697	1000.0000	1.3102
D:\GC-21\Data\060320\060326.D	Calibration	9	x	31711	2000.0000	1.3498
D:\GC-21\Data\060320\060327.D	Calibration	10	x	80982	5000.0000	1.4277

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

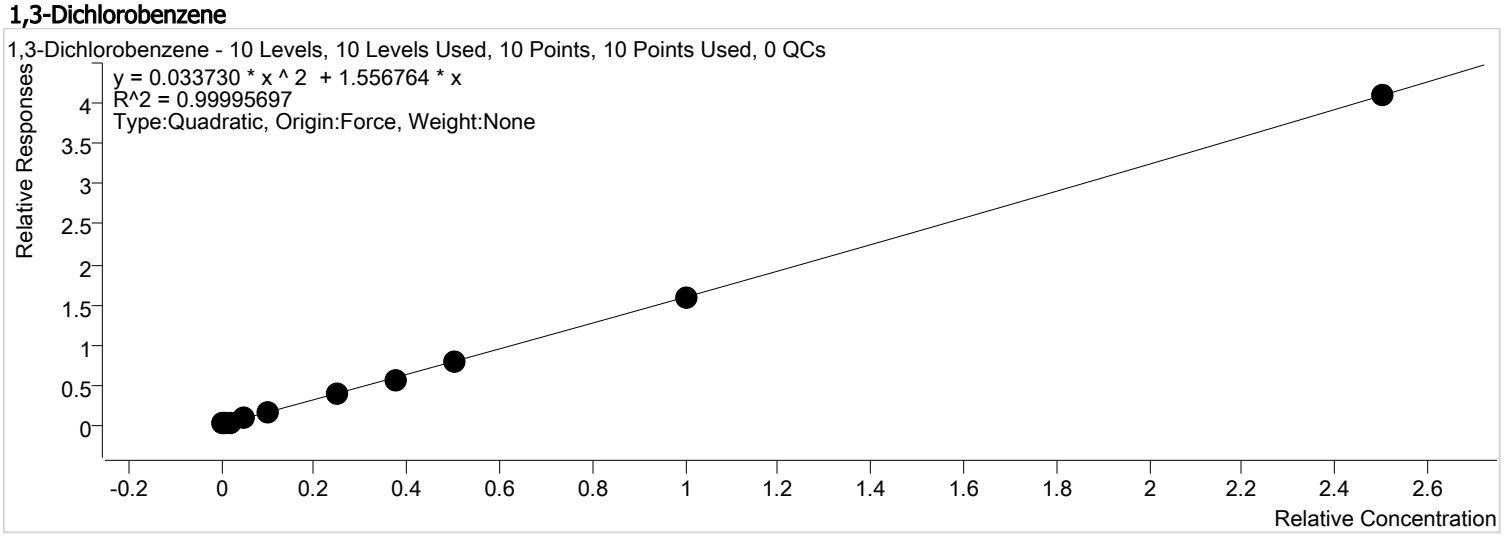
2-Chlorophenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1		0	10.0000	0.0000
D:\GC-21\Data\060320\060319.D	Calibration	2	x	513	20.0000	2.4125
D:\GC-21\Data\060320\060320.D	Calibration	3	x	655	40.0000	1.4333
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1868	100.0000	1.6212
D:\GC-21\Data\060320\060322.D	Calibration	5	x	3684	200.0000	1.5841
D:\GC-21\Data\060320\060323.D	Calibration	6	x	8093	500.0000	1.4198
D:\GC-21\Data\060320\060324.D	Calibration	7	x	12931	750.0000	1.4073
D:\GC-21\Data\060320\060325.D	Calibration	8	x	16889	1000.0000	1.4096
D:\GC-21\Data\060320\060326.D	Calibration	9	x	35357	2000.0000	1.5050
D:\GC-21\Data\060320\060327.D	Calibration	10	x	87986	5000.0000	1.5512

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

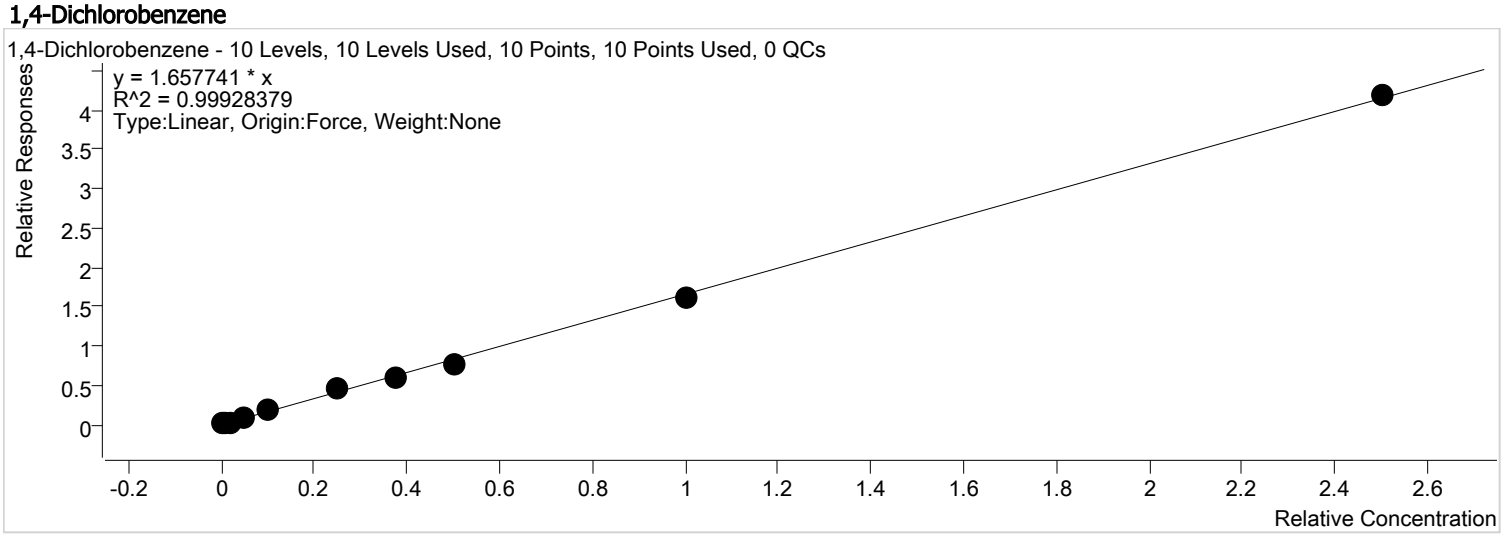
1,3-Dichlorobenzene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	122	10.0000	1.1352
D:\GC-21\Data\060320\060319.D	Calibration	2	x	301	20.0000	1.4170
D:\GC-21\Data\060320\060320.D	Calibration	3	x	877	40.0000	1.9193
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1792	100.0000	1.5556
D:\GC-21\Data\060320\060322.D	Calibration	5	x	3606	200.0000	1.5505
D:\GC-21\Data\060320\060323.D	Calibration	6	x	9040	500.0000	1.5861
D:\GC-21\Data\060320\060324.D	Calibration	7	x	13887	750.0000	1.5114
D:\GC-21\Data\060320\060325.D	Calibration	8	x	18954	1000.0000	1.5820
D:\GC-21\Data\060320\060326.D	Calibration	9	x	37525	2000.0000	1.5973
D:\GC-21\Data\060320\060327.D	Calibration	10	x	93068	5000.0000	1.6408

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

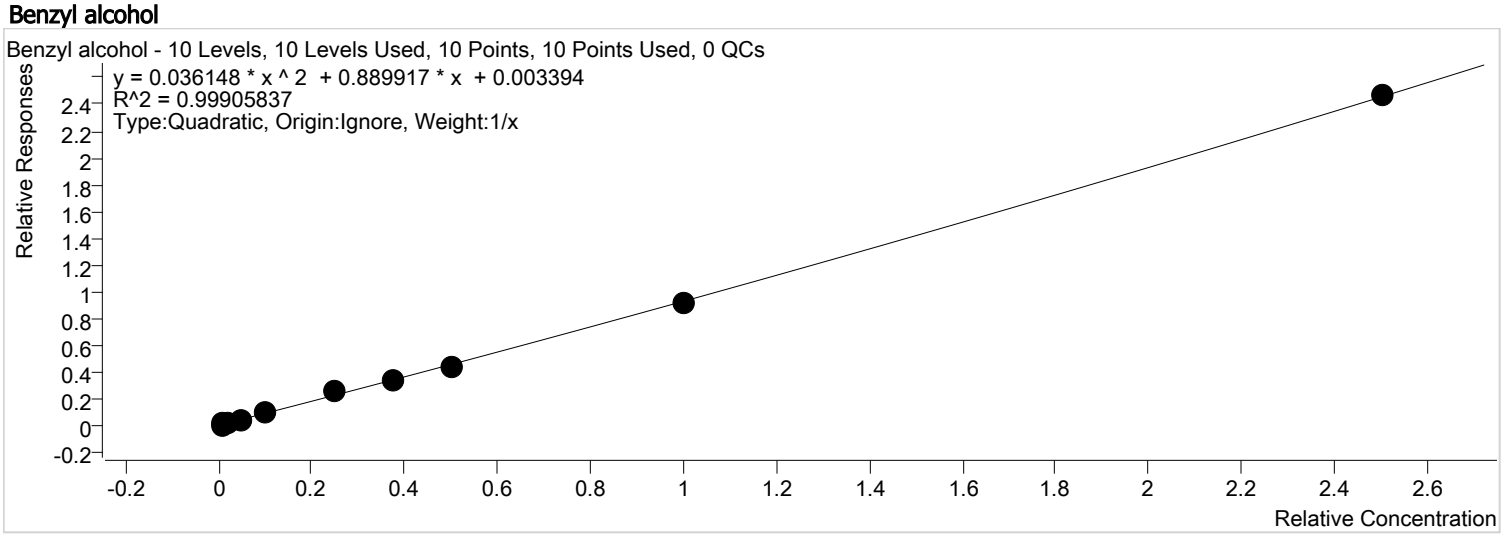
1,4-Dichlorobenzene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	265	10.0000	2.4568
D:\GC-21\Data\060320\060319.D	Calibration	2	x	466	20.0000	2.1920
D:\GC-21\Data\060320\060320.D	Calibration	3	x	649	40.0000	1.4206
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1937	100.0000	1.6811
D:\GC-21\Data\060320\060322.D	Calibration	5	x	4074	200.0000	1.7519
D:\GC-21\Data\060320\060323.D	Calibration	6	x	10384	500.0000	1.8218
D:\GC-21\Data\060320\060324.D	Calibration	7	x	14279	750.0000	1.5540
D:\GC-21\Data\060320\060325.D	Calibration	8	x	18376	1000.0000	1.5338
D:\GC-21\Data\060320\060326.D	Calibration	9	x	37794	2000.0000	1.6087
D:\GC-21\Data\060320\060327.D	Calibration	10	x	94788	5000.0000	1.6711

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

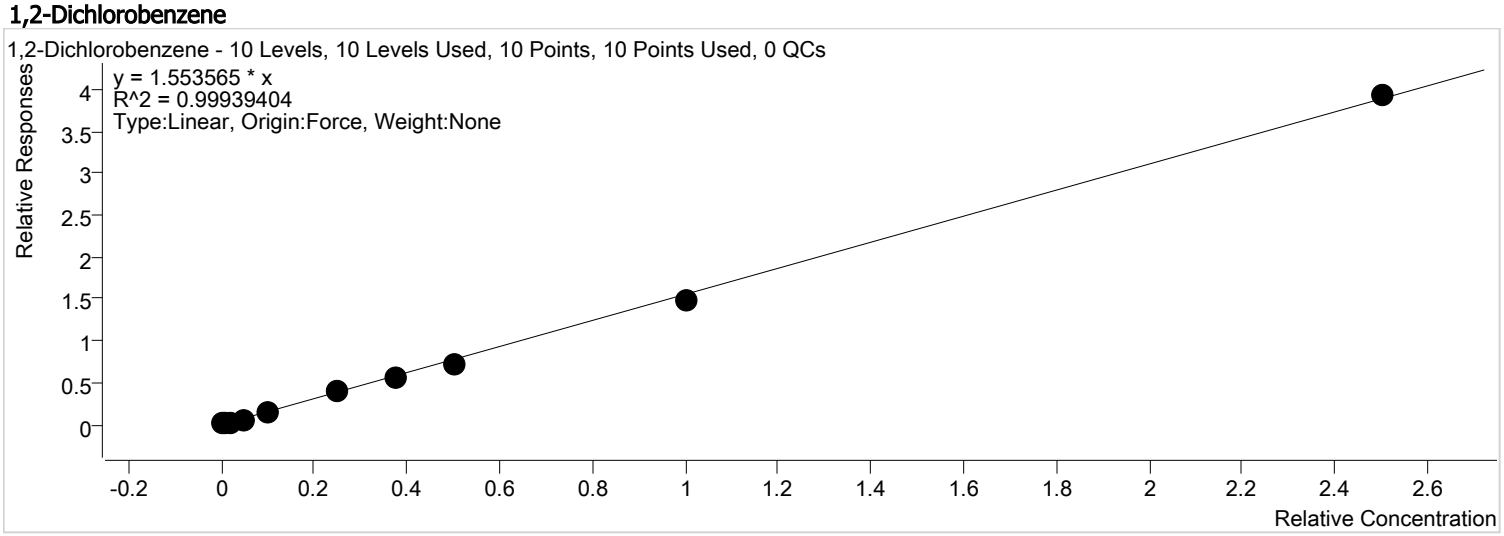
Benzyl alcohol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	155	10.0000	1.4374
D:\GC-21\Data\060320\060319.D	Calibration	2	x	279	20.0000	1.3147
D:\GC-21\Data\060320\060320.D	Calibration	3	x	448	40.0000	0.9802
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1146	100.0000	0.9947
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2279	200.0000	0.9801
D:\GC-21\Data\060320\060323.D	Calibration	6	x	5759	500.0000	1.0103
D:\GC-21\Data\060320\060324.D	Calibration	7	x	8243	750.0000	0.8971
D:\GC-21\Data\060320\060325.D	Calibration	8	x	10624	1000.0000	0.8867
D:\GC-21\Data\060320\060326.D	Calibration	9	x	21396	2000.0000	0.9107
D:\GC-21\Data\060320\060327.D	Calibration	10	x	55874	5000.0000	0.9850

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

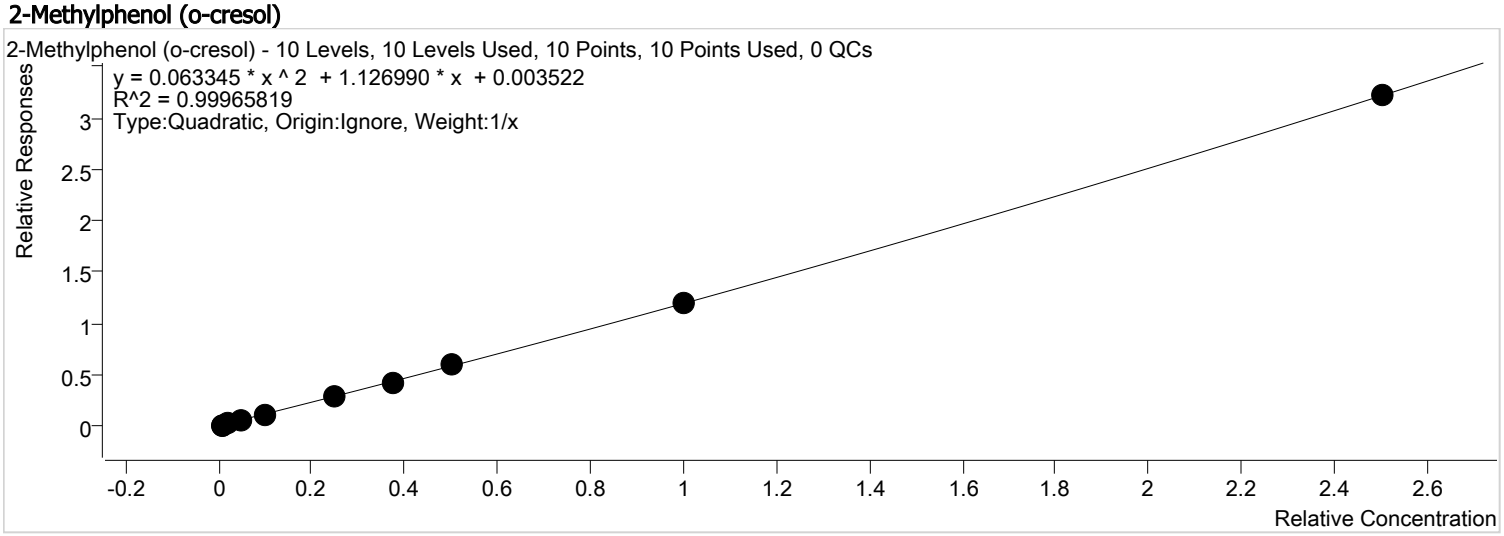
1,2-Dichlorobenzene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	238	10.0000	2.2105
D:\GC-21\Data\060320\060319.D	Calibration	2	x	281	20.0000	1.3199
D:\GC-21\Data\060320\060320.D	Calibration	3	x	663	40.0000	1.4510
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1581	100.0000	1.3719
D:\GC-21\Data\060320\060322.D	Calibration	5	x	3805	200.0000	1.6364
D:\GC-21\Data\060320\060323.D	Calibration	6	x	9070	500.0000	1.5913
D:\GC-21\Data\060320\060324.D	Calibration	7	x	13819	750.0000	1.5039
D:\GC-21\Data\060320\060325.D	Calibration	8	x	17586	1000.0000	1.4679
D:\GC-21\Data\060320\060326.D	Calibration	9	x	34972	2000.0000	1.4886
D:\GC-21\Data\060320\060327.D	Calibration	10	x	88945	5000.0000	1.5681

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

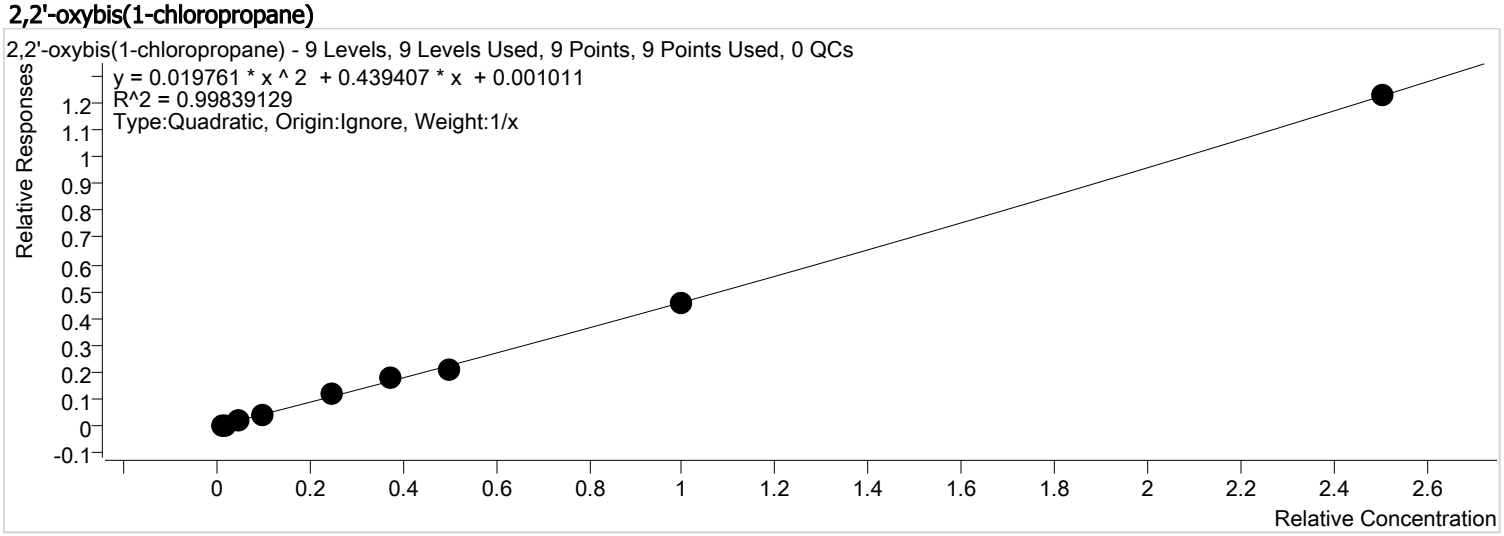
2-Methylphenol (o-cresol)



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	240	10.0000	2.2285
D:\GC-21\Data\060320\060319.D	Calibration	2	x	271	20.0000	1.2737
D:\GC-21\Data\060320\060320.D	Calibration	3	x	532	40.0000	1.1646
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1292	100.0000	1.1217
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2708	200.0000	1.1643
D:\GC-21\Data\060320\060323.D	Calibration	6	x	6782	500.0000	1.1898
D:\GC-21\Data\060320\060324.D	Calibration	7	x	10556	750.0000	1.1488
D:\GC-21\Data\060320\060325.D	Calibration	8	x	14148	1000.0000	1.1809
D:\GC-21\Data\060320\060326.D	Calibration	9	x	27940	2000.0000	1.1893
D:\GC-21\Data\060320\060327.D	Calibration	10	x	72994	5000.0000	1.2869

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

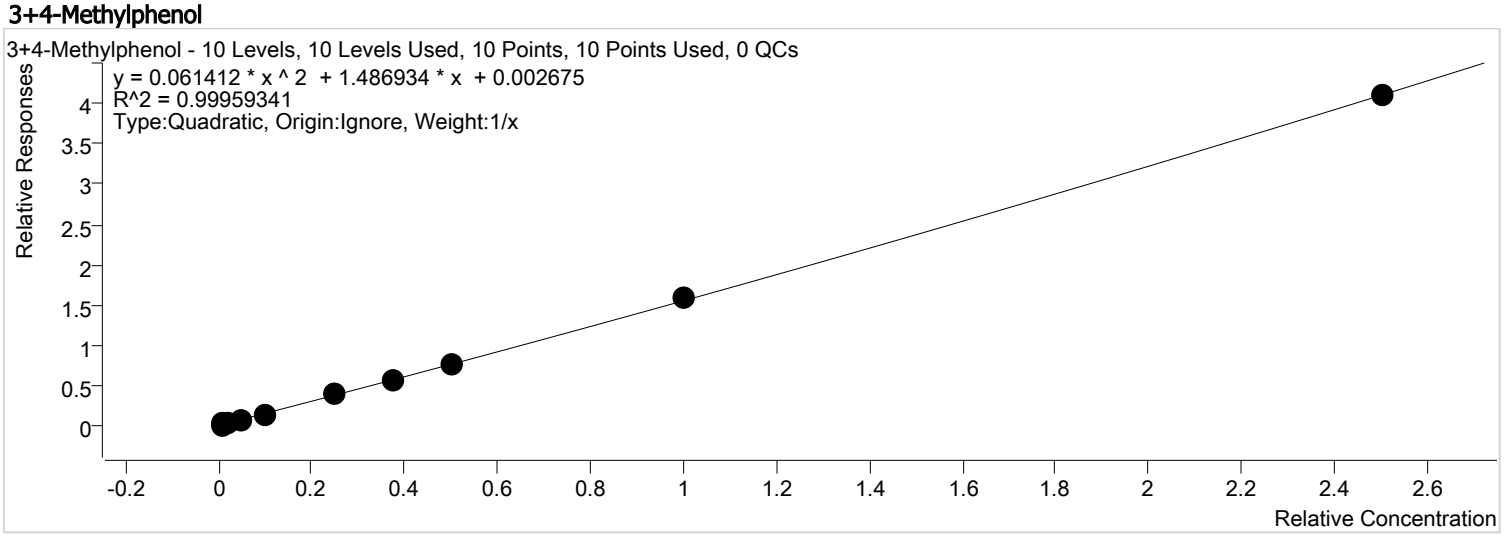
2,2'-oxybis(1-chloropropane)



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060319.D	Calibration	2	x	147	20.0000	0.6905
D:\GC-21\Data\060320\060320.D	Calibration	3	x	149	40.0000	0.3262
D:\GC-21\Data\060320\060321.D	Calibration	4	x	531	100.0000	0.4609
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1025	200.0000	0.4408
D:\GC-21\Data\060320\060323.D	Calibration	6	x	2685	500.0000	0.4710
D:\GC-21\Data\060320\060324.D	Calibration	7	x	4406	750.0000	0.4796
D:\GC-21\Data\060320\060325.D	Calibration	8	x	5097	1000.0000	0.4255
D:\GC-21\Data\060320\060326.D	Calibration	9	x	10750	2000.0000	0.4576
D:\GC-21\Data\060320\060327.D	Calibration	10	x	27782	5000.0000	0.4898

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

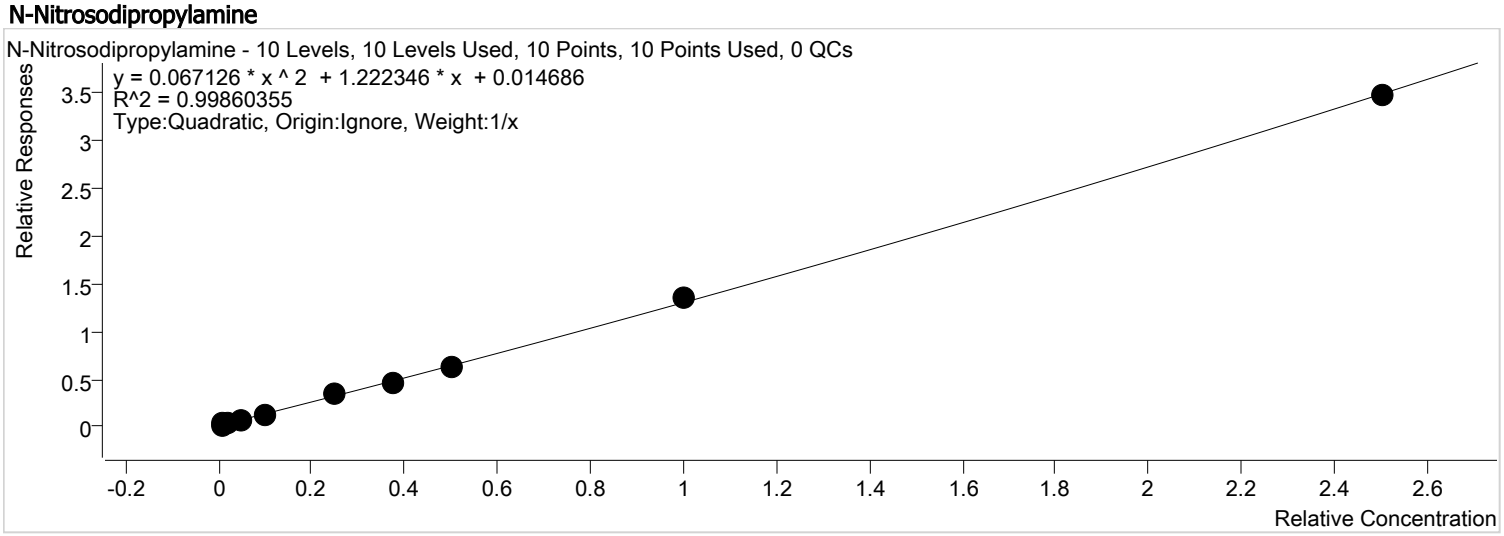
3+4-Methylphenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	214	10.0000	1.9830
D:\GC-21\Data\060320\060319.D	Calibration	2	x	442	20.0000	2.0775
D:\GC-21\Data\060320\060320.D	Calibration	3	x	640	40.0000	1.3994
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1751	100.0000	1.5202
D:\GC-21\Data\060320\060322.D	Calibration	5	x	3388	200.0000	1.4567
D:\GC-21\Data\060320\060323.D	Calibration	6	x	8946	500.0000	1.5695
D:\GC-21\Data\060320\060324.D	Calibration	7	x	13737	750.0000	1.4950
D:\GC-21\Data\060320\060325.D	Calibration	8	x	17860	1000.0000	1.4907
D:\GC-21\Data\060320\060326.D	Calibration	9	x	37059	2000.0000	1.5774
D:\GC-21\Data\060320\060327.D	Calibration	10	x	92949	5000.0000	1.6387

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

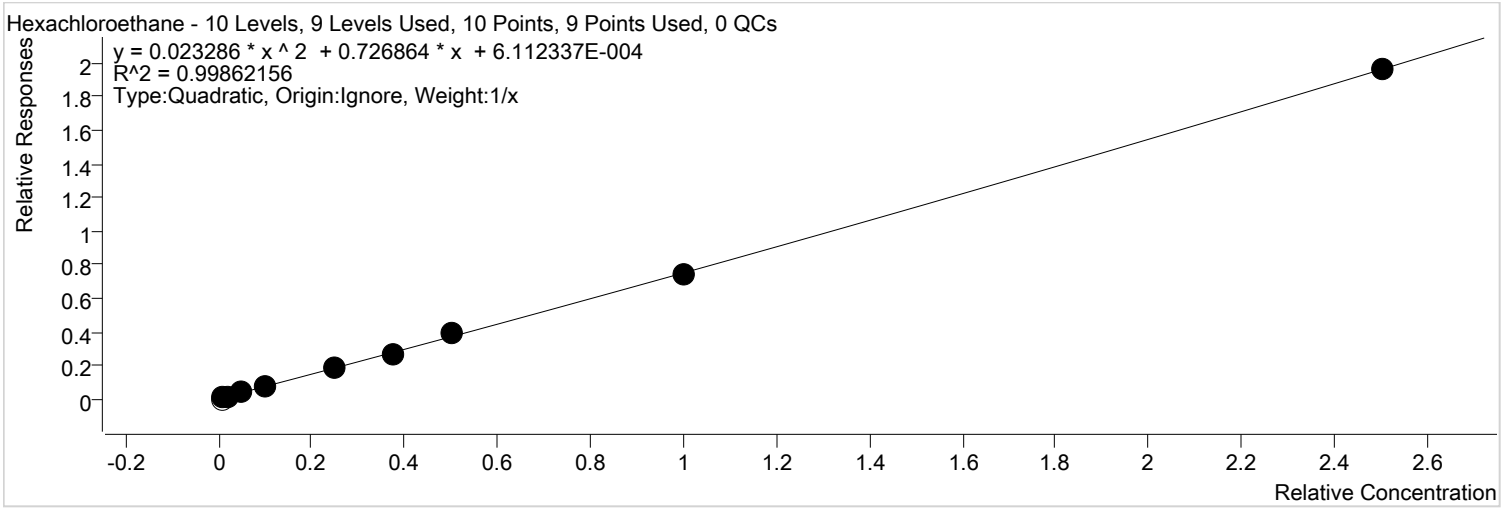
N-Nitrosodipropylamine



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	482	10.0000	4.4694
D:\GC-21\Data\060320\060319.D	Calibration	2	x	628	20.0000	2.9535
D:\GC-21\Data\060320\060320.D	Calibration	3	x	783	40.0000	1.7131
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1419	100.0000	1.2314
D:\GC-21\Data\060320\060322.D	Calibration	5	x	3028	200.0000	1.3022
D:\GC-21\Data\060320\060323.D	Calibration	6	x	7663	500.0000	1.3445
D:\GC-21\Data\060320\060324.D	Calibration	7	x	11547	750.0000	1.2566
D:\GC-21\Data\060320\060325.D	Calibration	8	x	15059	1000.0000	1.2569
D:\GC-21\Data\060320\060326.D	Calibration	9	x	31904	2000.0000	1.3580
D:\GC-21\Data\060320\060327.D	Calibration	10	x	78788	5000.0000	1.3890

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

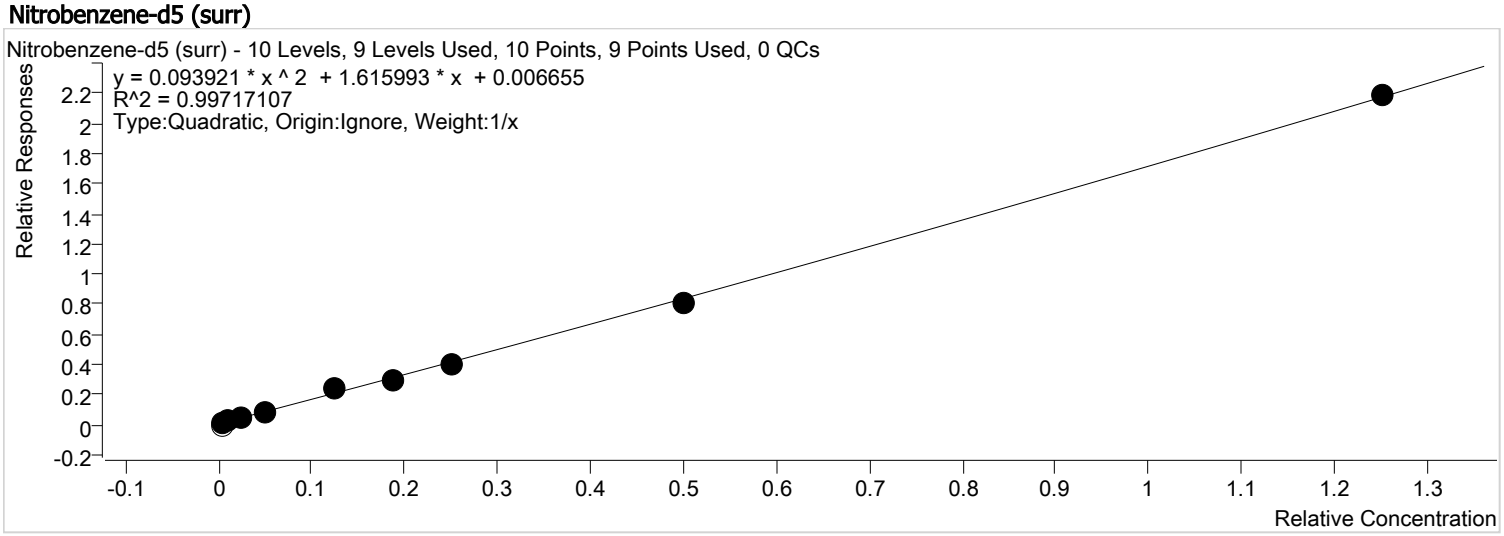
Hexachloroethane



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1		0	10.0000	0.0000
D:\GC-21\Data\060320\060319.D	Calibration	2	x	224	20.0000	1.0562
D:\GC-21\Data\060320\060320.D	Calibration	3	x	250	40.0000	0.5466
D:\GC-21\Data\060320\060321.D	Calibration	4	x	838	100.0000	0.7275
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1592	200.0000	0.6845
D:\GC-21\Data\060320\060323.D	Calibration	6	x	4112	500.0000	0.7214
D:\GC-21\Data\060320\060324.D	Calibration	7	x	6523	750.0000	0.7099
D:\GC-21\Data\060320\060325.D	Calibration	8	x	9483	1000.0000	0.7915
D:\GC-21\Data\060320\060326.D	Calibration	9	x	17564	2000.0000	0.7476
D:\GC-21\Data\060320\060327.D	Calibration	10	x	44505	5000.0000	0.7846

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

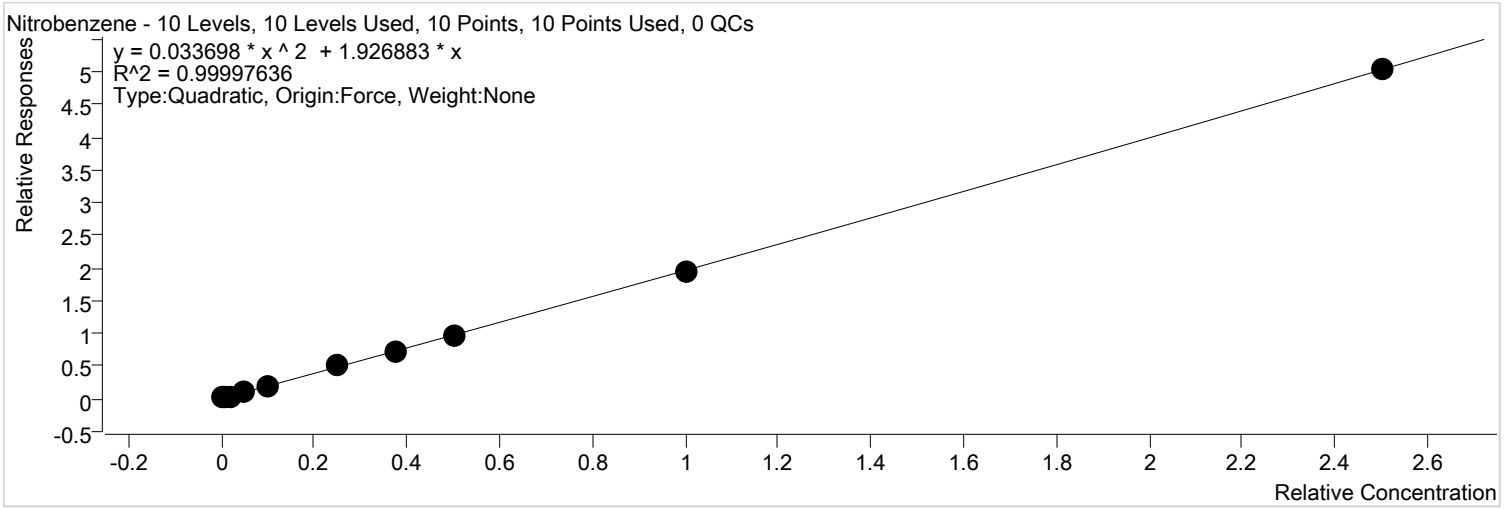
Nitrobenzene-d5 (surr)



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1		0	5.0000	0.0000
D:\GC-21\Data\060320\060319.D	Calibration	2	x	228	10.0000	2.1491
D:\GC-21\Data\060320\060320.D	Calibration	3	x	659	20.0000	2.8840
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1125	50.0000	1.9533
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2063	100.0000	1.7746
D:\GC-21\Data\060320\060323.D	Calibration	6	x	5531	250.0000	1.9407
D:\GC-21\Data\060320\060324.D	Calibration	7	x	7371	375.0000	1.6043
D:\GC-21\Data\060320\060325.D	Calibration	8	x	9673	500.0000	1.6148
D:\GC-21\Data\060320\060326.D	Calibration	9	x	19169	1000.0000	1.6319
D:\GC-21\Data\060320\060327.D	Calibration	10	x	49537	2500.0000	1.7466

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

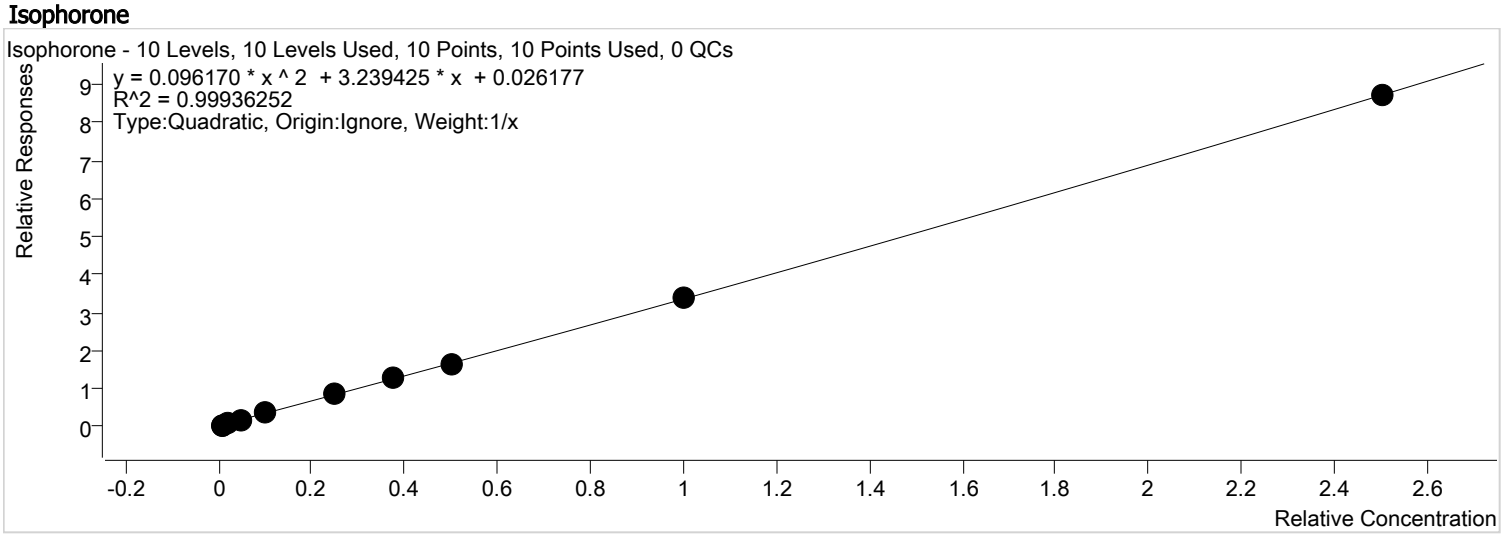
Nitrobenzene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	292	10.0000	2.7113
D:\GC-21\Data\060320\060319.D	Calibration	2	x	511	20.0000	2.4041
D:\GC-21\Data\060320\060320.D	Calibration	3	x	864	40.0000	1.8897
D:\GC-21\Data\060320\060321.D	Calibration	4	x	2363	100.0000	2.0510
D:\GC-21\Data\060320\060322.D	Calibration	5	x	4692	200.0000	2.0178
D:\GC-21\Data\060320\060323.D	Calibration	6	x	11346	500.0000	1.9906
D:\GC-21\Data\060320\060324.D	Calibration	7	x	18021	750.0000	1.9612
D:\GC-21\Data\060320\060325.D	Calibration	8	x	23094	1000.0000	1.9276
D:\GC-21\Data\060320\060326.D	Calibration	9	x	45917	2000.0000	1.9545
D:\GC-21\Data\060320\060327.D	Calibration	10	x	114098	5000.0000	2.0115

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

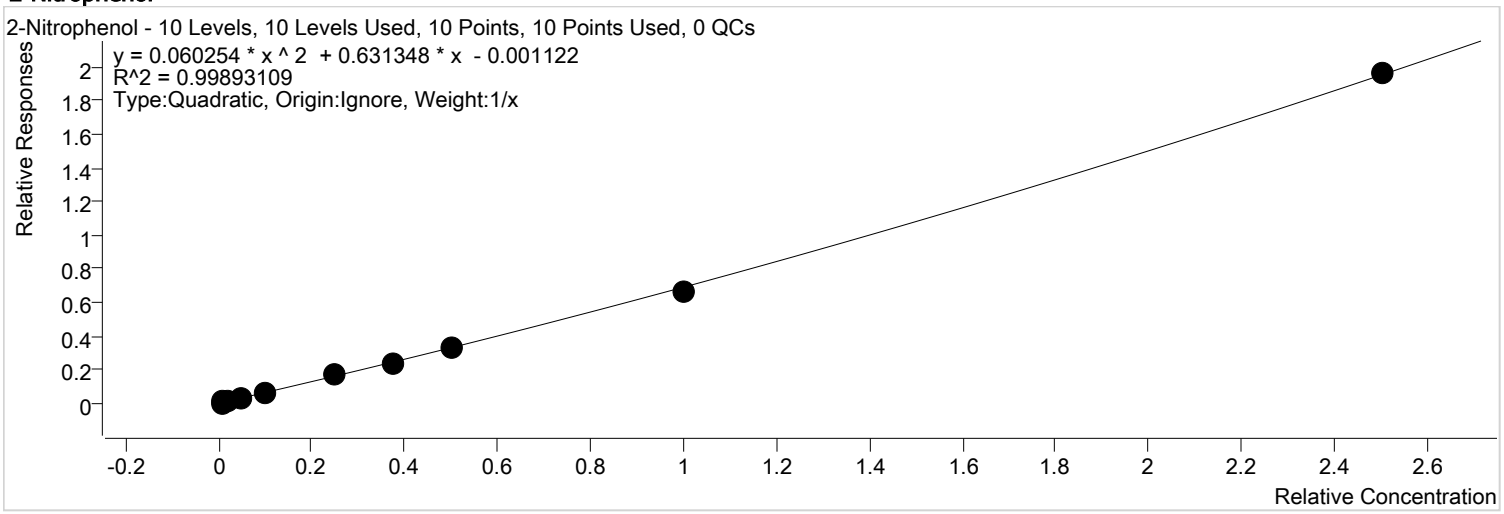
Isophorone



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	1047	10.0000	9.7067
D:\GC-21\Data\060320\060319.D	Calibration	2	x	1191	20.0000	5.6031
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1640	40.0000	3.5863
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4364	100.0000	3.7876
D:\GC-21\Data\060320\060322.D	Calibration	5	x	8014	200.0000	3.4461
D:\GC-21\Data\060320\060323.D	Calibration	6	x	19075	500.0000	3.3467
D:\GC-21\Data\060320\060324.D	Calibration	7	x	31478	750.0000	3.4258
D:\GC-21\Data\060320\060325.D	Calibration	8	x	39261	1000.0000	3.2770
D:\GC-21\Data\060320\060326.D	Calibration	9	x	79961	2000.0000	3.4036
D:\GC-21\Data\060320\060327.D	Calibration	10	x	197662	5000.0000	3.4847

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

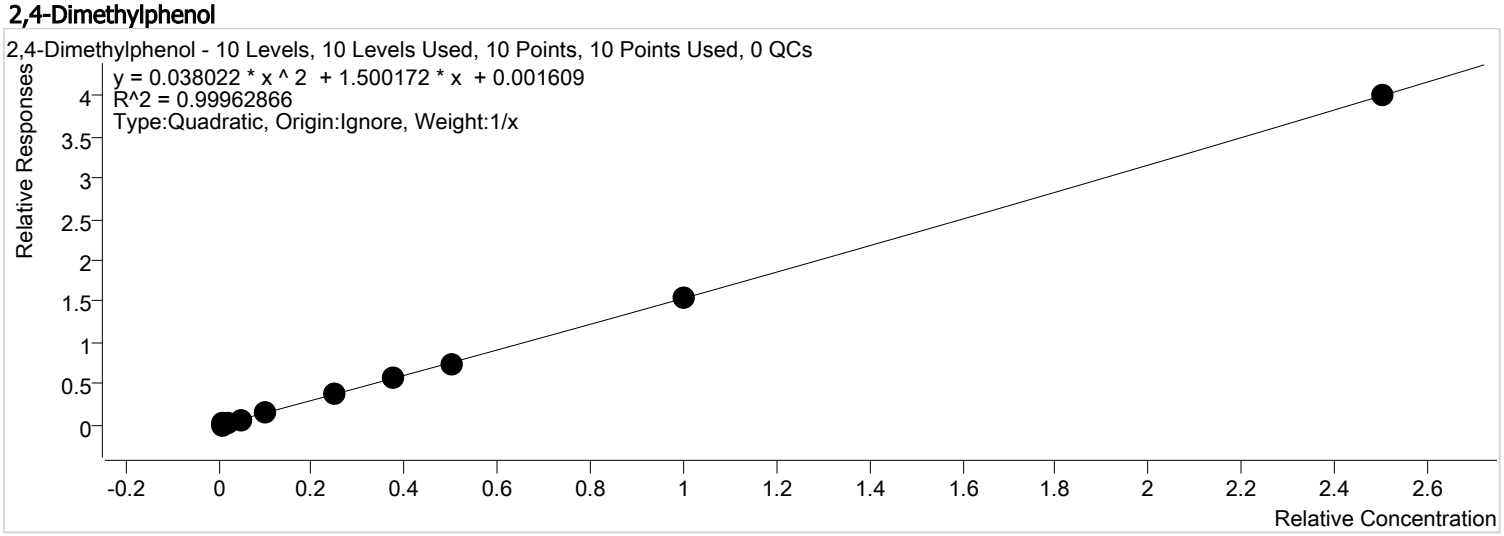
2-Nitrophenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	32	10.0000	0.2934
D:\GC-21\Data\060320\060319.D	Calibration	2	x	120	20.0000	0.5644
D:\GC-21\Data\060320\060320.D	Calibration	3	x	228	40.0000	0.4992
D:\GC-21\Data\060320\060321.D	Calibration	4	x	819	100.0000	0.7107
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1532	200.0000	0.6588
D:\GC-21\Data\060320\060323.D	Calibration	6	x	3985	500.0000	0.6991
D:\GC-21\Data\060320\060324.D	Calibration	7	x	5646	750.0000	0.6145
D:\GC-21\Data\060320\060325.D	Calibration	8	x	8039	1000.0000	0.6710
D:\GC-21\Data\060320\060326.D	Calibration	9	x	15741	2000.0000	0.6700
D:\GC-21\Data\060320\060327.D	Calibration	10	x	44499	5000.0000	0.7845

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

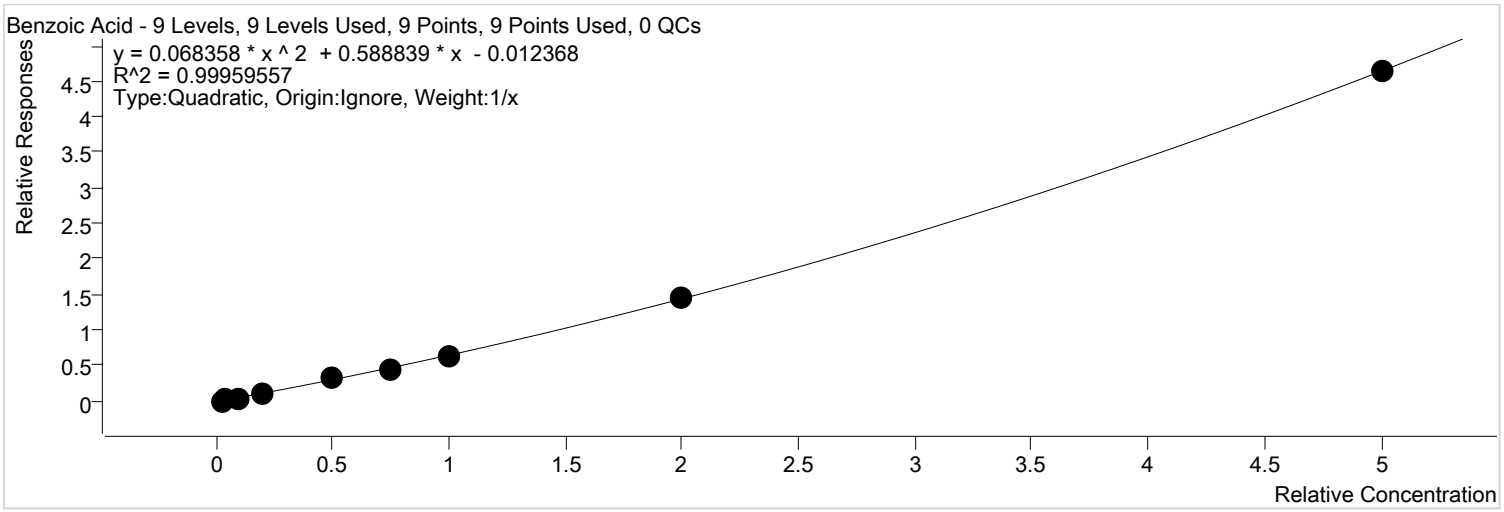
2,4-Dimethylphenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	175	10.0000	1.6216
D:\GC-21\Data\060320\060319.D	Calibration	2	x	375	20.0000	1.7644
D:\GC-21\Data\060320\060320.D	Calibration	3	x	795	40.0000	1.7385
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1624	100.0000	1.4096
D:\GC-21\Data\060320\060322.D	Calibration	5	x	3643	200.0000	1.5664
D:\GC-21\Data\060320\060323.D	Calibration	6	x	8857	500.0000	1.5540
D:\GC-21\Data\060320\060324.D	Calibration	7	x	14261	750.0000	1.5521
D:\GC-21\Data\060320\060325.D	Calibration	8	x	17570	1000.0000	1.4665
D:\GC-21\Data\060320\060326.D	Calibration	9	x	36242	2000.0000	1.5427
D:\GC-21\Data\060320\060327.D	Calibration	10	x	90557	5000.0000	1.5965

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

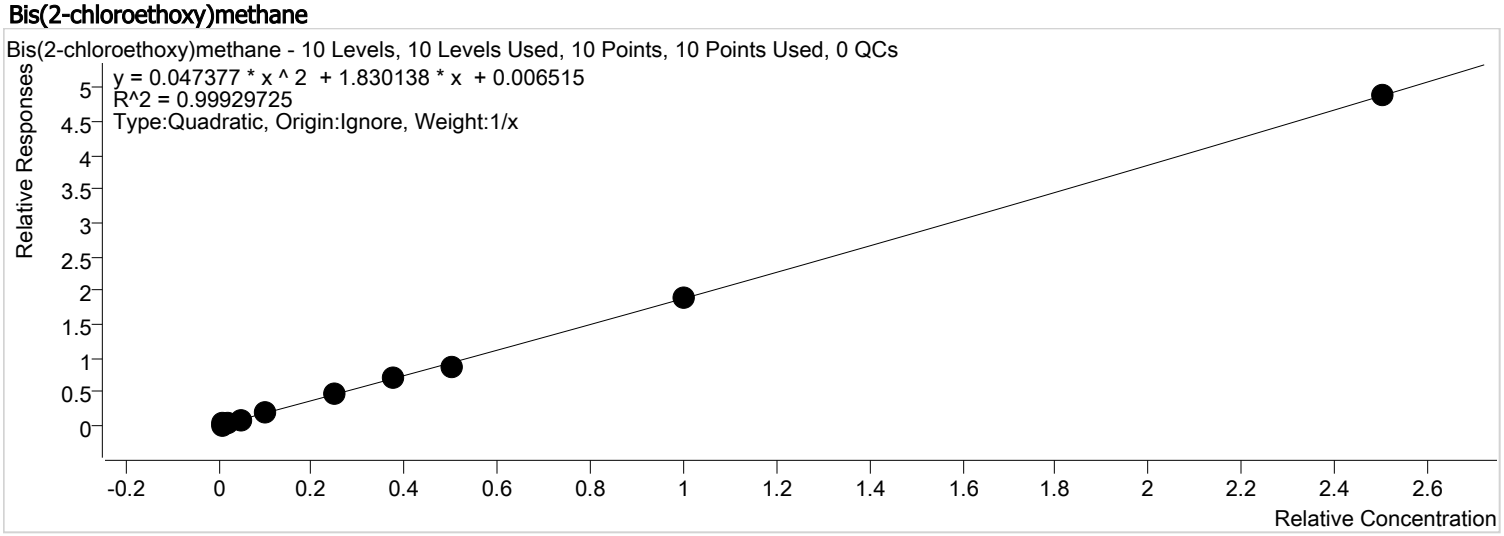
Benzoic Acid



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060319.D	Calibration	2	x	32	40.0000	0.0759
D:\GC-21\Data\060320\060320.D	Calibration	3	x	202	80.0000	0.2213
D:\GC-21\Data\060320\060321.D	Calibration	4	x	949	200.0000	0.4117
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2595	400.0000	0.5578
D:\GC-21\Data\060320\060323.D	Calibration	6	x	7130	1000.0000	0.6255
D:\GC-21\Data\060320\060324.D	Calibration	7	x	10913	1500.0000	0.5938
D:\GC-21\Data\060320\060325.D	Calibration	8	x	15179	2000.0000	0.6335
D:\GC-21\Data\060320\060326.D	Calibration	9	x	34536	4000.0000	0.7350
D:\GC-21\Data\060320\060327.D	Calibration	10	x	105107	10000.0000	0.9265

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

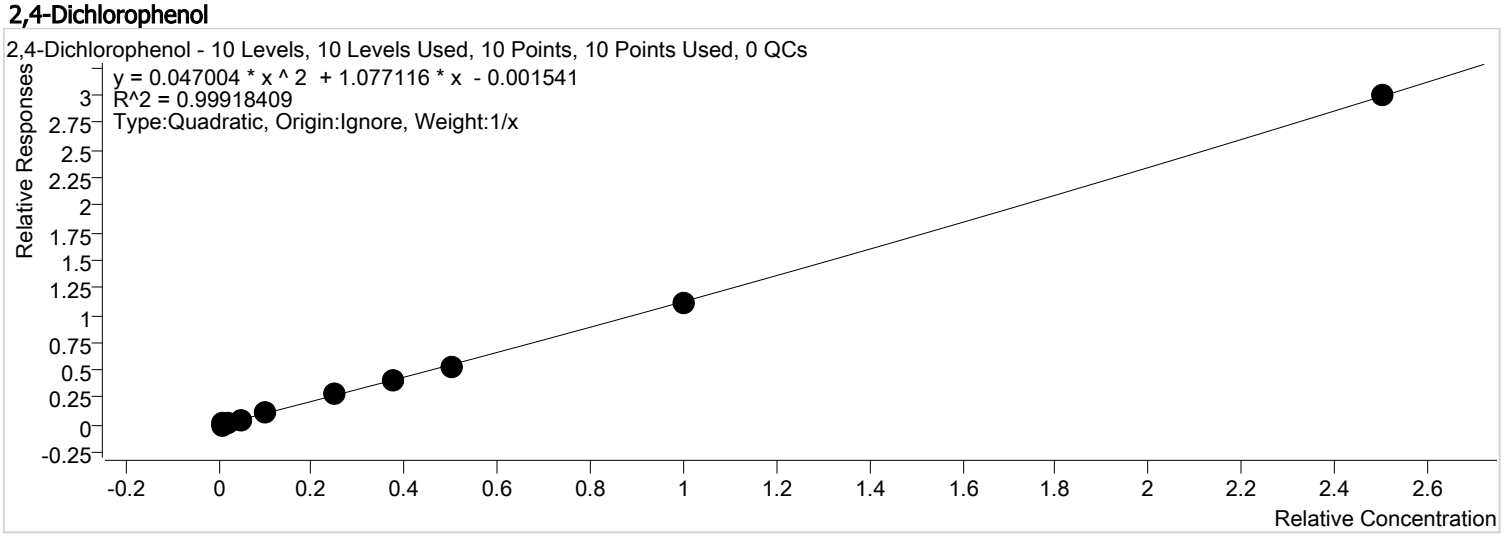
Bis(2-chloroethoxy)methane



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	370	10.0000	3.4324
D:\GC-21\Data\060320\060319.D	Calibration	2	x	540	20.0000	2.5386
D:\GC-21\Data\060320\060320.D	Calibration	3	x	773	40.0000	1.6907
D:\GC-21\Data\060320\060321.D	Calibration	4	x	2327	100.0000	2.0202
D:\GC-21\Data\060320\060322.D	Calibration	5	x	4428	200.0000	1.9042
D:\GC-21\Data\060320\060323.D	Calibration	6	x	10941	500.0000	1.9195
D:\GC-21\Data\060320\060324.D	Calibration	7	x	17877	750.0000	1.9456
D:\GC-21\Data\060320\060325.D	Calibration	8	x	21350	1000.0000	1.7820
D:\GC-21\Data\060320\060326.D	Calibration	9	x	44290	2000.0000	1.8852
D:\GC-21\Data\060320\060327.D	Calibration	10	x	110726	5000.0000	1.9521

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

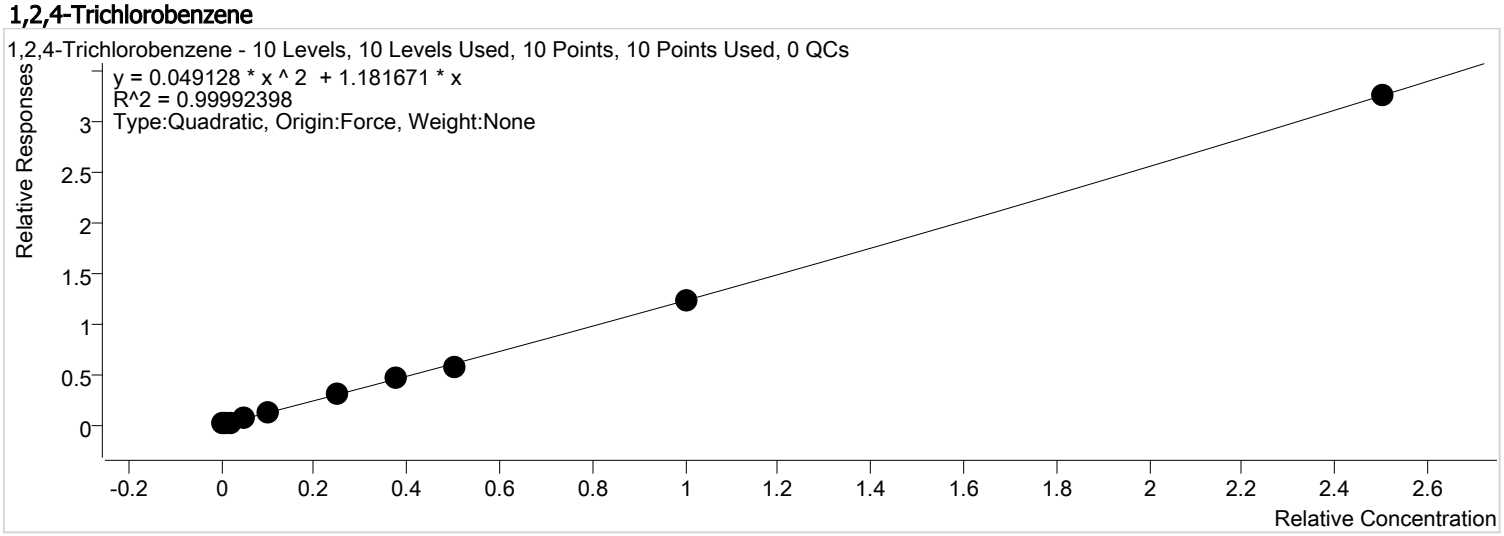
2,4-Dichlorophenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	66	10.0000	0.6114
D:\GC-21\Data\060320\060319.D	Calibration	2	x	169	20.0000	0.7942
D:\GC-21\Data\060320\060320.D	Calibration	3	x	511	40.0000	1.1168
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1234	100.0000	1.0712
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2906	200.0000	1.2495
D:\GC-21\Data\060320\060323.D	Calibration	6	x	6340	500.0000	1.1123
D:\GC-21\Data\060320\060324.D	Calibration	7	x	9684	750.0000	1.0540
D:\GC-21\Data\060320\060325.D	Calibration	8	x	12910	1000.0000	1.0776
D:\GC-21\Data\060320\060326.D	Calibration	9	x	26143	2000.0000	1.1128
D:\GC-21\Data\060320\060327.D	Calibration	10	x	67874	5000.0000	1.1966

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

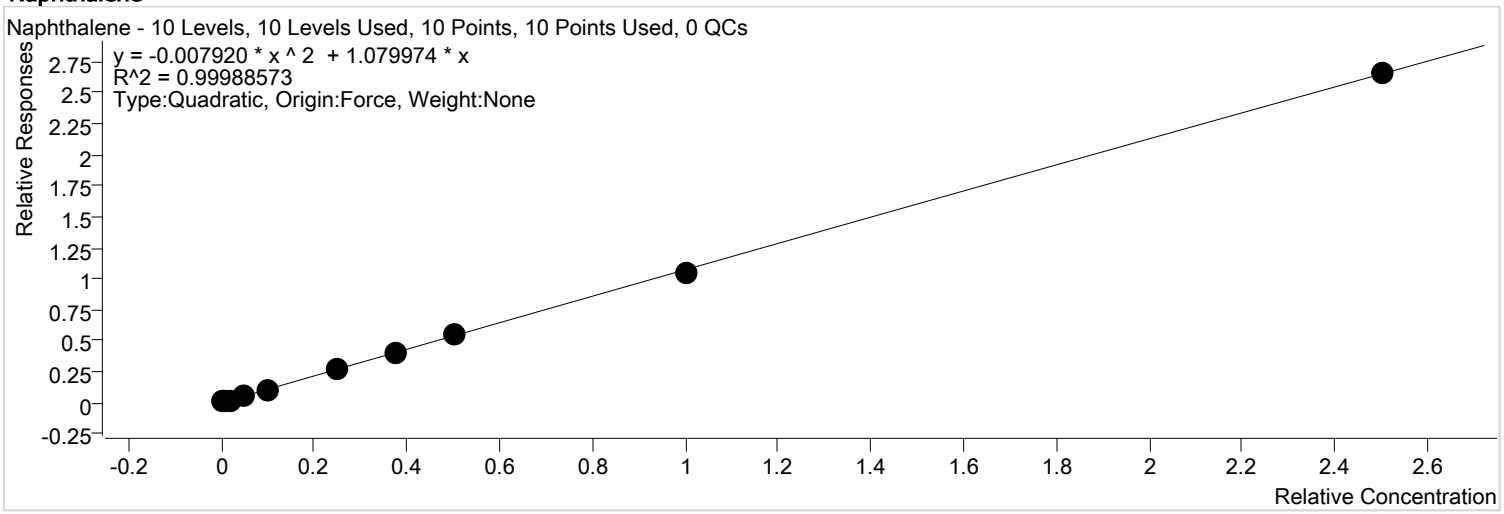
1,2,4-Trichlorobenzene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	126	10.0000	1.1650
D:\GC-21\Data\060320\060319.D	Calibration	2	x	327	20.0000	1.5393
D:\GC-21\Data\060320\060320.D	Calibration	3	x	412	40.0000	0.9005
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1470	100.0000	1.2759
D:\GC-21\Data\060320\060322.D	Calibration	5	x	3003	200.0000	1.2915
D:\GC-21\Data\060320\060323.D	Calibration	6	x	7034	500.0000	1.2340
D:\GC-21\Data\060320\060324.D	Calibration	7	x	11257	750.0000	1.2251
D:\GC-21\Data\060320\060325.D	Calibration	8	x	14017	1000.0000	1.1700
D:\GC-21\Data\060320\060326.D	Calibration	9	x	28949	2000.0000	1.2322
D:\GC-21\Data\060320\060327.D	Calibration	10	x	73998	5000.0000	1.3046

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

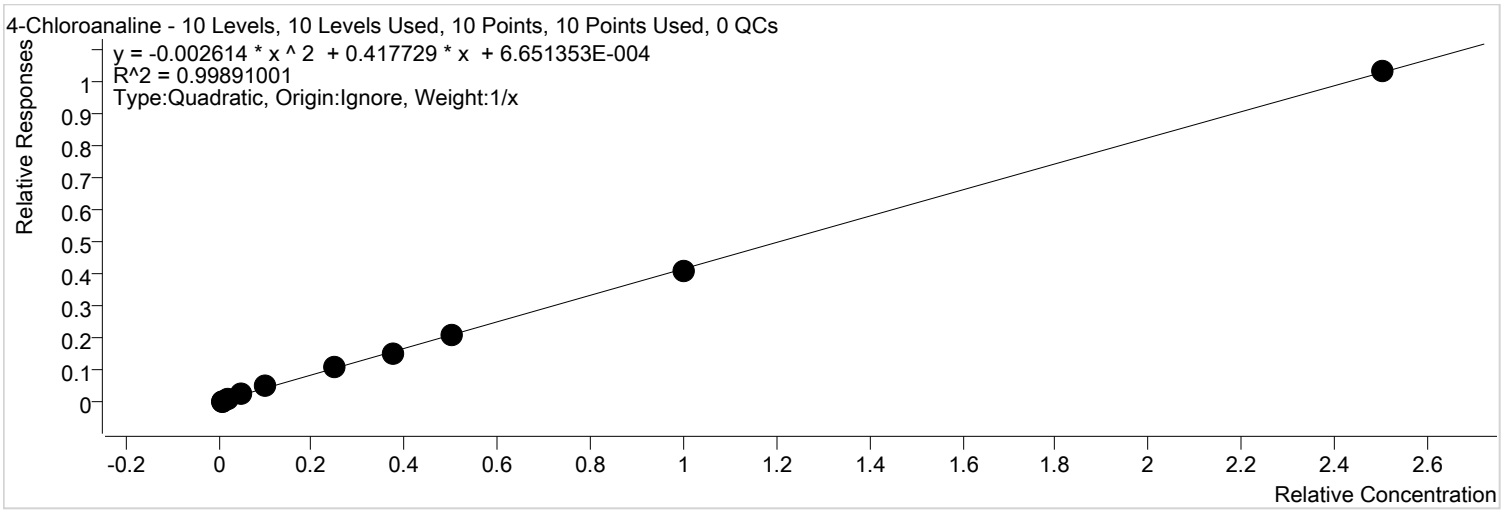
Naphthalene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	687	10.0000	1.6247
D:\GC-21\Data\060320\060319.D	Calibration	2	x	989	20.0000	1.1840
D:\GC-21\Data\060320\060320.D	Calibration	3	x	2059	40.0000	1.1767
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4516	100.0000	0.9771
D:\GC-21\Data\060320\060322.D	Calibration	5	x	9741	200.0000	1.1098
D:\GC-21\Data\060320\060323.D	Calibration	6	x	24812	500.0000	1.1101
D:\GC-21\Data\060320\060324.D	Calibration	7	x	38414	750.0000	1.0924
D:\GC-21\Data\060320\060325.D	Calibration	8	x	51300	1000.0000	1.1081
D:\GC-21\Data\060320\060326.D	Calibration	9	x	97495	2000.0000	1.0551
D:\GC-21\Data\060320\060327.D	Calibration	10	x	242809	5000.0000	1.0609

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

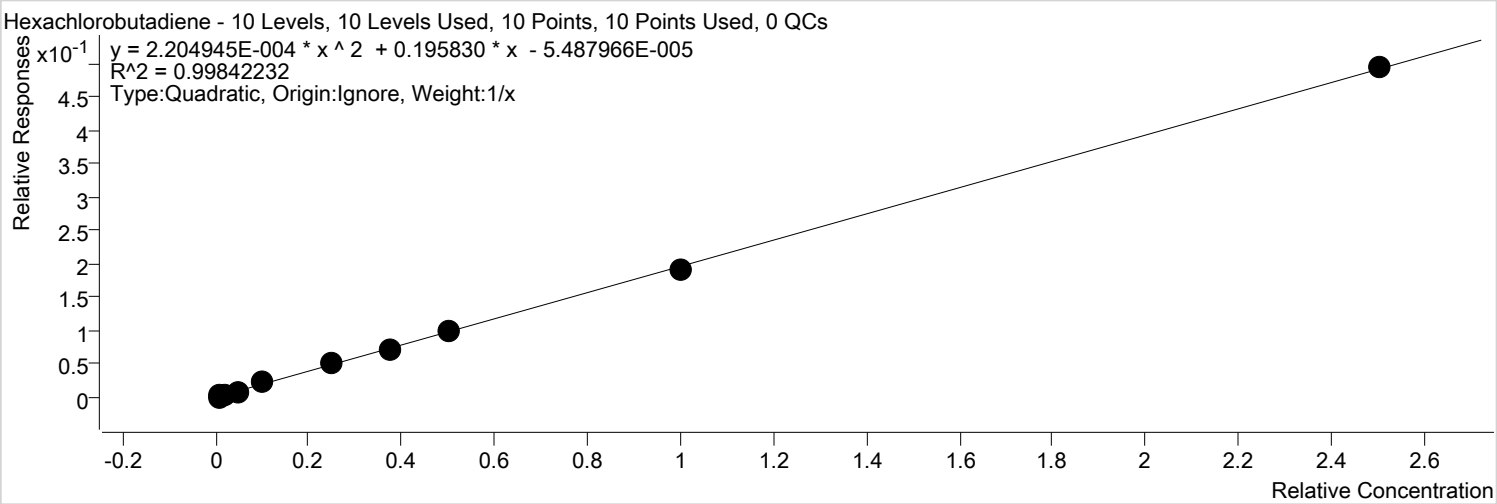
4-Chloroanaline



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	295	10.0000	0.6971
D:\GC-21\Data\060320\060319.D	Calibration	2	x	266	20.0000	0.3185
D:\GC-21\Data\060320\060320.D	Calibration	3	x	736	40.0000	0.4206
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1971	100.0000	0.4264
D:\GC-21\Data\060320\060322.D	Calibration	5	x	4144	200.0000	0.4722
D:\GC-21\Data\060320\060323.D	Calibration	6	x	9913	500.0000	0.4435
D:\GC-21\Data\060320\060324.D	Calibration	7	x	14486	750.0000	0.4119
D:\GC-21\Data\060320\060325.D	Calibration	8	x	19059	1000.0000	0.4117
D:\GC-21\Data\060320\060326.D	Calibration	9	x	37851	2000.0000	0.4096
D:\GC-21\Data\060320\060327.D	Calibration	10	x	94414	5000.0000	0.4125

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

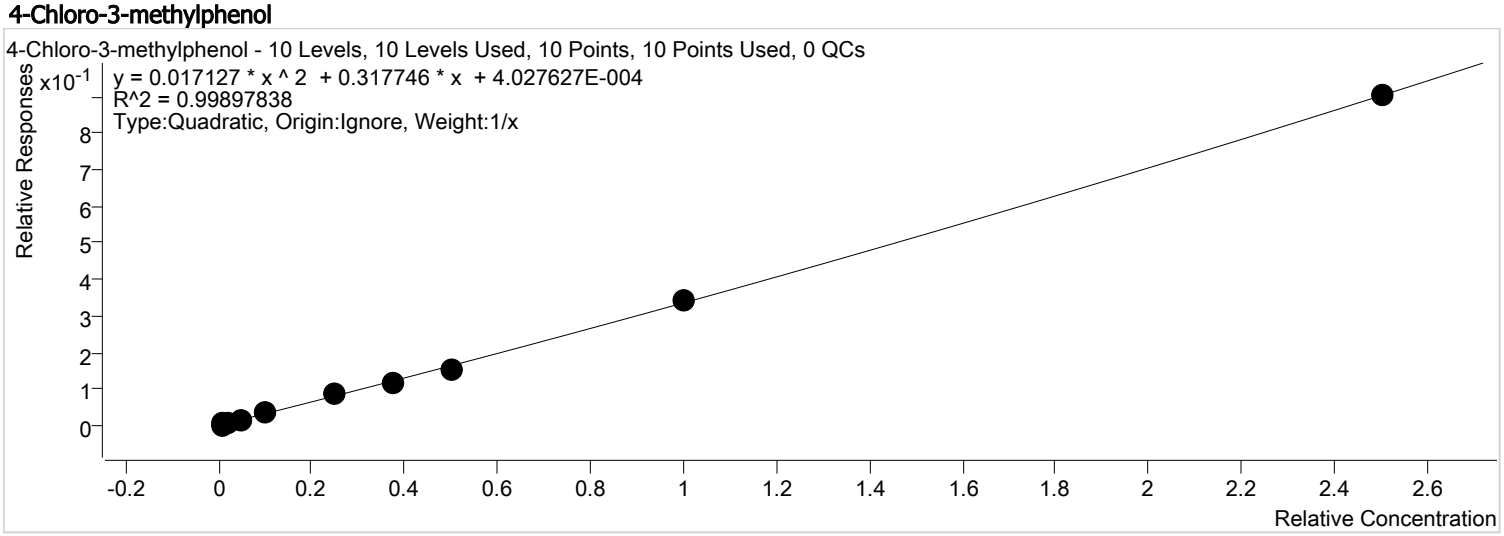
Hexachlorobutadiene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	63	10.0000	0.1479
D:\GC-21\Data\060320\060319.D	Calibration	2	x	177	20.0000	0.2114
D:\GC-21\Data\060320\060320.D	Calibration	3	x	365	40.0000	0.2085
D:\GC-21\Data\060320\060321.D	Calibration	4	x	732	100.0000	0.1583
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2026	200.0000	0.2308
D:\GC-21\Data\060320\060323.D	Calibration	6	x	4505	500.0000	0.2016
D:\GC-21\Data\060320\060324.D	Calibration	7	x	6783	750.0000	0.1929
D:\GC-21\Data\060320\060325.D	Calibration	8	x	9263	1000.0000	0.2001
D:\GC-21\Data\060320\060326.D	Calibration	9	x	17485	2000.0000	0.1892
D:\GC-21\Data\060320\060327.D	Calibration	10	x	45141	5000.0000	0.1972

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

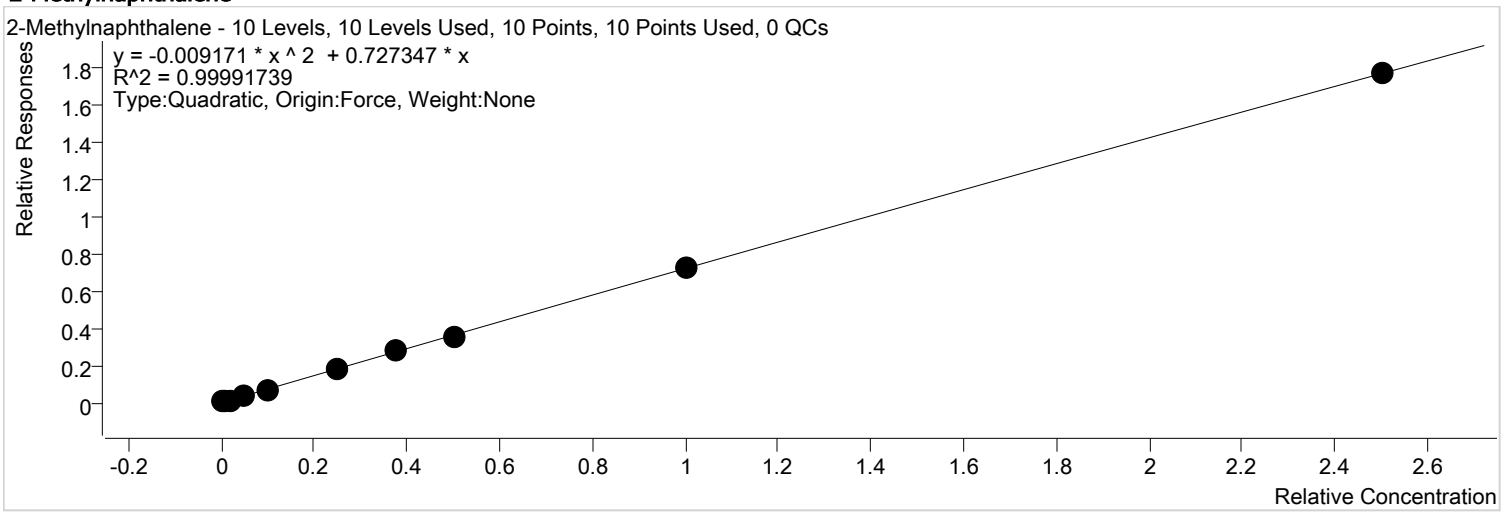
4-Chloro-3-methylphenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	171	10.0000	0.4057
D:\GC-21\Data\060320\060319.D	Calibration	2	x	292	20.0000	0.3500
D:\GC-21\Data\060320\060320.D	Calibration	3	x	507	40.0000	0.2899
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1564	100.0000	0.3384
D:\GC-21\Data\060320\060322.D	Calibration	5	x	3258	200.0000	0.3712
D:\GC-21\Data\060320\060323.D	Calibration	6	x	7534	500.0000	0.3371
D:\GC-21\Data\060320\060324.D	Calibration	7	x	10989	750.0000	0.3125
D:\GC-21\Data\060320\060325.D	Calibration	8	x	14377	1000.0000	0.3105
D:\GC-21\Data\060320\060326.D	Calibration	9	x	31522	2000.0000	0.3411
D:\GC-21\Data\060320\060327.D	Calibration	10	x	82512	5000.0000	0.3605

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

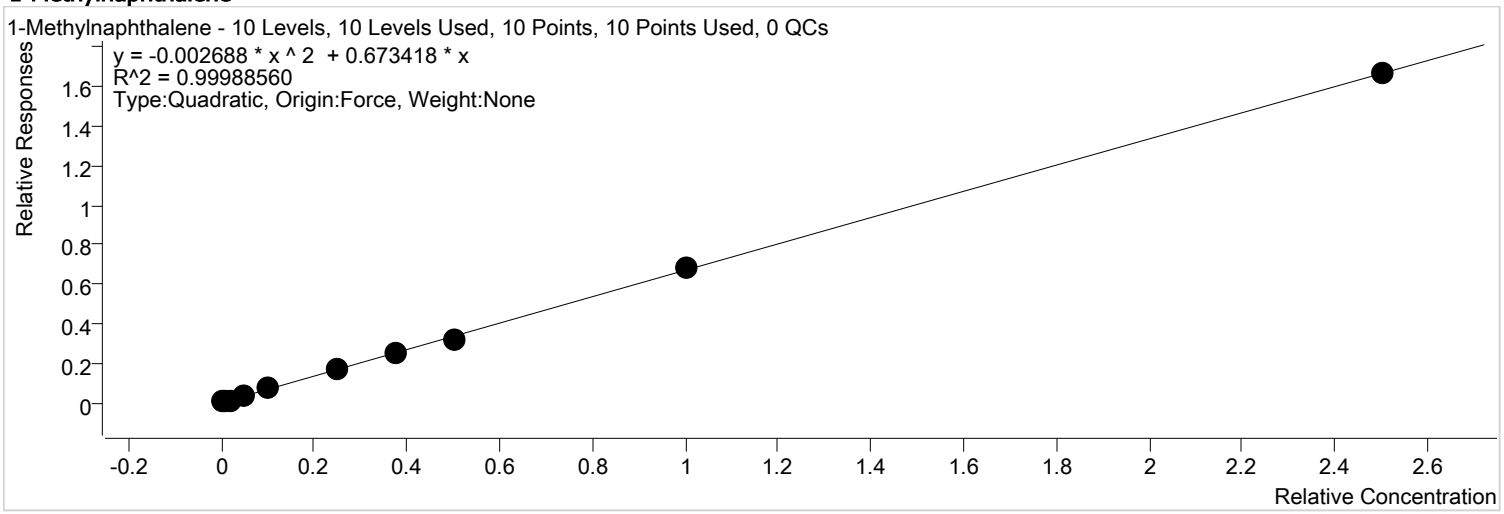
2-Methylnaphthalene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	457	10.0000	1.0815
D:\GC-21\Data\060320\060319.D	Calibration	2	x	628	20.0000	0.7518
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1201	40.0000	0.6864
D:\GC-21\Data\060320\060321.D	Calibration	4	x	3197	100.0000	0.6916
D:\GC-21\Data\060320\060322.D	Calibration	5	x	6467	200.0000	0.7369
D:\GC-21\Data\060320\060323.D	Calibration	6	x	15944	500.0000	0.7134
D:\GC-21\Data\060320\060324.D	Calibration	7	x	25776	750.0000	0.7330
D:\GC-21\Data\060320\060325.D	Calibration	8	x	32360	1000.0000	0.6990
D:\GC-21\Data\060320\060326.D	Calibration	9	x	67026	2000.0000	0.7254
D:\GC-21\Data\060320\060327.D	Calibration	10	x	161153	5000.0000	0.7041

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

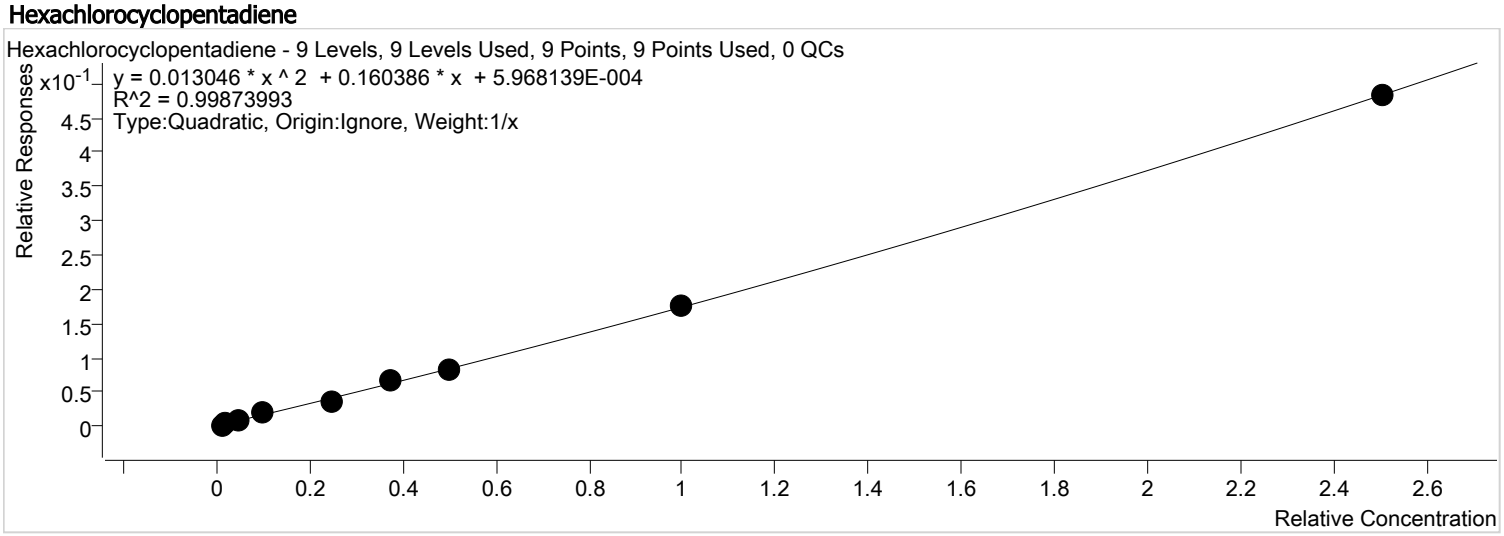
1-Methylnaphthalene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	233	10.0000	0.5503
D:\GC-21\Data\060320\060319.D	Calibration	2	x	680	20.0000	0.8138
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1180	40.0000	0.6745
D:\GC-21\Data\060320\060321.D	Calibration	4	x	3219	100.0000	0.6965
D:\GC-21\Data\060320\060322.D	Calibration	5	x	6218	200.0000	0.7085
D:\GC-21\Data\060320\060323.D	Calibration	6	x	14994	500.0000	0.6709
D:\GC-21\Data\060320\060324.D	Calibration	7	x	23110	750.0000	0.6572
D:\GC-21\Data\060320\060325.D	Calibration	8	x	30080	1000.0000	0.6497
D:\GC-21\Data\060320\060326.D	Calibration	9	x	62900	2000.0000	0.6807
D:\GC-21\Data\060320\060327.D	Calibration	10	x	152492	5000.0000	0.6663

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

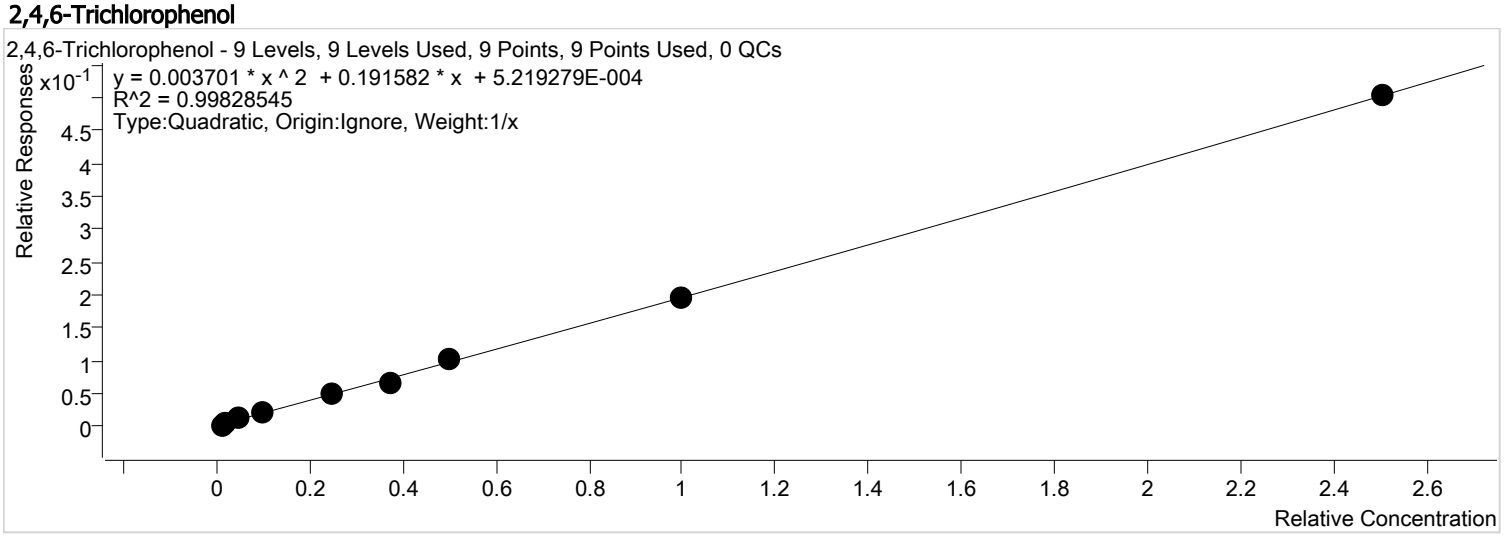
Hexachlorocyclopentadiene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060319.D	Calibration	2	x	187	20.0000	0.2241
D:\GC-21\Data\060320\060320.D	Calibration	3	x	344	40.0000	0.1967
D:\GC-21\Data\060320\060321.D	Calibration	4	x	706	100.0000	0.1528
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1640	200.0000	0.1869
D:\GC-21\Data\060320\060323.D	Calibration	6	x	3358	500.0000	0.1502
D:\GC-21\Data\060320\060324.D	Calibration	7	x	6221	750.0000	0.1769
D:\GC-21\Data\060320\060325.D	Calibration	8	x	7504	1000.0000	0.1621
D:\GC-21\Data\060320\060326.D	Calibration	9	x	16348	2000.0000	0.1769
D:\GC-21\Data\060320\060327.D	Calibration	10	x	44155	5000.0000	0.1929

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

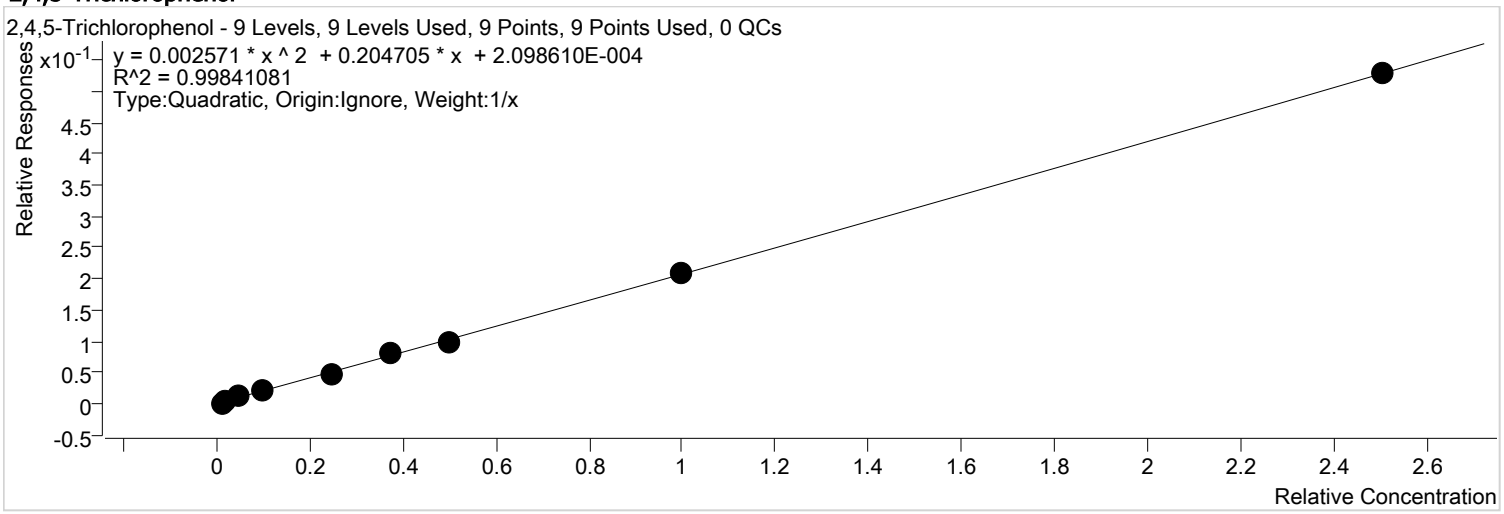
2,4,6-Trichlorophenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060319.D	Calibration	2	x	152	20.0000	0.1820
D:\GC-21\Data\060320\060320.D	Calibration	3	x	453	40.0000	0.2589
D:\GC-21\Data\060320\060321.D	Calibration	4	x	986	100.0000	0.2134
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1913	200.0000	0.2180
D:\GC-21\Data\060320\060323.D	Calibration	6	x	4269	500.0000	0.1910
D:\GC-21\Data\060320\060324.D	Calibration	7	x	6223	750.0000	0.1770
D:\GC-21\Data\060320\060325.D	Calibration	8	x	9491	1000.0000	0.2050
D:\GC-21\Data\060320\060326.D	Calibration	9	x	18000	2000.0000	0.1948
D:\GC-21\Data\060320\060327.D	Calibration	10	x	46042	5000.0000	0.2012

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

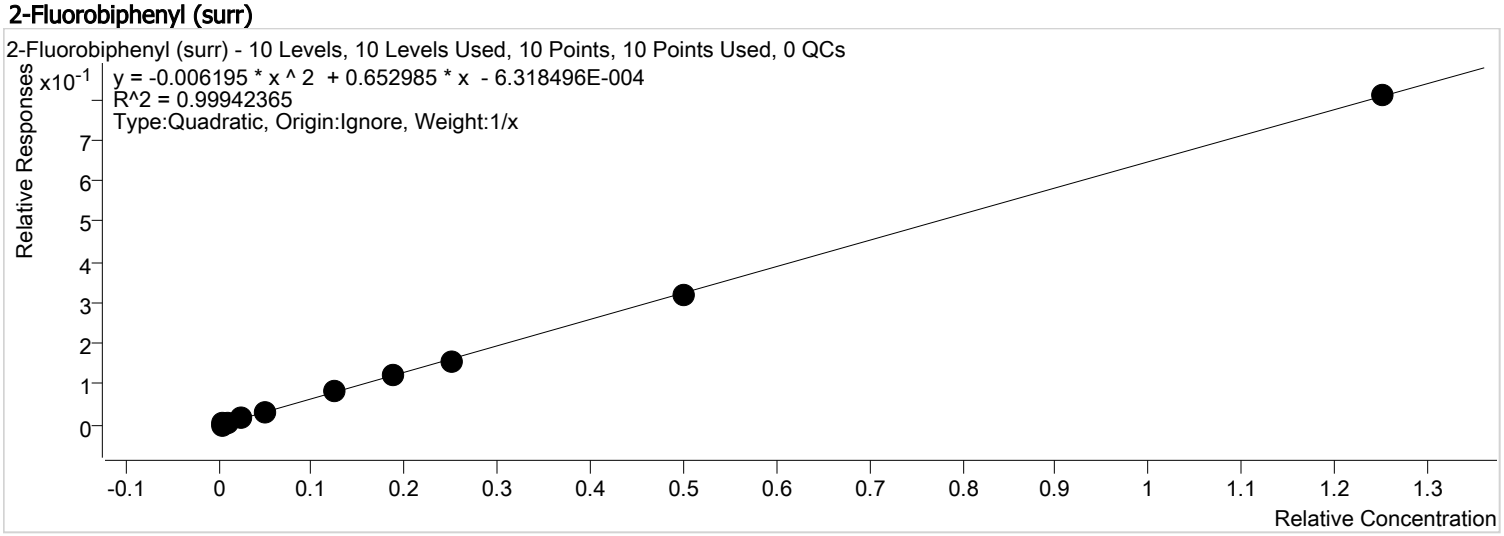
2,4,5-Trichlorophenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060319.D	Calibration	2	x	129	20.0000	0.1539
D:\GC-21\Data\060320\060320.D	Calibration	3	x	453	40.0000	0.2589
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1038	100.0000	0.2246
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2056	200.0000	0.2342
D:\GC-21\Data\060320\060323.D	Calibration	6	x	4283	500.0000	0.1916
D:\GC-21\Data\060320\060324.D	Calibration	7	x	7530	750.0000	0.2141
D:\GC-21\Data\060320\060325.D	Calibration	8	x	9099	1000.0000	0.1965
D:\GC-21\Data\060320\060326.D	Calibration	9	x	19356	2000.0000	0.2095
D:\GC-21\Data\060320\060327.D	Calibration	10	x	48339	5000.0000	0.2112

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

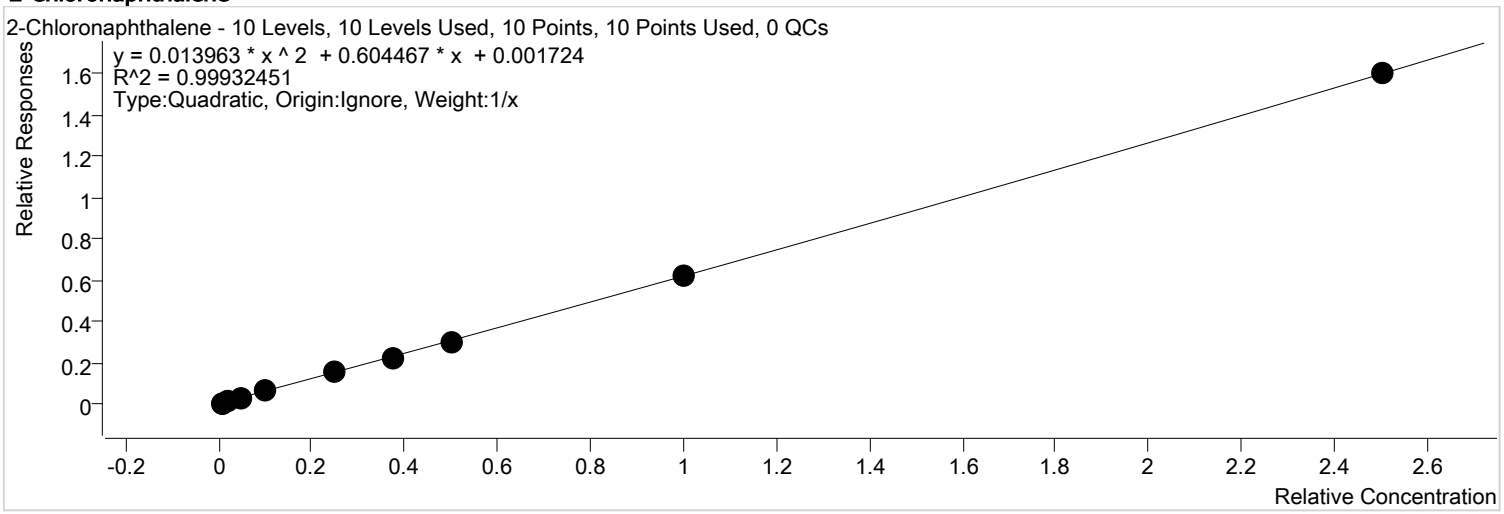
2-Fluorobiphenyl (surr)



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	59	5.0000	0.2812
D:\GC-21\Data\060320\060319.D	Calibration	2	x	238	10.0000	0.5698
D:\GC-21\Data\060320\060320.D	Calibration	3	x	502	20.0000	0.5739
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1615	50.0000	0.6986
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2842	100.0000	0.6476
D:\GC-21\Data\060320\060323.D	Calibration	6	x	7733	250.0000	0.6920
D:\GC-21\Data\060320\060324.D	Calibration	7	x	11257	375.0000	0.6403
D:\GC-21\Data\060320\060325.D	Calibration	8	x	14582	500.0000	0.6299
D:\GC-21\Data\060320\060326.D	Calibration	9	x	29688	1000.0000	0.6426
D:\GC-21\Data\060320\060327.D	Calibration	10	x	73942	2500.0000	0.6462

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

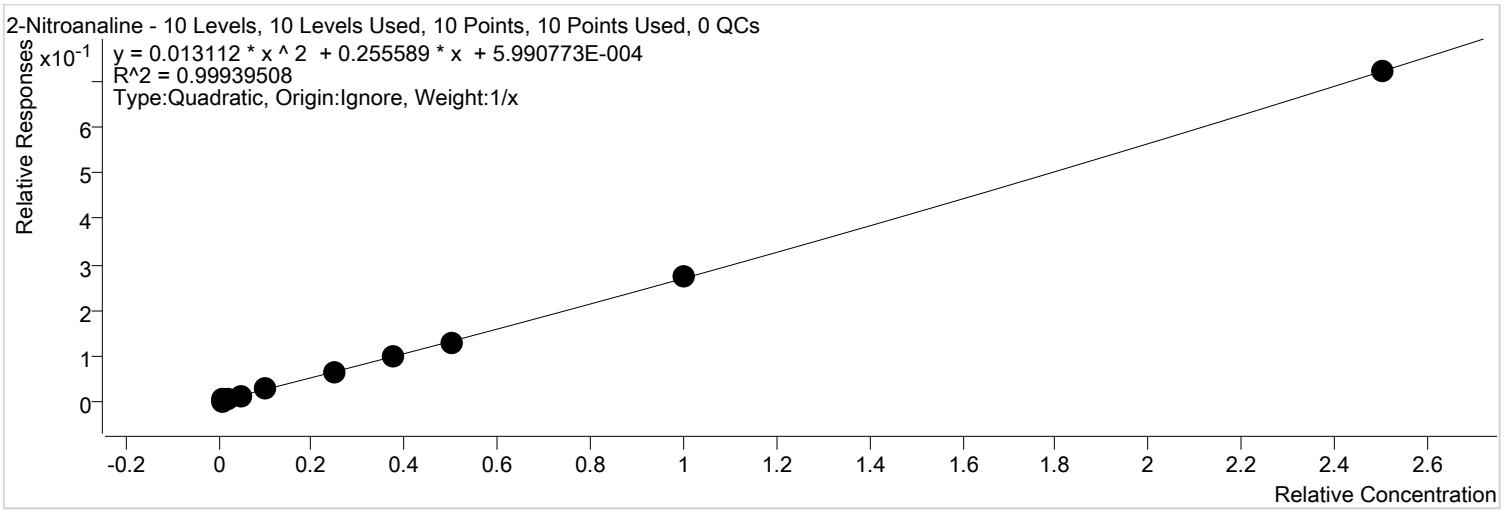
2-Chloronaphthalene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	444	10.0000	1.0499
D:\GC-21\Data\060320\060319.D	Calibration	2	x	563	20.0000	0.6745
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1117	40.0000	0.6382
D:\GC-21\Data\060320\060321.D	Calibration	4	x	2897	100.0000	0.6268
D:\GC-21\Data\060320\060322.D	Calibration	5	x	6079	200.0000	0.6926
D:\GC-21\Data\060320\060323.D	Calibration	6	x	14387	500.0000	0.6437
D:\GC-21\Data\060320\060324.D	Calibration	7	x	21184	750.0000	0.6024
D:\GC-21\Data\060320\060325.D	Calibration	8	x	27449	1000.0000	0.5929
D:\GC-21\Data\060320\060326.D	Calibration	9	x	57554	2000.0000	0.6229
D:\GC-21\Data\060320\060327.D	Calibration	10	x	146564	5000.0000	0.6404

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

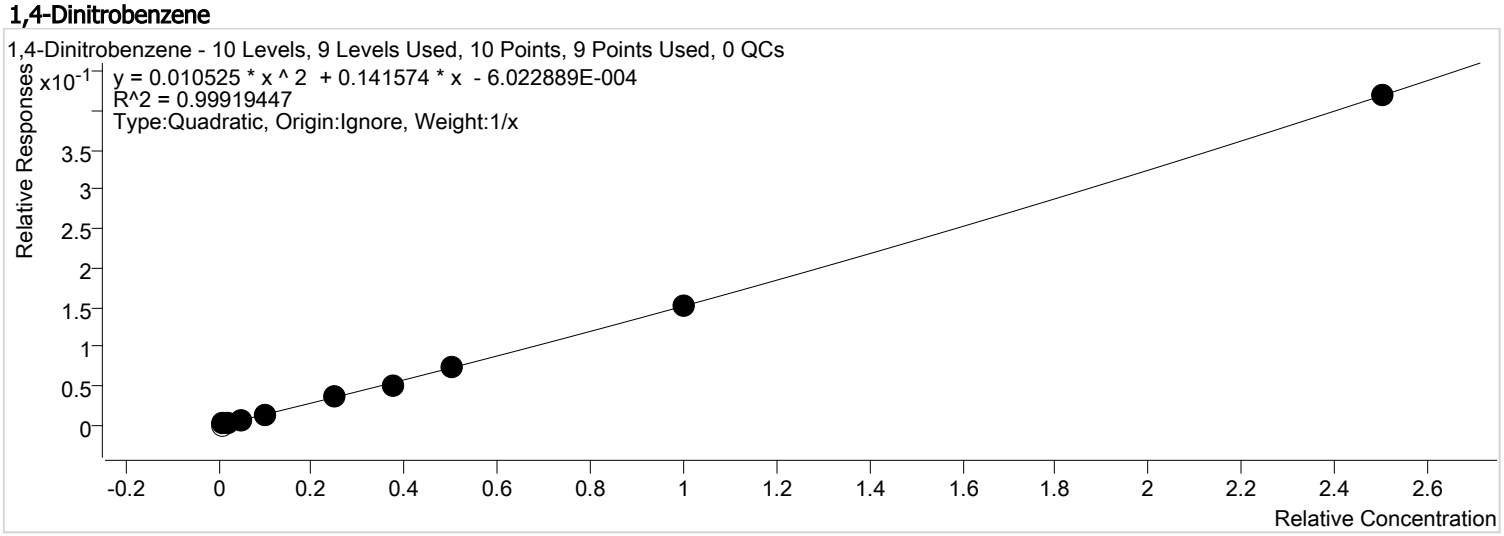
2-Nitroanaline



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	137	10.0000	0.3244
D:\GC-21\Data\060320\060319.D	Calibration	2	x	254	20.0000	0.3041
D:\GC-21\Data\060320\060320.D	Calibration	3	x	603	40.0000	0.3446
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1191	100.0000	0.2578
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2557	200.0000	0.2914
D:\GC-21\Data\060320\060323.D	Calibration	6	x	5641	500.0000	0.2524
D:\GC-21\Data\060320\060324.D	Calibration	7	x	9030	750.0000	0.2568
D:\GC-21\Data\060320\060325.D	Calibration	8	x	12066	1000.0000	0.2606
D:\GC-21\Data\060320\060326.D	Calibration	9	x	25154	2000.0000	0.2722
D:\GC-21\Data\060320\060327.D	Calibration	10	x	66009	5000.0000	0.2884

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

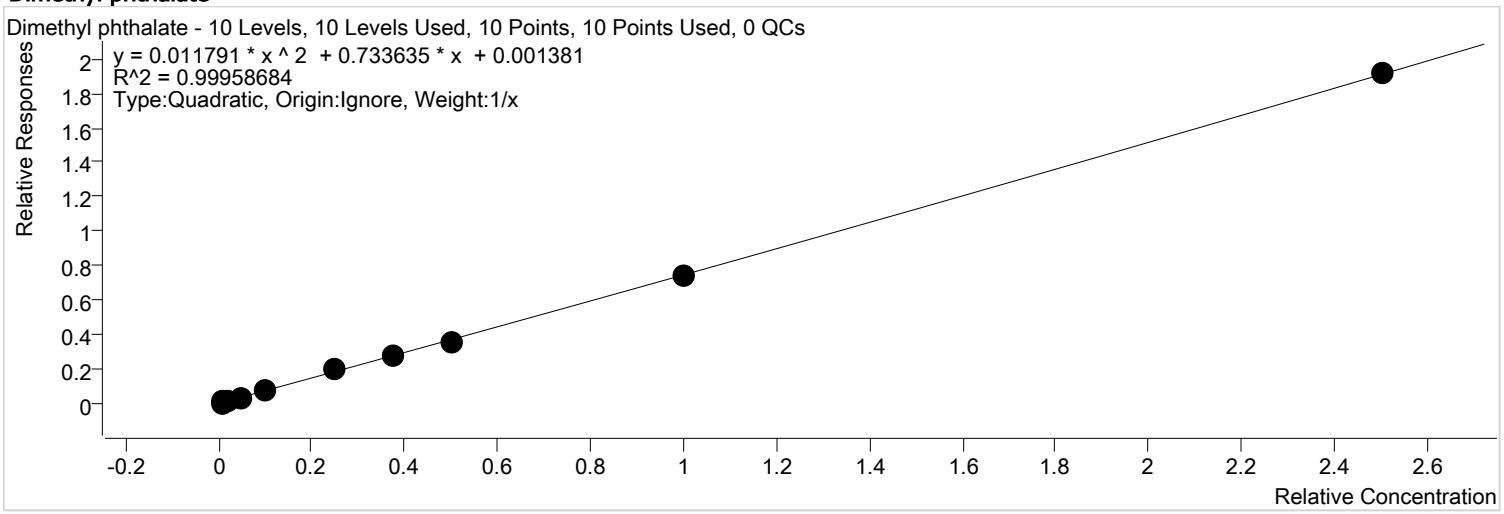
1,4-Dinitrobenzene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1		32	10.0000	0.0756
D:\GC-21\Data\060320\060319.D	Calibration	2	x	93	20.0000	0.1117
D:\GC-21\Data\060320\060320.D	Calibration	3	x	160	40.0000	0.0916
D:\GC-21\Data\060320\060321.D	Calibration	4	x	529	100.0000	0.1144
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1200	200.0000	0.1367
D:\GC-21\Data\060320\060323.D	Calibration	6	x	3406	500.0000	0.1524
D:\GC-21\Data\060320\060324.D	Calibration	7	x	4768	750.0000	0.1356
D:\GC-21\Data\060320\060325.D	Calibration	8	x	6910	1000.0000	0.1492
D:\GC-21\Data\060320\060326.D	Calibration	9	x	13949	2000.0000	0.1510
D:\GC-21\Data\060320\060327.D	Calibration	10	x	38375	5000.0000	0.1677

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

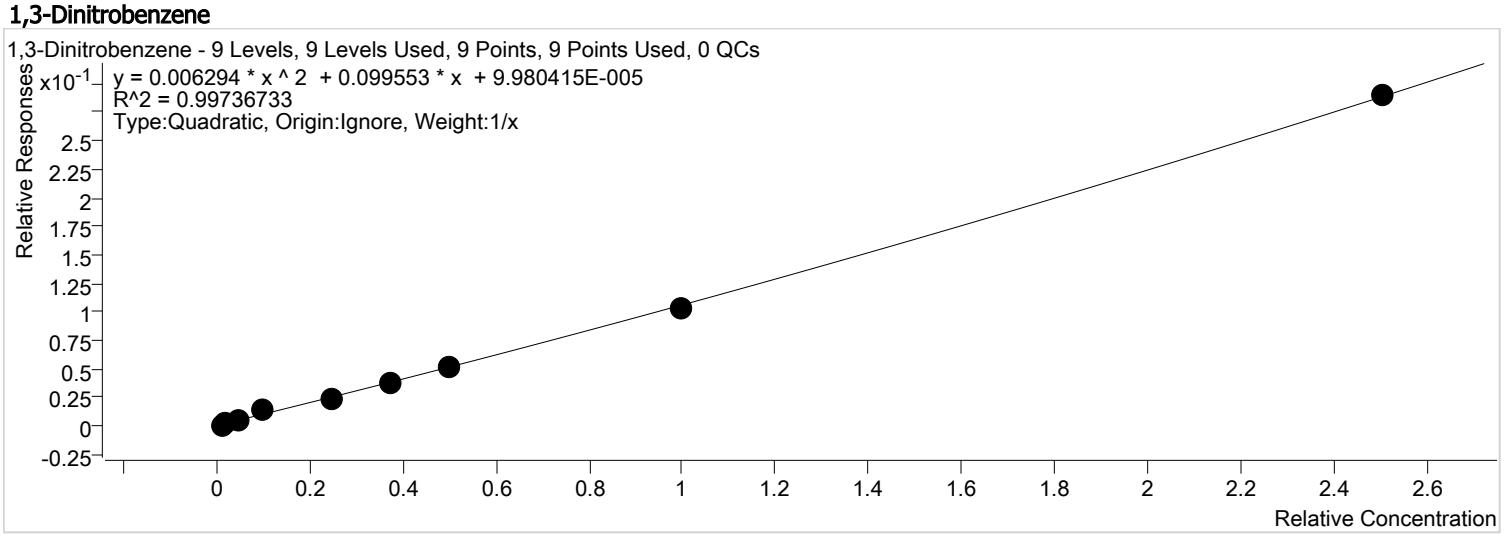
Dimethyl phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	394	10.0000	0.9322
D:\GC-21\Data\060320\060319.D	Calibration	2	x	760	20.0000	0.9095
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1422	40.0000	0.8129
D:\GC-21\Data\060320\060321.D	Calibration	4	x	3400	100.0000	0.7357
D:\GC-21\Data\060320\060322.D	Calibration	5	x	6876	200.0000	0.7835
D:\GC-21\Data\060320\060323.D	Calibration	6	x	17710	500.0000	0.7924
D:\GC-21\Data\060320\060324.D	Calibration	7	x	25909	750.0000	0.7368
D:\GC-21\Data\060320\060325.D	Calibration	8	x	33583	1000.0000	0.7254
D:\GC-21\Data\060320\060326.D	Calibration	9	x	68205	2000.0000	0.7381
D:\GC-21\Data\060320\060327.D	Calibration	10	x	175151	5000.0000	0.7653

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

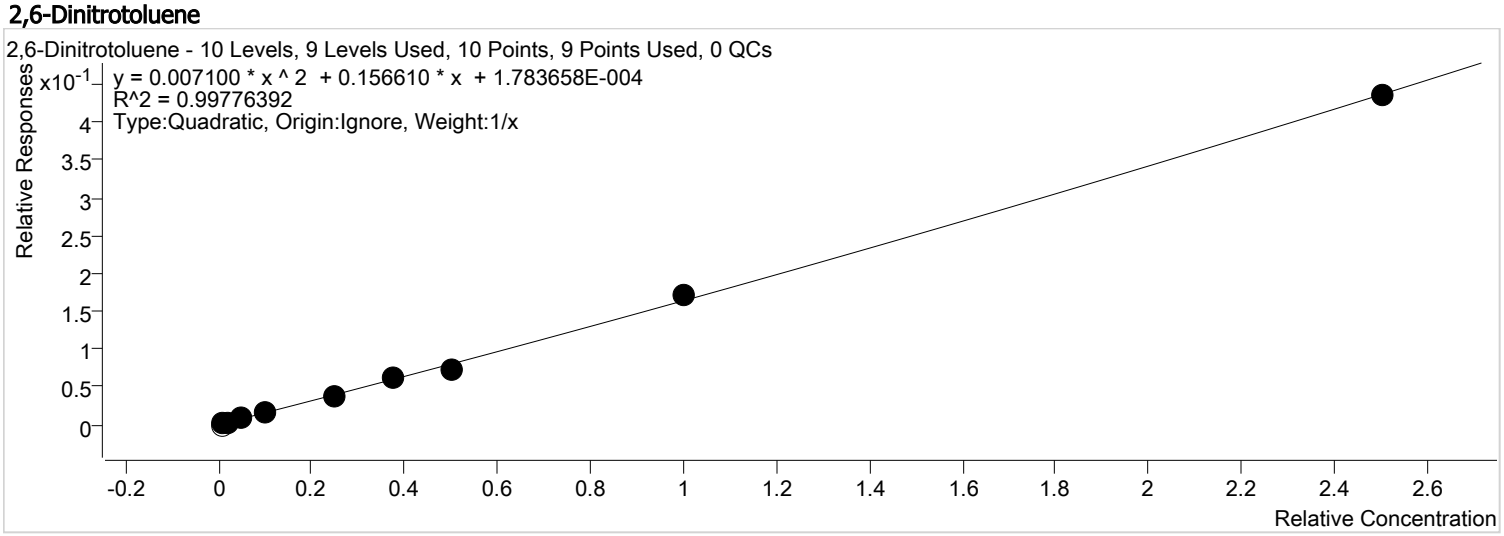
1,3-Dinitrobenzene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060319.D	Calibration	2	x	69	20.0000	0.0827
D:\GC-21\Data\060320\060320.D	Calibration	3	x	223	40.0000	0.1275
D:\GC-21\Data\060320\060321.D	Calibration	4	x	377	100.0000	0.0815
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1147	200.0000	0.1307
D:\GC-21\Data\060320\060323.D	Calibration	6	x	2193	500.0000	0.0981
D:\GC-21\Data\060320\060324.D	Calibration	7	x	3542	750.0000	0.1007
D:\GC-21\Data\060320\060325.D	Calibration	8	x	4877	1000.0000	0.1053
D:\GC-21\Data\060320\060326.D	Calibration	9	x	9517	2000.0000	0.1030
D:\GC-21\Data\060320\060327.D	Calibration	10	x	26486	5000.0000	0.1157

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

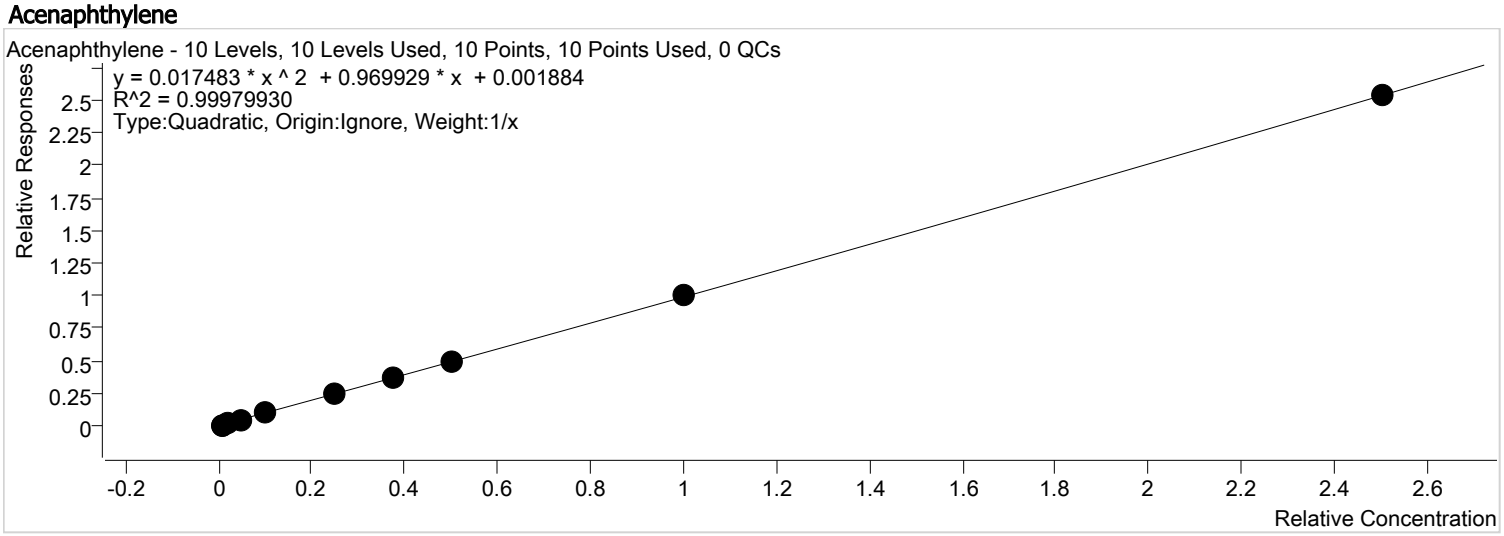
2,6-Dinitrotoluene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1		0	10.0000	0.0000
D:\GC-21\Data\060320\060319.D	Calibration	2	x	122	20.0000	0.1462
D:\GC-21\Data\060320\060320.D	Calibration	3	x	308	40.0000	0.1762
D:\GC-21\Data\060320\060321.D	Calibration	4	x	798	100.0000	0.1726
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1552	200.0000	0.1768
D:\GC-21\Data\060320\060323.D	Calibration	6	x	3424	500.0000	0.1532
D:\GC-21\Data\060320\060324.D	Calibration	7	x	5760	750.0000	0.1638
D:\GC-21\Data\060320\060325.D	Calibration	8	x	6626	1000.0000	0.1431
D:\GC-21\Data\060320\060326.D	Calibration	9	x	15880	2000.0000	0.1719
D:\GC-21\Data\060320\060327.D	Calibration	10	x	39774	5000.0000	0.1738

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

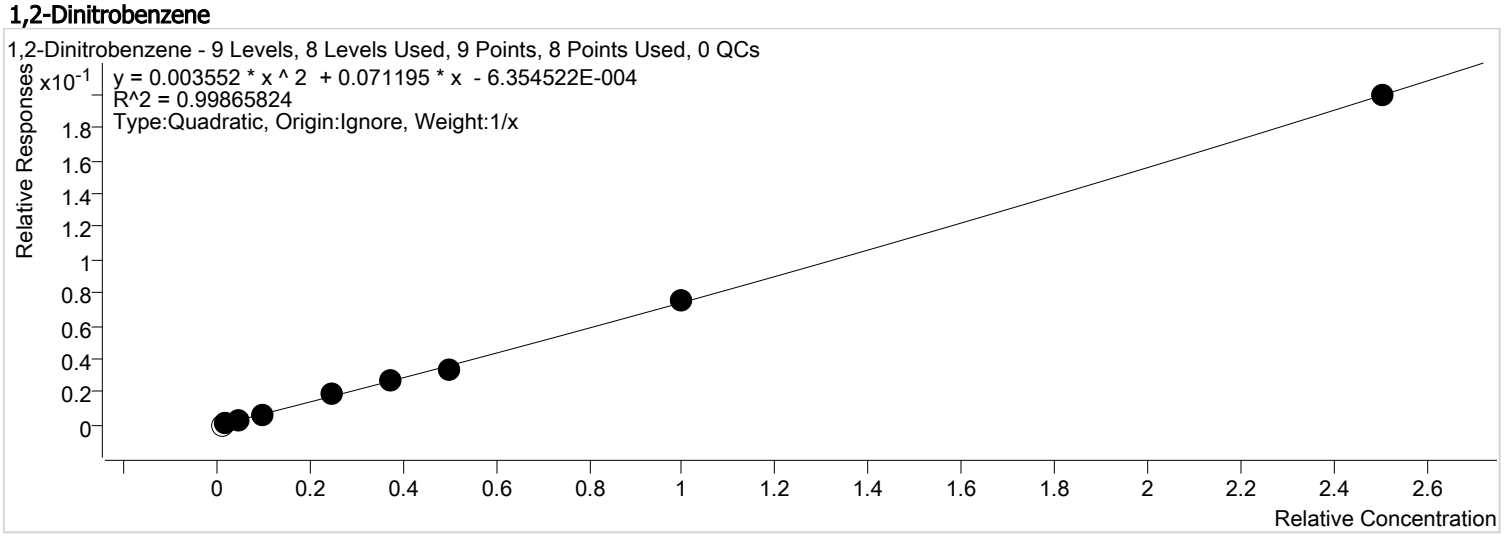
Acenaphthylene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	627	10.0000	1.4830
D:\GC-21\Data\060320\060319.D	Calibration	2	x	864	20.0000	1.0346
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1866	40.0000	1.0667
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4376	100.0000	0.9468
D:\GC-21\Data\060320\060322.D	Calibration	5	x	9118	200.0000	1.0389
D:\GC-21\Data\060320\060323.D	Calibration	6	x	22315	500.0000	0.9984
D:\GC-21\Data\060320\060324.D	Calibration	7	x	34163	750.0000	0.9715
D:\GC-21\Data\060320\060325.D	Calibration	8	x	44849	1000.0000	0.9687
D:\GC-21\Data\060320\060326.D	Calibration	9	x	92005	2000.0000	0.9957
D:\GC-21\Data\060320\060327.D	Calibration	10	x	232054	5000.0000	1.0139

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

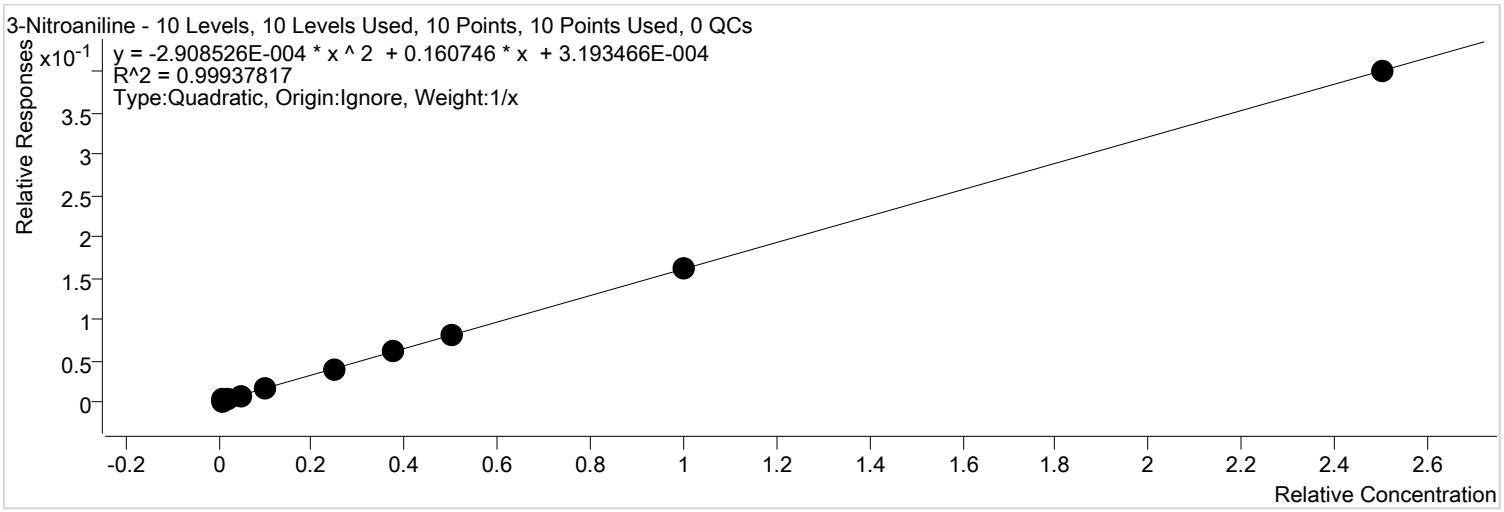
1,2-Dinitrobenzene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060319.D	Calibration	2		0	20.0000	0.0000
D:\GC-21\Data\060320\060320.D	Calibration	3	x	61	40.0000	0.0346
D:\GC-21\Data\060320\060321.D	Calibration	4	x	287	100.0000	0.0621
D:\GC-21\Data\060320\060322.D	Calibration	5	x	569	200.0000	0.0648
D:\GC-21\Data\060320\060323.D	Calibration	6	x	1695	500.0000	0.0758
D:\GC-21\Data\060320\060324.D	Calibration	7	x	2496	750.0000	0.0710
D:\GC-21\Data\060320\060325.D	Calibration	8	x	3032	1000.0000	0.0655
D:\GC-21\Data\060320\060326.D	Calibration	9	x	6999	2000.0000	0.0757
D:\GC-21\Data\060320\060327.D	Calibration	10	x	18250	5000.0000	0.0797

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

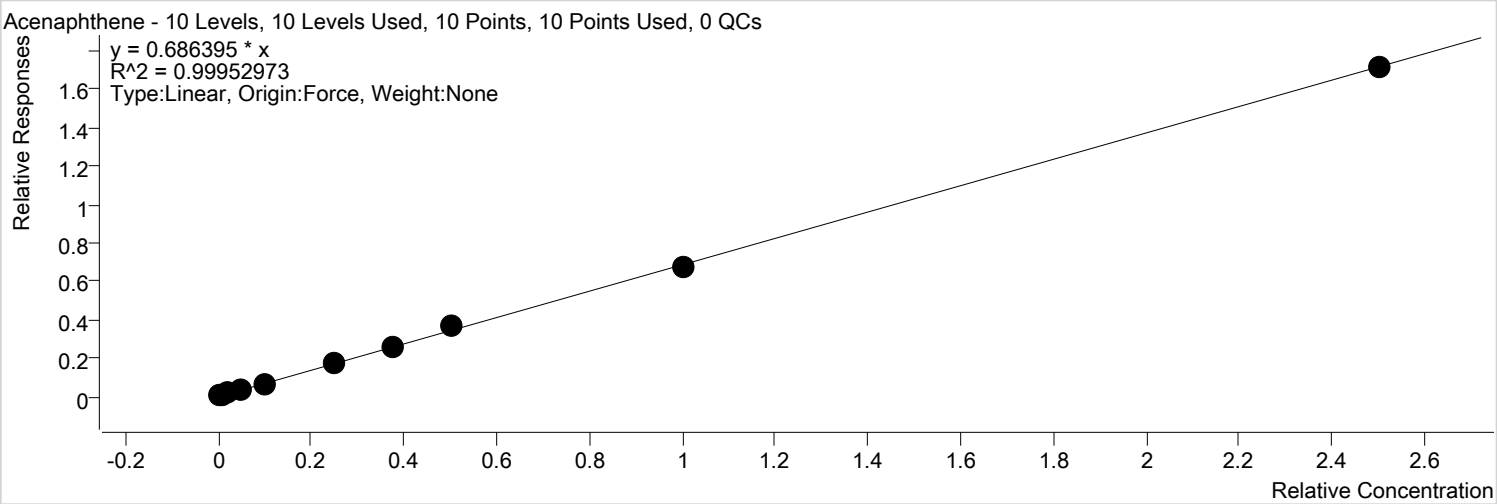
3-Nitroaniline



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	107	10.0000	0.2522
D:\GC-21\Data\060320\060319.D	Calibration	2	x	173	20.0000	0.2066
D:\GC-21\Data\060320\060320.D	Calibration	3	x	283	40.0000	0.1616
D:\GC-21\Data\060320\060321.D	Calibration	4	x	649	100.0000	0.1405
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1458	200.0000	0.1661
D:\GC-21\Data\060320\060323.D	Calibration	6	x	3439	500.0000	0.1538
D:\GC-21\Data\060320\060324.D	Calibration	7	x	5736	750.0000	0.1631
D:\GC-21\Data\060320\060325.D	Calibration	8	x	7583	1000.0000	0.1638
D:\GC-21\Data\060320\060326.D	Calibration	9	x	15073	2000.0000	0.1631
D:\GC-21\Data\060320\060327.D	Calibration	10	x	36555	5000.0000	0.1597

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

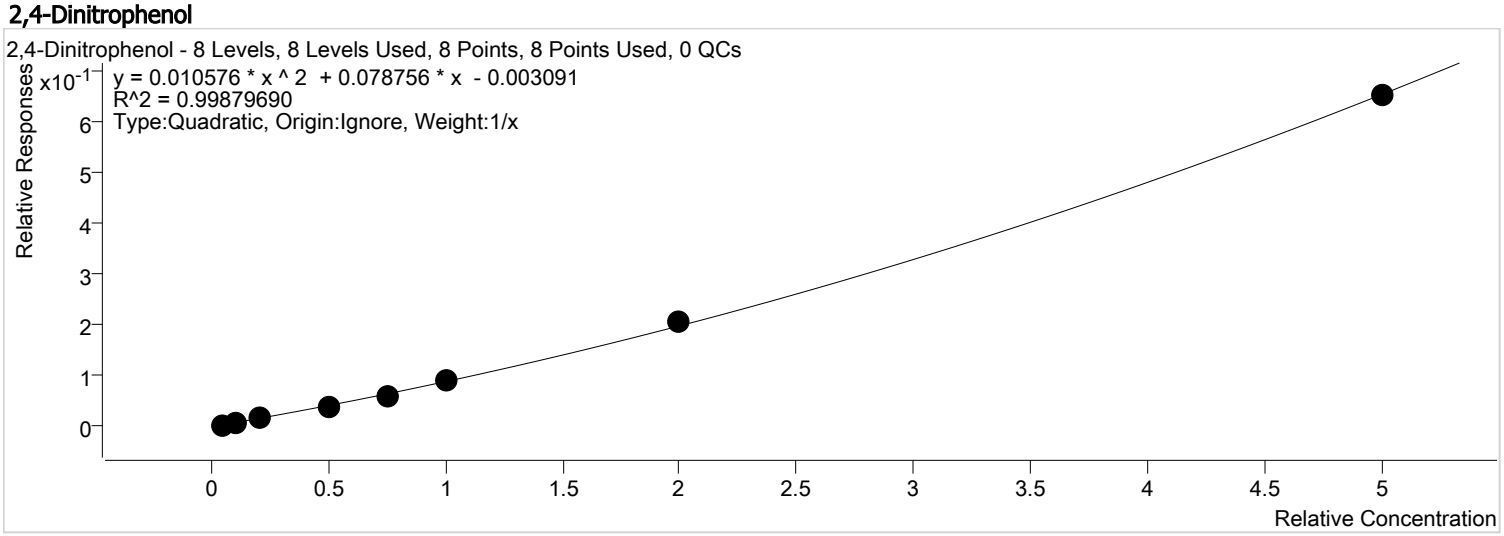
Acenaphthene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	331	10.0000	0.7837
D:\GC-21\Data\060320\060319.D	Calibration	2	x	803	20.0000	0.9617
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1481	40.0000	0.8462
D:\GC-21\Data\060320\060321.D	Calibration	4	x	3367	100.0000	0.7285
D:\GC-21\Data\060320\060322.D	Calibration	5	x	5899	200.0000	0.6721
D:\GC-21\Data\060320\060323.D	Calibration	6	x	15711	500.0000	0.7029
D:\GC-21\Data\060320\060324.D	Calibration	7	x	24767	750.0000	0.7043
D:\GC-21\Data\060320\060325.D	Calibration	8	x	34718	1000.0000	0.7499
D:\GC-21\Data\060320\060326.D	Calibration	9	x	62637	2000.0000	0.6779
D:\GC-21\Data\060320\060327.D	Calibration	10	x	156692	5000.0000	0.6846

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

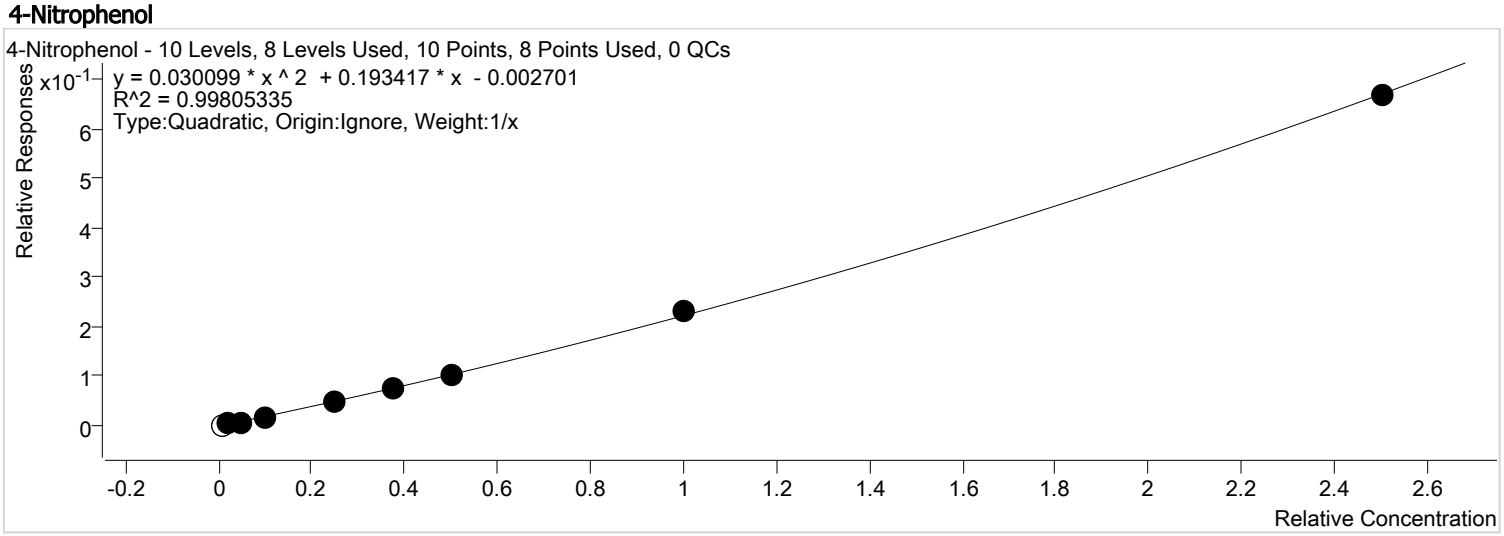
2,4-Dinitrophenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060320.D	Calibration	3	x	30	80.0000	0.0160
D:\GC-21\Data\060320\060321.D	Calibration	4	x	137	200.0000	0.0295
D:\GC-21\Data\060320\060322.D	Calibration	5	x	710	400.0000	0.0776
D:\GC-21\Data\060320\060323.D	Calibration	6	x	1690	1000.0000	0.0724
D:\GC-21\Data\060320\060324.D	Calibration	7	x	2828	1500.0000	0.0773
D:\GC-21\Data\060320\060325.D	Calibration	8	x	4269	2000.0000	0.0870
D:\GC-21\Data\060320\060326.D	Calibration	9	x	10231	4000.0000	0.1019
D:\GC-21\Data\060320\060327.D	Calibration	10	x	30103	10000.0000	0.1306

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

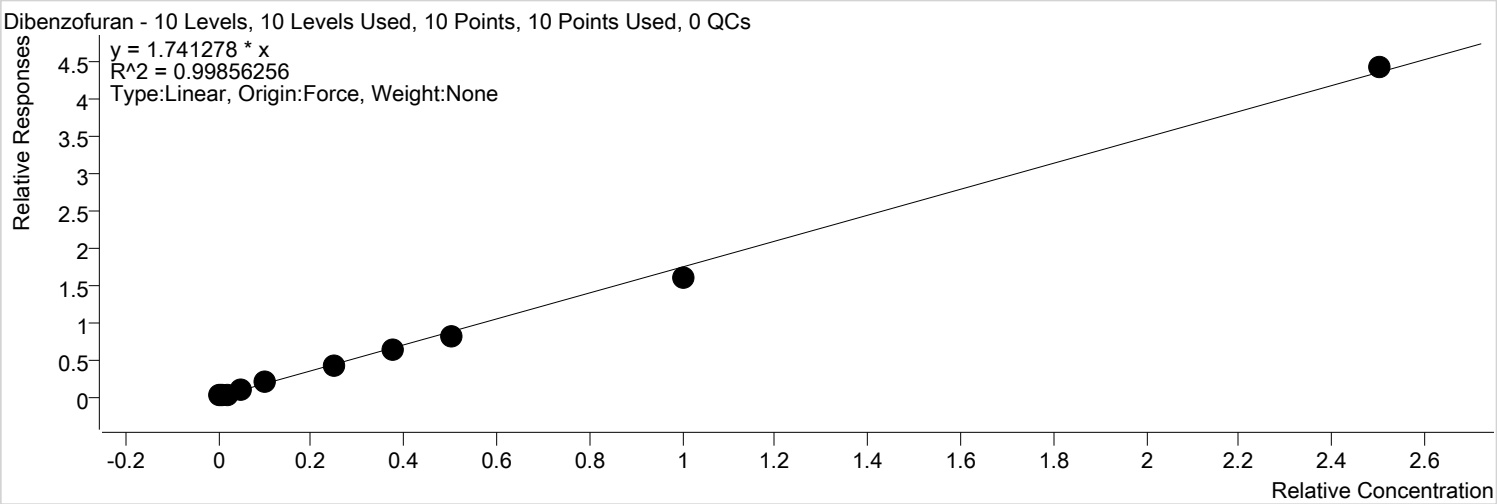
4-Nitrophenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1		0	10.0000	0.0000
D:\GC-21\Data\060320\060319.D	Calibration	2		0	20.0000	0.0000
D:\GC-21\Data\060320\060320.D	Calibration	3	x	123	40.0000	0.1314
D:\GC-21\Data\060320\060321.D	Calibration	4	x	253	100.0000	0.1084
D:\GC-21\Data\060320\060322.D	Calibration	5	x	558	200.0000	0.1220
D:\GC-21\Data\060320\060323.D	Calibration	6	x	2262	500.0000	0.1937
D:\GC-21\Data\060320\060324.D	Calibration	7	x	3621	750.0000	0.1980
D:\GC-21\Data\060320\060325.D	Calibration	8	x	4859	1000.0000	0.1981
D:\GC-21\Data\060320\060326.D	Calibration	9	x	11568	2000.0000	0.2303
D:\GC-21\Data\060320\060327.D	Calibration	10	x	30693	5000.0000	0.2663

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

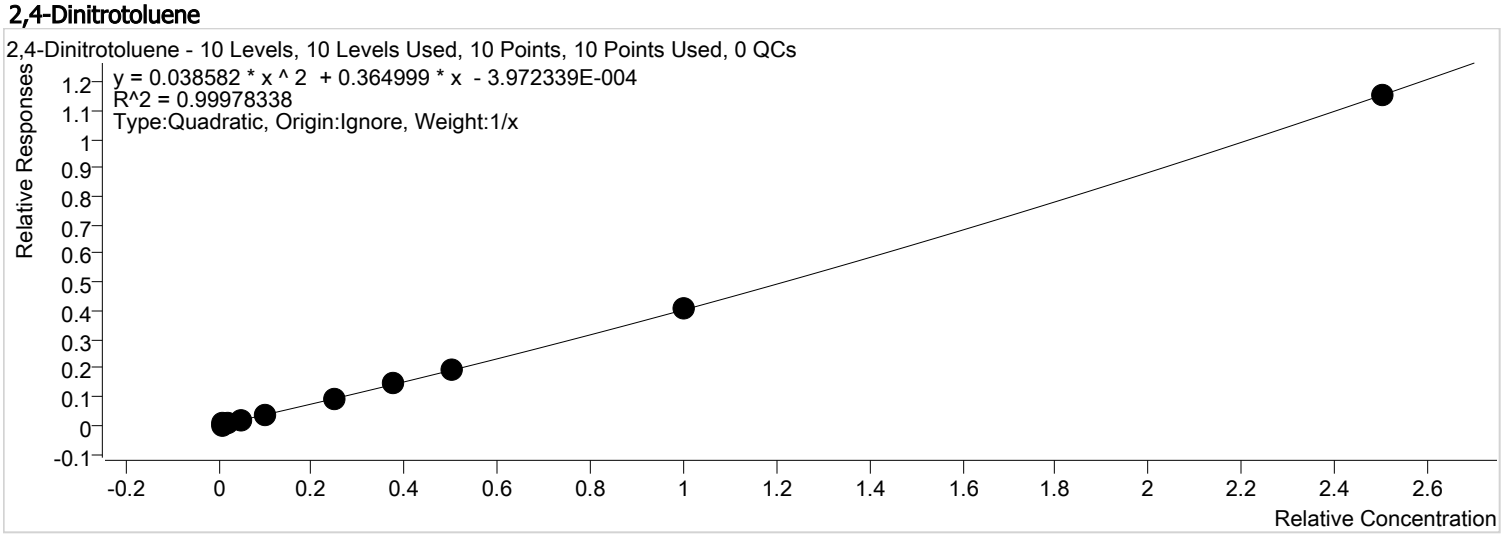
Dibenzofuran



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	518	10.0000	2.2865
D:\GC-21\Data\060320\060319.D	Calibration	2	x	883	20.0000	2.0475
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1435	40.0000	1.5352
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4166	100.0000	1.7854
D:\GC-21\Data\060320\060322.D	Calibration	5	x	8531	200.0000	1.8655
D:\GC-21\Data\060320\060323.D	Calibration	6	x	19525	500.0000	1.6720
D:\GC-21\Data\060320\060324.D	Calibration	7	x	31490	750.0000	1.7218
D:\GC-21\Data\060320\060325.D	Calibration	8	x	40613	1000.0000	1.6561
D:\GC-21\Data\060320\060326.D	Calibration	9	x	80815	2000.0000	1.6092
D:\GC-21\Data\060320\060327.D	Calibration	10	x	203635	5000.0000	1.7667

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

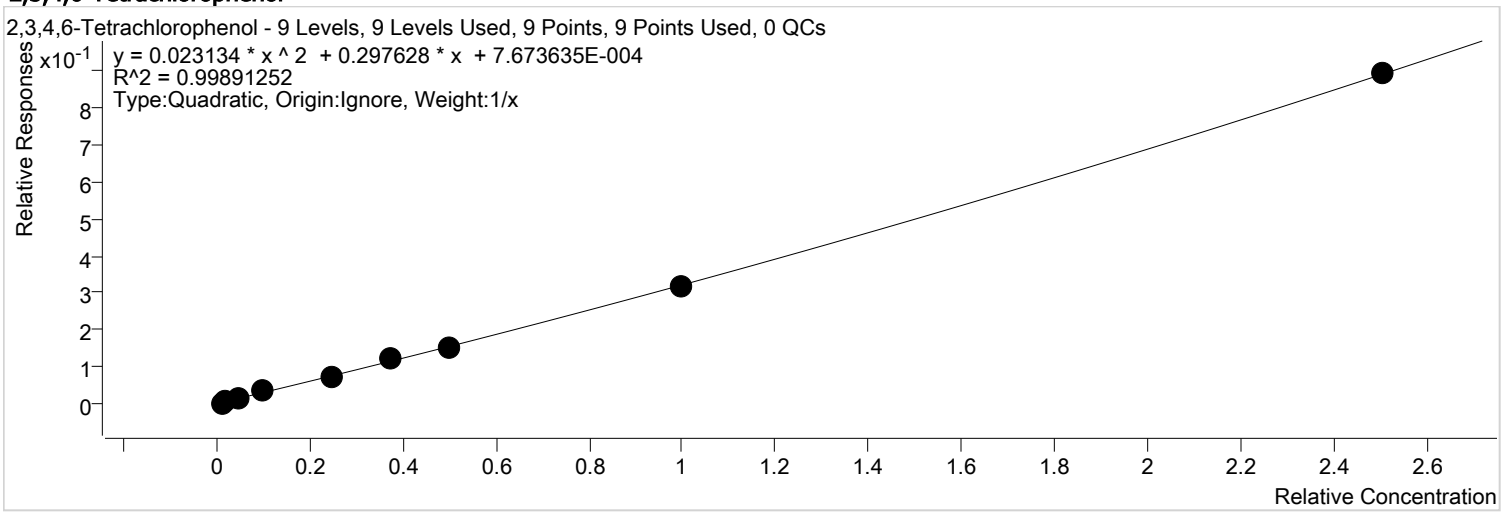
2,4-Dinitrotoluene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	63	10.0000	0.2798
D:\GC-21\Data\060320\060319.D	Calibration	2	x	136	20.0000	0.3161
D:\GC-21\Data\060320\060320.D	Calibration	3	x	340	40.0000	0.3639
D:\GC-21\Data\060320\060321.D	Calibration	4	x	859	100.0000	0.3681
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1683	200.0000	0.3680
D:\GC-21\Data\060320\060323.D	Calibration	6	x	4075	500.0000	0.3490
D:\GC-21\Data\060320\060324.D	Calibration	7	x	6997	750.0000	0.3826
D:\GC-21\Data\060320\060325.D	Calibration	8	x	9445	1000.0000	0.3851
D:\GC-21\Data\060320\060326.D	Calibration	9	x	20454	2000.0000	0.4073
D:\GC-21\Data\060320\060327.D	Calibration	10	x	53101	5000.0000	0.4607

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

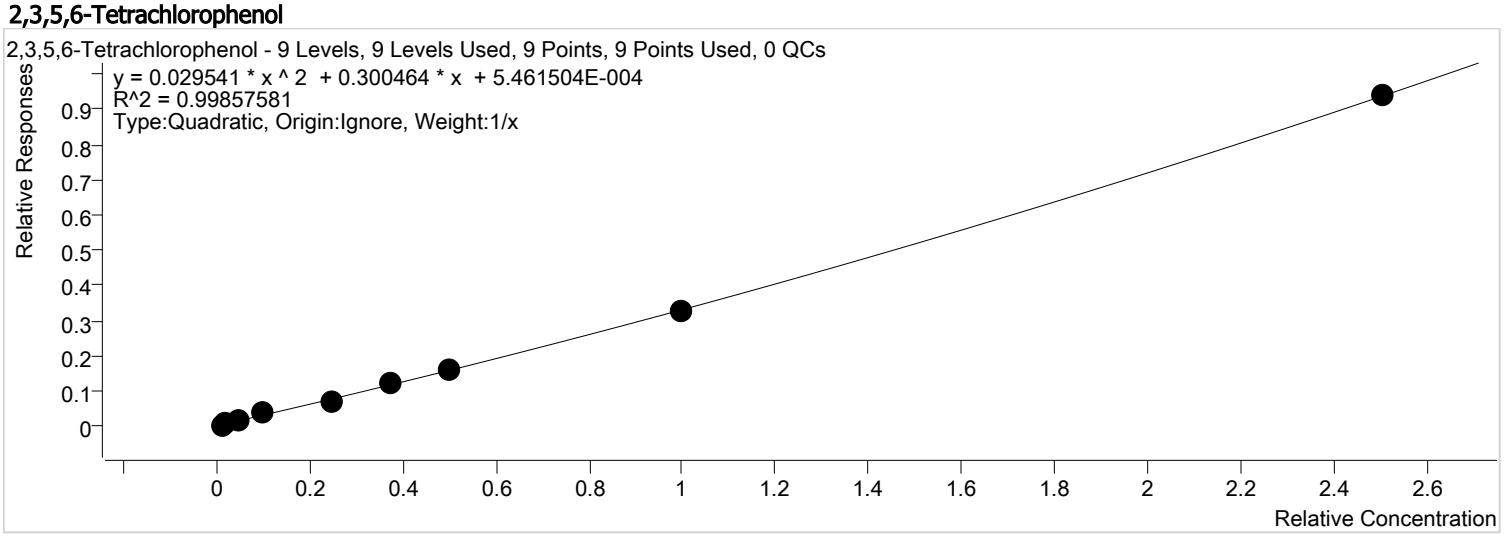
2,3,4,6-Tetrachlorophenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060319.D	Calibration	2	x	139	20.0000	0.3217
D:\GC-21\Data\060320\060320.D	Calibration	3	x	329	40.0000	0.3518
D:\GC-21\Data\060320\060321.D	Calibration	4	x	732	100.0000	0.3139
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1645	200.0000	0.3598
D:\GC-21\Data\060320\060323.D	Calibration	6	x	3333	500.0000	0.2854
D:\GC-21\Data\060320\060324.D	Calibration	7	x	5919	750.0000	0.3236
D:\GC-21\Data\060320\060325.D	Calibration	8	x	7529	1000.0000	0.3070
D:\GC-21\Data\060320\060326.D	Calibration	9	x	15862	2000.0000	0.3158
D:\GC-21\Data\060320\060327.D	Calibration	10	x	41103	5000.0000	0.3566

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

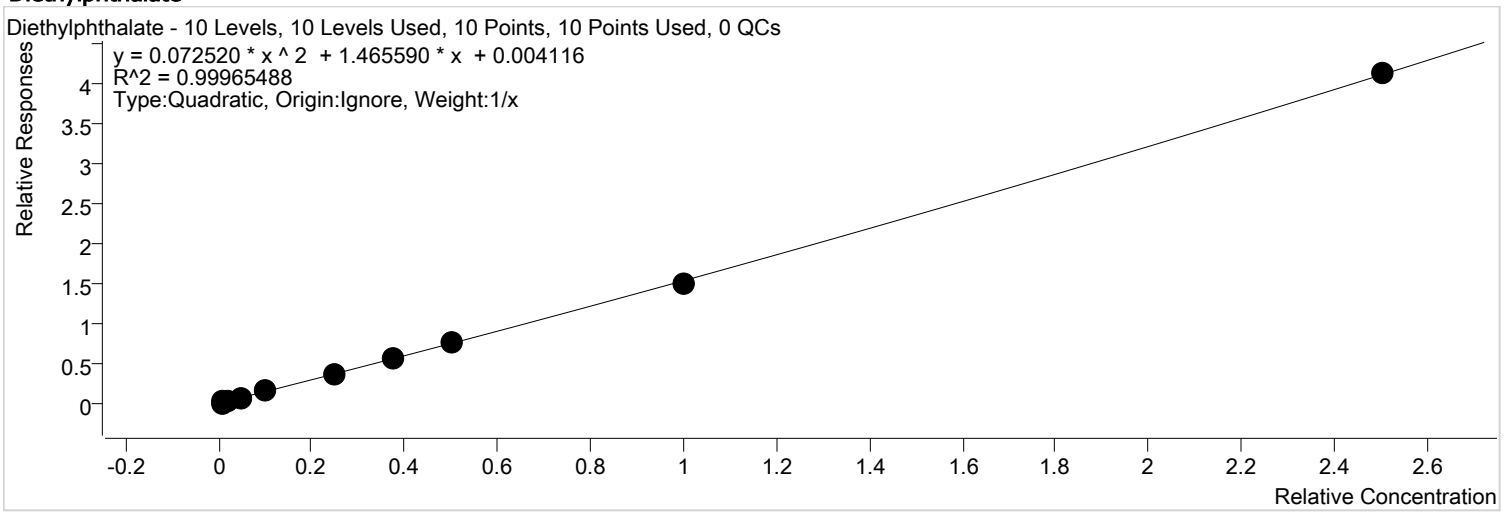
2,3,5,6-Tetrachlorophenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060319.D	Calibration	2	x	154	20.0000	0.3575
D:\GC-21\Data\060320\060320.D	Calibration	3	x	322	40.0000	0.3442
D:\GC-21\Data\060320\060321.D	Calibration	4	x	587	100.0000	0.2515
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1645	200.0000	0.3598
D:\GC-21\Data\060320\060323.D	Calibration	6	x	3354	500.0000	0.2872
D:\GC-21\Data\060320\060324.D	Calibration	7	x	6087	750.0000	0.3328
D:\GC-21\Data\060320\060325.D	Calibration	8	x	7787	1000.0000	0.3175
D:\GC-21\Data\060320\060326.D	Calibration	9	x	16276	2000.0000	0.3241
D:\GC-21\Data\060320\060327.D	Calibration	10	x	43251	5000.0000	0.3752

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

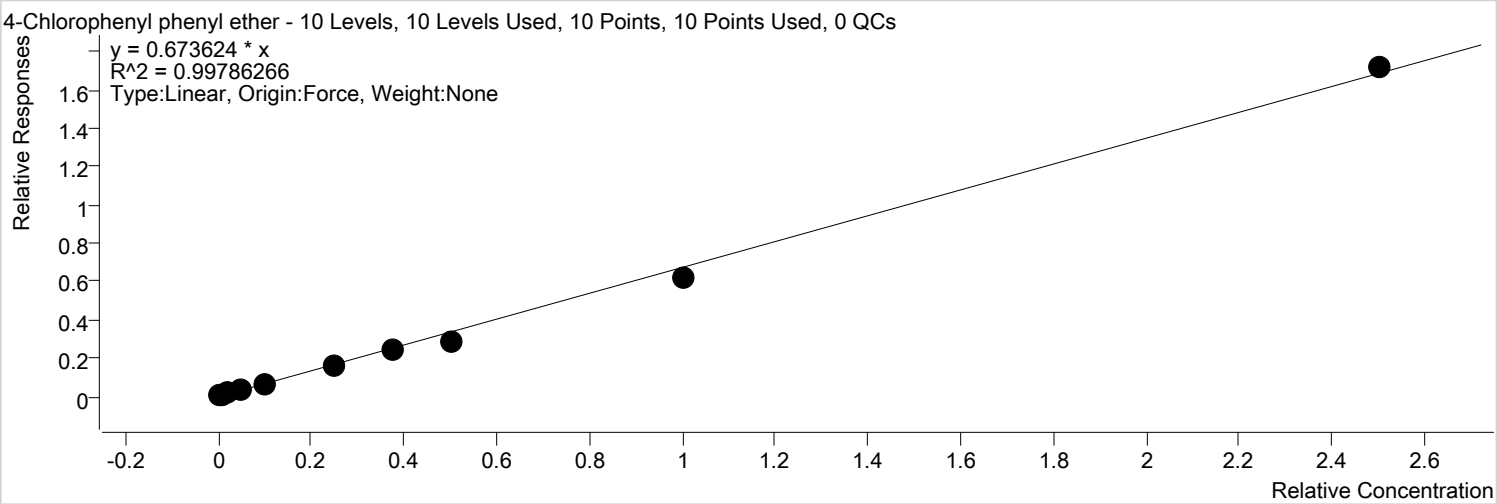
Diethylphthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	517	10.0000	2.2830
D:\GC-21\Data\060320\060319.D	Calibration	2	x	772	20.0000	1.7913
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1457	40.0000	1.5593
D:\GC-21\Data\060320\060321.D	Calibration	4	x	3874	100.0000	1.6601
D:\GC-21\Data\060320\060322.D	Calibration	5	x	7283	200.0000	1.5926
D:\GC-21\Data\060320\060323.D	Calibration	6	x	17912	500.0000	1.5339
D:\GC-21\Data\060320\060324.D	Calibration	7	x	27632	750.0000	1.5108
D:\GC-21\Data\060320\060325.D	Calibration	8	x	37439	1000.0000	1.5267
D:\GC-21\Data\060320\060326.D	Calibration	9	x	75261	2000.0000	1.4986
D:\GC-21\Data\060320\060327.D	Calibration	10	x	190663	5000.0000	1.6542

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

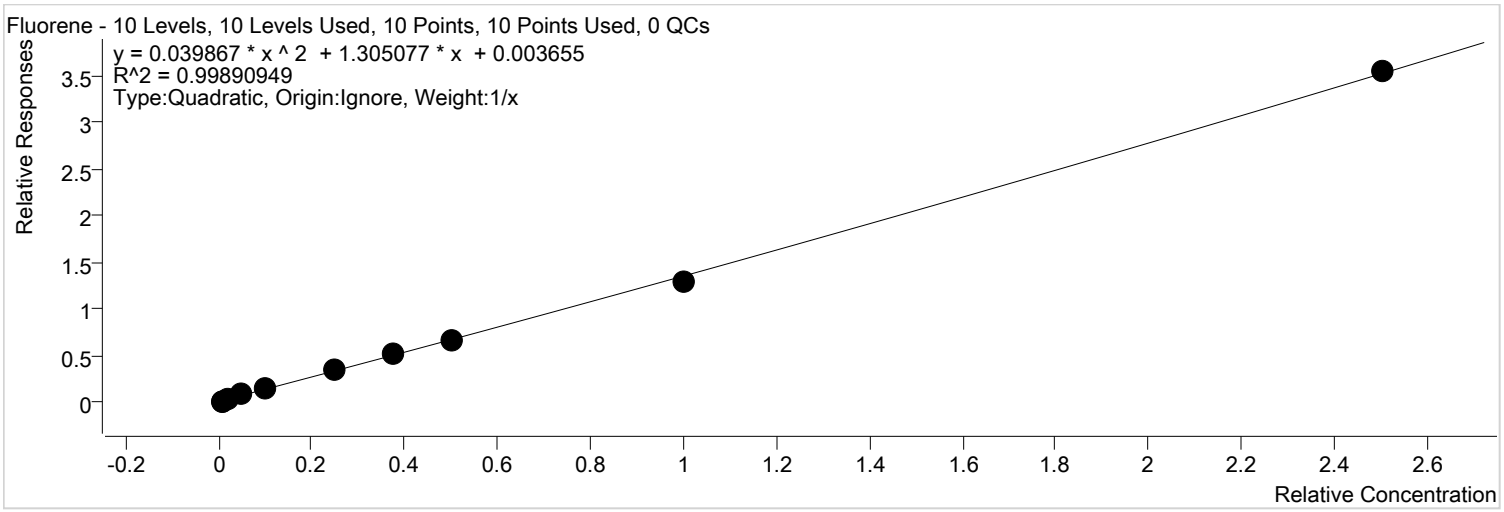
4-Chlorophenyl phenyl ether



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	134	10.0000	0.5933
D:\GC-21\Data\060320\060319.D	Calibration	2	x	398	20.0000	0.9224
D:\GC-21\Data\060320\060320.D	Calibration	3	x	803	40.0000	0.8590
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1693	100.0000	0.7254
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2971	200.0000	0.6498
D:\GC-21\Data\060320\060323.D	Calibration	6	x	7485	500.0000	0.6409
D:\GC-21\Data\060320\060324.D	Calibration	7	x	12091	750.0000	0.6611
D:\GC-21\Data\060320\060325.D	Calibration	8	x	14390	1000.0000	0.5868
D:\GC-21\Data\060320\060326.D	Calibration	9	x	31349	2000.0000	0.6242
D:\GC-21\Data\060320\060327.D	Calibration	10	x	79024	5000.0000	0.6856

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

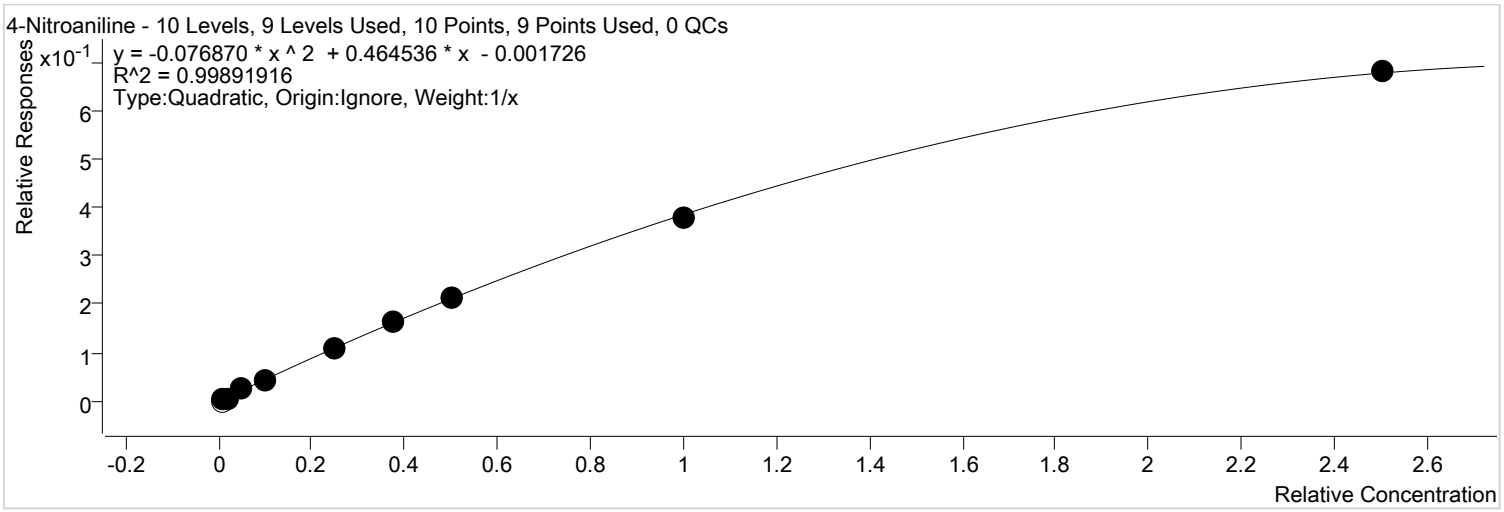
Fluorene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	509	10.0000	2.2467
D:\GC-21\Data\060320\060319.D	Calibration	2	x	634	20.0000	1.4717
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1159	40.0000	1.2398
D:\GC-21\Data\060320\060321.D	Calibration	4	x	3447	100.0000	1.4773
D:\GC-21\Data\060320\060322.D	Calibration	5	x	6524	200.0000	1.4266
D:\GC-21\Data\060320\060323.D	Calibration	6	x	16186	500.0000	1.3860
D:\GC-21\Data\060320\060324.D	Calibration	7	x	25255	750.0000	1.3809
D:\GC-21\Data\060320\060325.D	Calibration	8	x	32922	1000.0000	1.3425
D:\GC-21\Data\060320\060326.D	Calibration	9	x	64406	2000.0000	1.2824
D:\GC-21\Data\060320\060327.D	Calibration	10	x	163038	5000.0000	1.4145

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

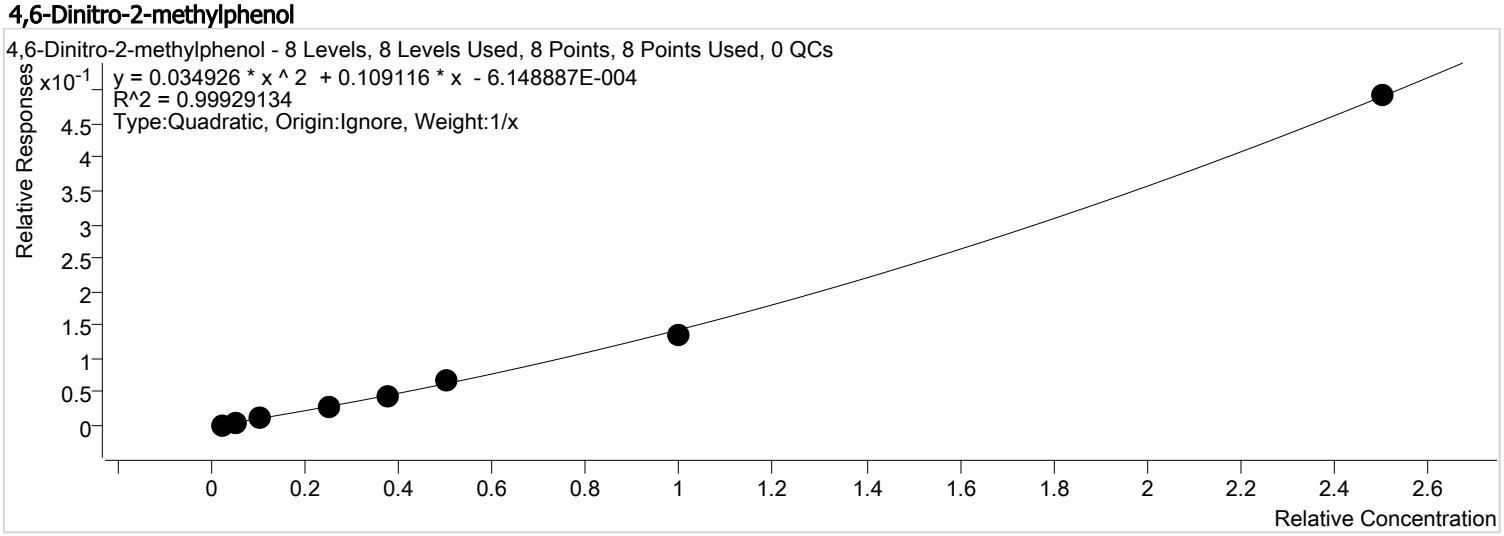
4-Nitroaniline



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1		0	10.0000	0.0000
D:\GC-21\Data\060320\060319.D	Calibration	2	x	120	20.0000	0.2777
D:\GC-21\Data\060320\060320.D	Calibration	3	x	297	40.0000	0.3176
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1191	100.0000	0.5104
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1948	200.0000	0.4260
D:\GC-21\Data\060320\060323.D	Calibration	6	x	5089	500.0000	0.4358
D:\GC-21\Data\060320\060324.D	Calibration	7	x	8033	750.0000	0.4392
D:\GC-21\Data\060320\060325.D	Calibration	8	x	10456	1000.0000	0.4264
D:\GC-21\Data\060320\060326.D	Calibration	9	x	18964	2000.0000	0.3776
D:\GC-21\Data\060320\060327.D	Calibration	10	x	31431	5000.0000	0.2727

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

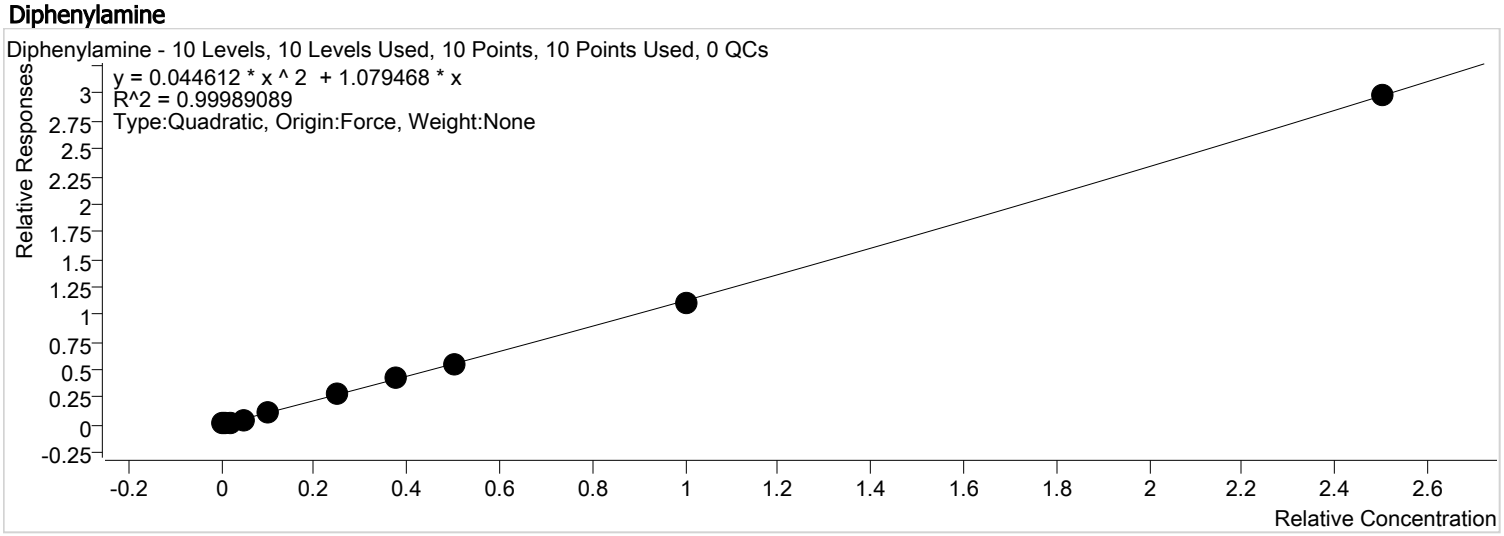
4,6-Dinitro-2-methylphenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060320.D	Calibration	3	x	73	40.0000	0.0778
D:\GC-21\Data\060320\060321.D	Calibration	4	x	199	100.0000	0.0855
D:\GC-21\Data\060320\060322.D	Calibration	5	x	539	200.0000	0.1178
D:\GC-21\Data\060320\060323.D	Calibration	6	x	1358	500.0000	0.1162
D:\GC-21\Data\060320\060324.D	Calibration	7	x	2207	750.0000	0.1207
D:\GC-21\Data\060320\060325.D	Calibration	8	x	3258	1000.0000	0.1329
D:\GC-21\Data\060320\060326.D	Calibration	9	x	6897	2000.0000	0.1373
D:\GC-21\Data\060320\060327.D	Calibration	10	x	22687	5000.0000	0.1968

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

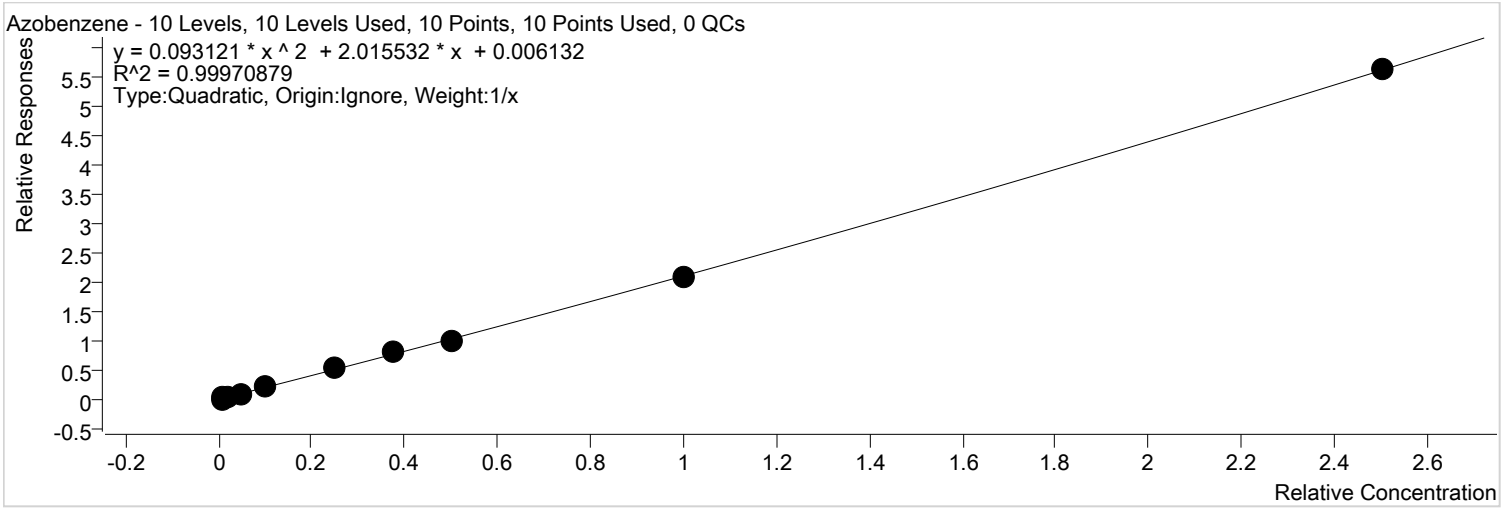
Diphenylamine



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	335	10.0000	1.4803
D:\GC-21\Data\060320\060319.D	Calibration	2	x	611	20.0000	1.4173
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1211	40.0000	1.2962
D:\GC-21\Data\060320\060321.D	Calibration	4	x	2368	100.0000	1.0147
D:\GC-21\Data\060320\060322.D	Calibration	5	x	5313	200.0000	1.1618
D:\GC-21\Data\060320\060323.D	Calibration	6	x	13357	500.0000	1.1438
D:\GC-21\Data\060320\060324.D	Calibration	7	x	20975	750.0000	1.1468
D:\GC-21\Data\060320\060325.D	Calibration	8	x	26642	1000.0000	1.0864
D:\GC-21\Data\060320\060326.D	Calibration	9	x	55894	2000.0000	1.1130
D:\GC-21\Data\060320\060327.D	Calibration	10	x	137344	5000.0000	1.1916

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

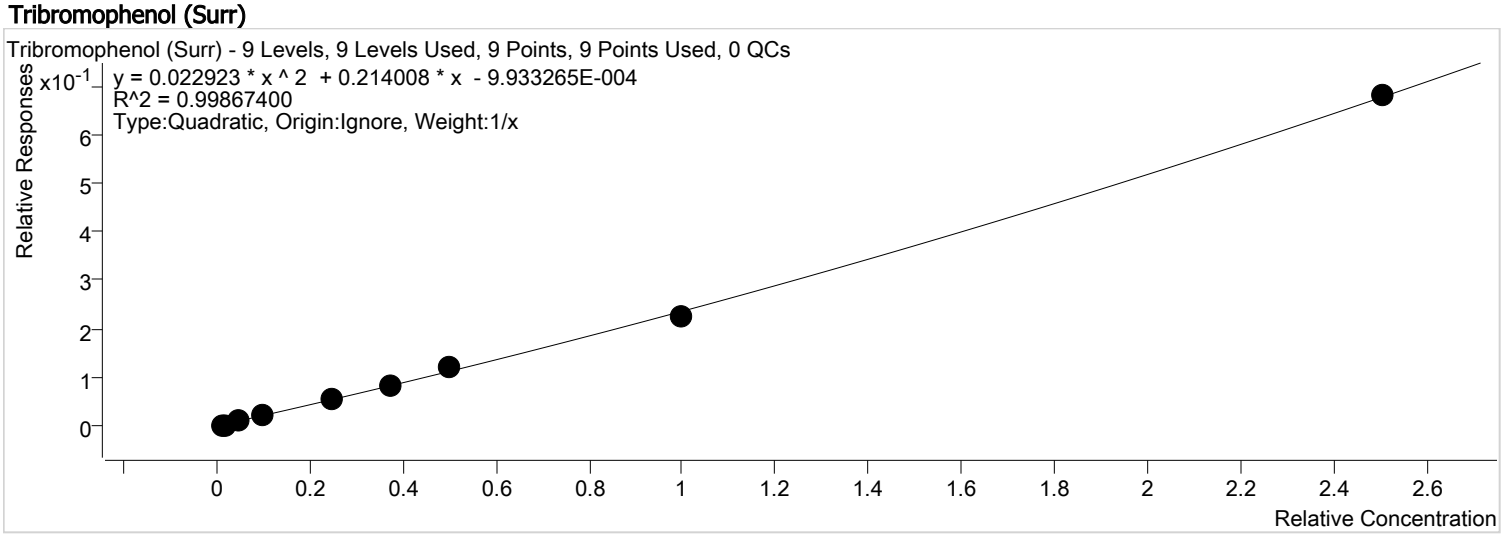
Azobenzene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	697	10.0000	3.0757
D:\GC-21\Data\060320\060319.D	Calibration	2	x	1204	20.0000	2.7930
D:\GC-21\Data\060320\060320.D	Calibration	3	x	2187	40.0000	2.3399
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4770	100.0000	2.0442
D:\GC-21\Data\060320\060322.D	Calibration	5	x	9689	200.0000	2.1187
D:\GC-21\Data\060320\060323.D	Calibration	6	x	24511	500.0000	2.0990
D:\GC-21\Data\060320\060324.D	Calibration	7	x	39433	750.0000	2.1561
D:\GC-21\Data\060320\060325.D	Calibration	8	x	49724	1000.0000	2.0276
D:\GC-21\Data\060320\060326.D	Calibration	9	x	104771	2000.0000	2.0862
D:\GC-21\Data\060320\060327.D	Calibration	10	x	259894	5000.0000	2.2549

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

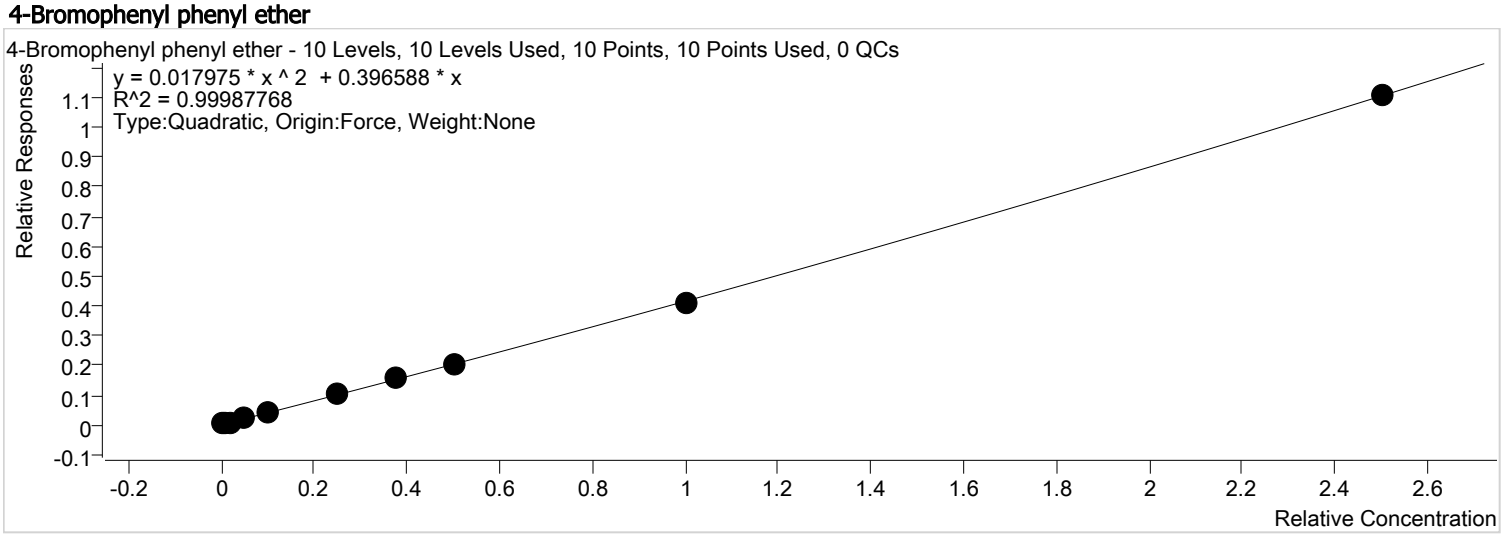
Tribromophenol (Surr)



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060319.D	Calibration	2	x	67	20.0000	0.1560
D:\GC-21\Data\060320\060320.D	Calibration	3	x	101	40.0000	0.1080
D:\GC-21\Data\060320\060321.D	Calibration	4	x	432	100.0000	0.1849
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1026	200.0000	0.2243
D:\GC-21\Data\060320\060323.D	Calibration	6	x	2543	500.0000	0.2178
D:\GC-21\Data\060320\060324.D	Calibration	7	x	4100	750.0000	0.2242
D:\GC-21\Data\060320\060325.D	Calibration	8	x	5802	1000.0000	0.2366
D:\GC-21\Data\060320\060326.D	Calibration	9	x	11218	2000.0000	0.2234
D:\GC-21\Data\060320\060327.D	Calibration	10	x	31382	5000.0000	0.2723

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

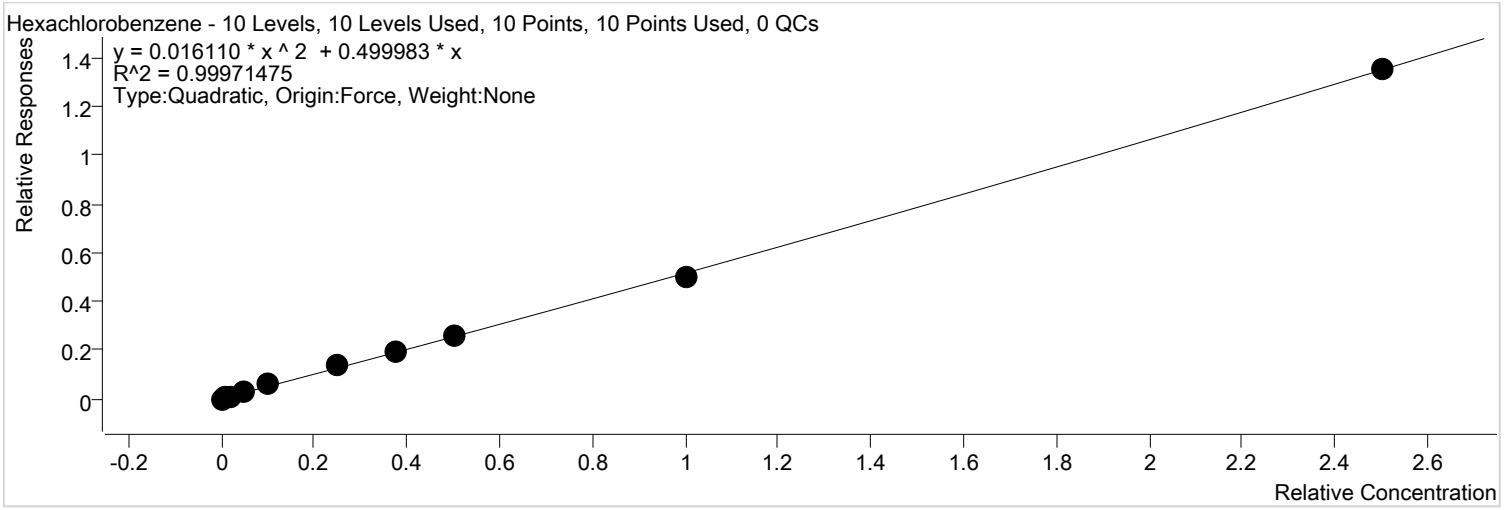
4-Bromophenyl phenyl ether



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	112	10.0000	0.4953
D:\GC-21\Data\060320\060319.D	Calibration	2	x	110	20.0000	0.2561
D:\GC-21\Data\060320\060320.D	Calibration	3	x	471	40.0000	0.5038
D:\GC-21\Data\060320\060321.D	Calibration	4	x	921	100.0000	0.3946
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2094	200.0000	0.4579
D:\GC-21\Data\060320\060323.D	Calibration	6	x	4866	500.0000	0.4167
D:\GC-21\Data\060320\060324.D	Calibration	7	x	7544	750.0000	0.4125
D:\GC-21\Data\060320\060325.D	Calibration	8	x	10123	1000.0000	0.4128
D:\GC-21\Data\060320\060326.D	Calibration	9	x	20484	2000.0000	0.4079
D:\GC-21\Data\060320\060327.D	Calibration	10	x	50927	5000.0000	0.4418

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

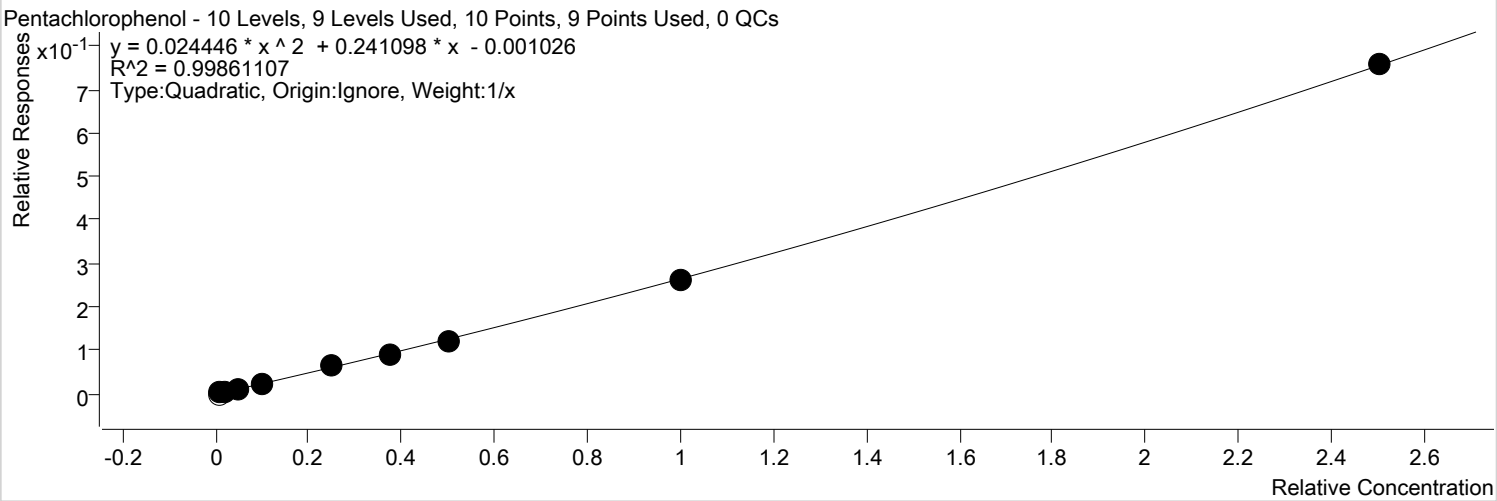
Hexachlorobenzene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	72	10.0000	0.3180
D:\GC-21\Data\060320\060319.D	Calibration	2	x	297	20.0000	0.6884
D:\GC-21\Data\060320\060320.D	Calibration	3	x	519	40.0000	0.5559
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1362	100.0000	0.5837
D:\GC-21\Data\060320\060322.D	Calibration	5	x	2599	200.0000	0.5684
D:\GC-21\Data\060320\060323.D	Calibration	6	x	6611	500.0000	0.5661
D:\GC-21\Data\060320\060324.D	Calibration	7	x	9520	750.0000	0.5205
D:\GC-21\Data\060320\060325.D	Calibration	8	x	12462	1000.0000	0.5082
D:\GC-21\Data\060320\060326.D	Calibration	9	x	25405	2000.0000	0.5059
D:\GC-21\Data\060320\060327.D	Calibration	10	x	62332	5000.0000	0.5408

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

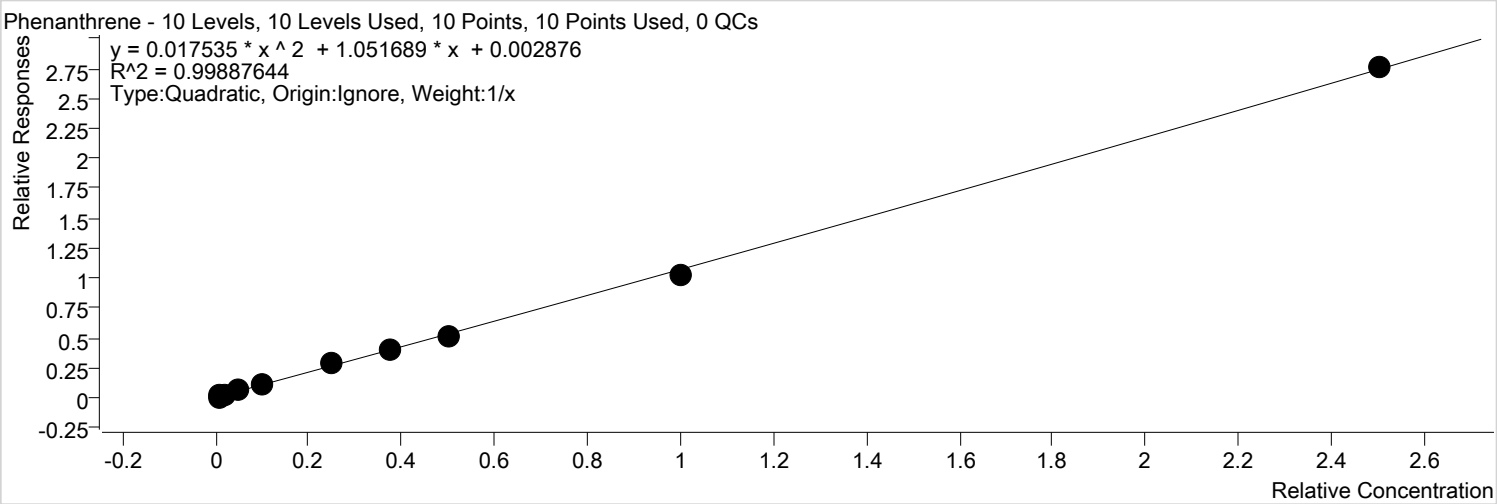
Pentachlorophenol



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1		0	10.0000	0.0000
D:\GC-21\Data\060320\060319.D	Calibration	2	x	70	20.0000	0.1628
D:\GC-21\Data\060320\060320.D	Calibration	3	x	116	40.0000	0.1240
D:\GC-21\Data\060320\060321.D	Calibration	4	x	547	100.0000	0.2346
D:\GC-21\Data\060320\060322.D	Calibration	5	x	1141	200.0000	0.2496
D:\GC-21\Data\060320\060323.D	Calibration	6	x	3197	500.0000	0.2737
D:\GC-21\Data\060320\060324.D	Calibration	7	x	4531	750.0000	0.2478
D:\GC-21\Data\060320\060325.D	Calibration	8	x	5790	1000.0000	0.2361
D:\GC-21\Data\060320\060326.D	Calibration	9	x	13116	2000.0000	0.2612
D:\GC-21\Data\060320\060327.D	Calibration	10	x	34879	5000.0000	0.3026

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

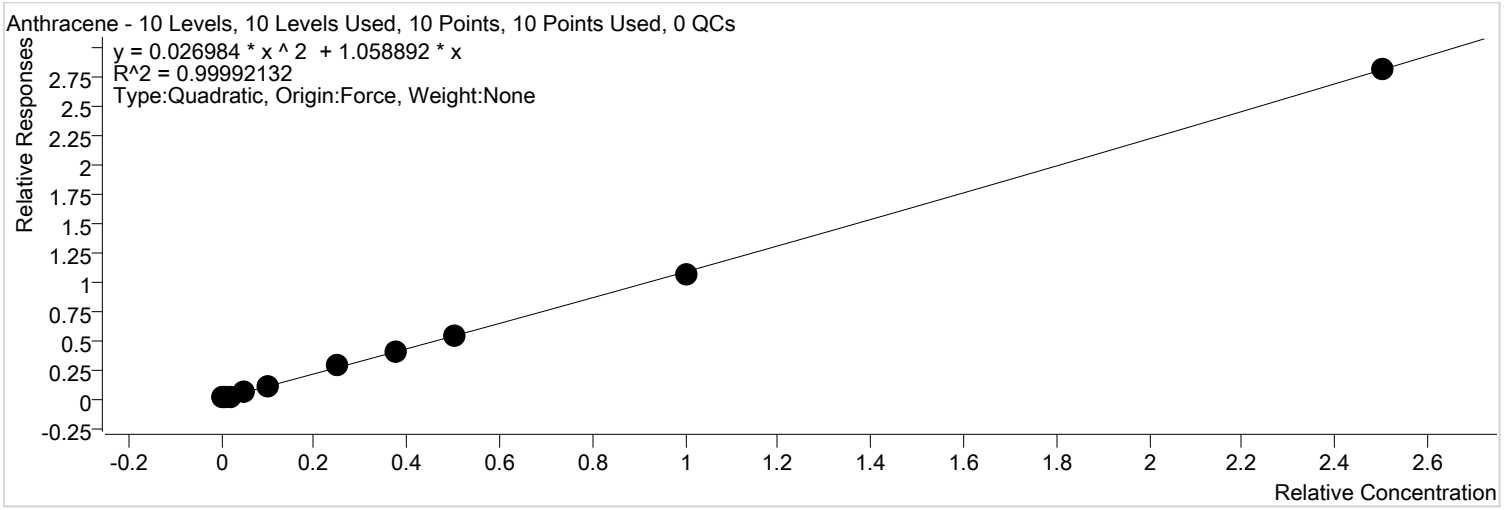
Phenanthrene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	611	10.0000	1.5782
D:\GC-21\Data\060320\060319.D	Calibration	2	x	918	20.0000	1.2169
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1908	40.0000	1.1819
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4717	100.0000	1.1638
D:\GC-21\Data\060320\060322.D	Calibration	5	x	9208	200.0000	1.1614
D:\GC-21\Data\060320\060323.D	Calibration	6	x	23872	500.0000	1.1776
D:\GC-21\Data\060320\060324.D	Calibration	7	x	34693	750.0000	1.0733
D:\GC-21\Data\060320\060325.D	Calibration	8	x	44090	1000.0000	1.0318
D:\GC-21\Data\060320\060326.D	Calibration	9	x	89923	2000.0000	1.0357
D:\GC-21\Data\060320\060327.D	Calibration	10	x	227978	5000.0000	1.1025

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

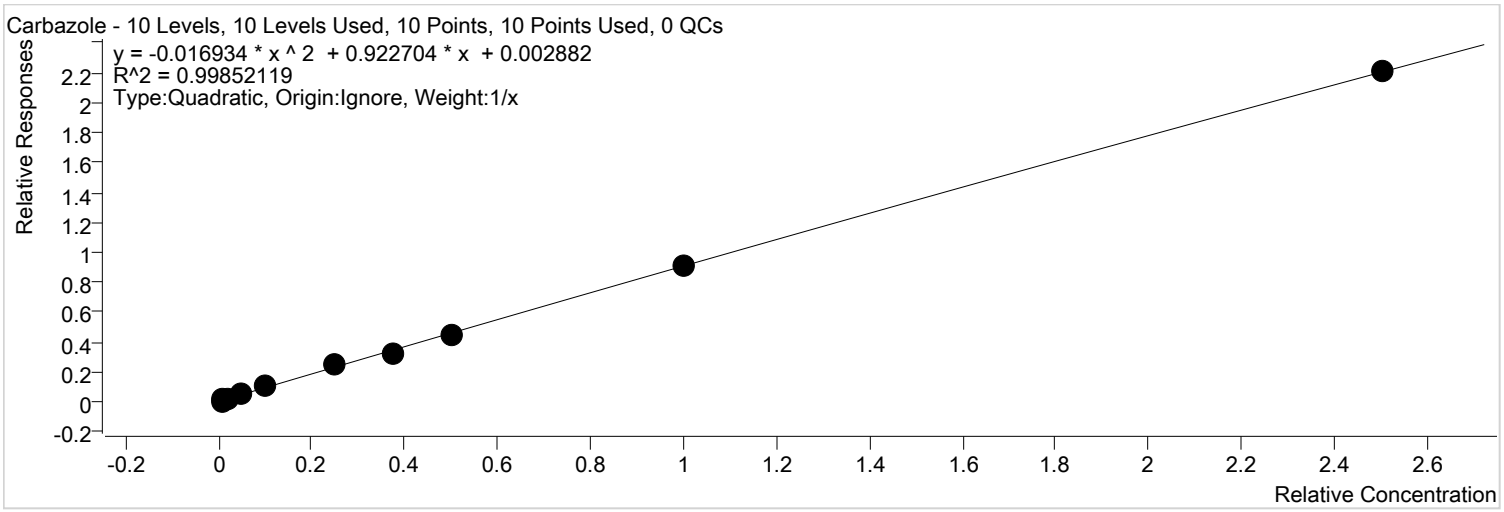
Anthracene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	611	10.0000	1.5782
D:\GC-21\Data\060320\060319.D	Calibration	2	x	922	20.0000	1.2227
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1757	40.0000	1.0881
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4493	100.0000	1.1086
D:\GC-21\Data\060320\060322.D	Calibration	5	x	8962	200.0000	1.1303
D:\GC-21\Data\060320\060323.D	Calibration	6	x	23088	500.0000	1.1389
D:\GC-21\Data\060320\060324.D	Calibration	7	x	34258	750.0000	1.0599
D:\GC-21\Data\060320\060325.D	Calibration	8	x	46263	1000.0000	1.0827
D:\GC-21\Data\060320\060326.D	Calibration	9	x	93427	2000.0000	1.0760
D:\GC-21\Data\060320\060327.D	Calibration	10	x	233021	5000.0000	1.1269

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

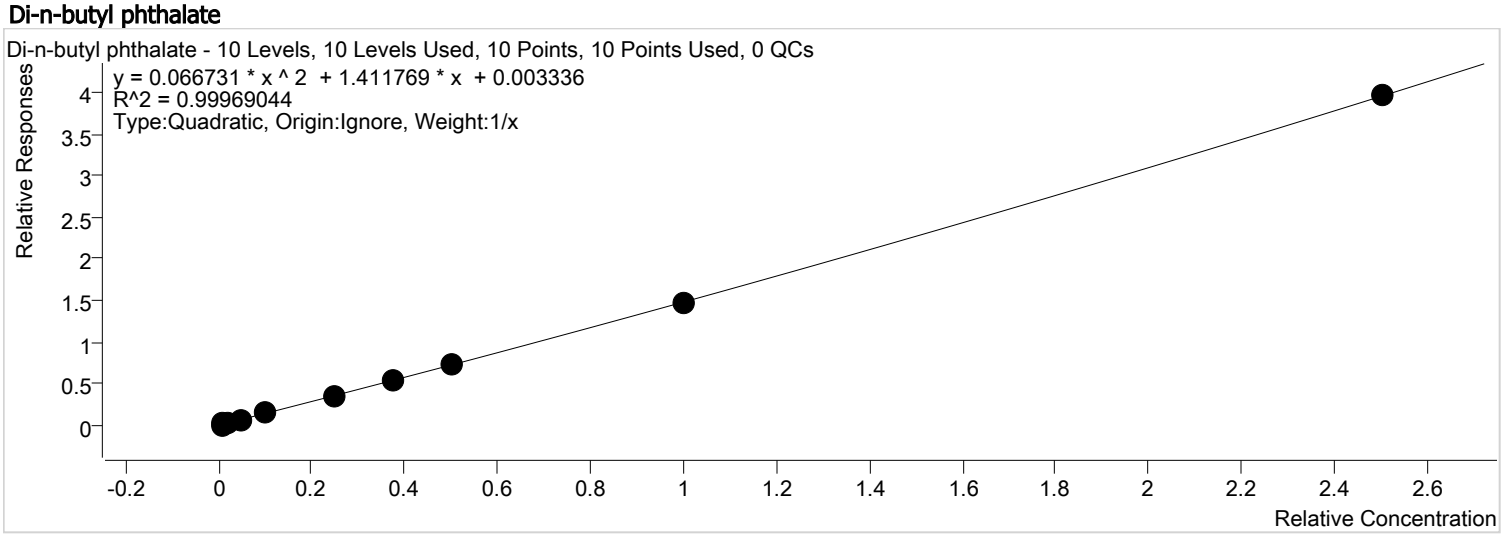
Carbazole



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	580	10.0000	1.4991
D:\GC-21\Data\060320\060319.D	Calibration	2	x	1041	20.0000	1.3803
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1291	40.0000	0.7995
D:\GC-21\Data\060320\060321.D	Calibration	4	x	3914	100.0000	0.9658
D:\GC-21\Data\060320\060322.D	Calibration	5	x	8283	200.0000	1.0448
D:\GC-21\Data\060320\060323.D	Calibration	6	x	20534	500.0000	1.0129
D:\GC-21\Data\060320\060324.D	Calibration	7	x	28291	750.0000	0.8752
D:\GC-21\Data\060320\060325.D	Calibration	8	x	38559	1000.0000	0.9024
D:\GC-21\Data\060320\060326.D	Calibration	9	x	78763	2000.0000	0.9071
D:\GC-21\Data\060320\060327.D	Calibration	10	x	182513	5000.0000	0.8826

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

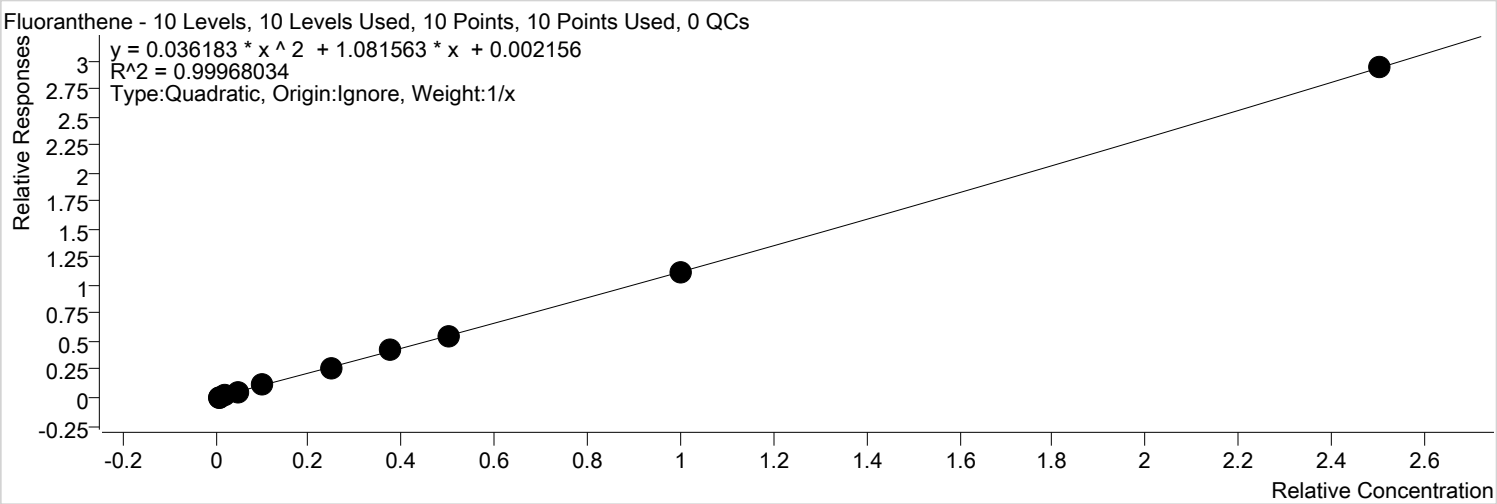
Di-n-butyl phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	697	10.0000	1.8004
D:\GC-21\Data\060320\060319.D	Calibration	2	x	1482	20.0000	1.9657
D:\GC-21\Data\060320\060320.D	Calibration	3	x	2453	40.0000	1.5189
D:\GC-21\Data\060320\060321.D	Calibration	4	x	6077	100.0000	1.4996
D:\GC-21\Data\060320\060322.D	Calibration	5	x	12536	200.0000	1.5812
D:\GC-21\Data\060320\060323.D	Calibration	6	x	29346	500.0000	1.4476
D:\GC-21\Data\060320\060324.D	Calibration	7	x	45716	750.0000	1.4144
D:\GC-21\Data\060320\060325.D	Calibration	8	x	62483	1000.0000	1.4623
D:\GC-21\Data\060320\060326.D	Calibration	9	x	127446	2000.0000	1.4679
D:\GC-21\Data\060320\060327.D	Calibration	10	x	327178	5000.0000	1.5822

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:44 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

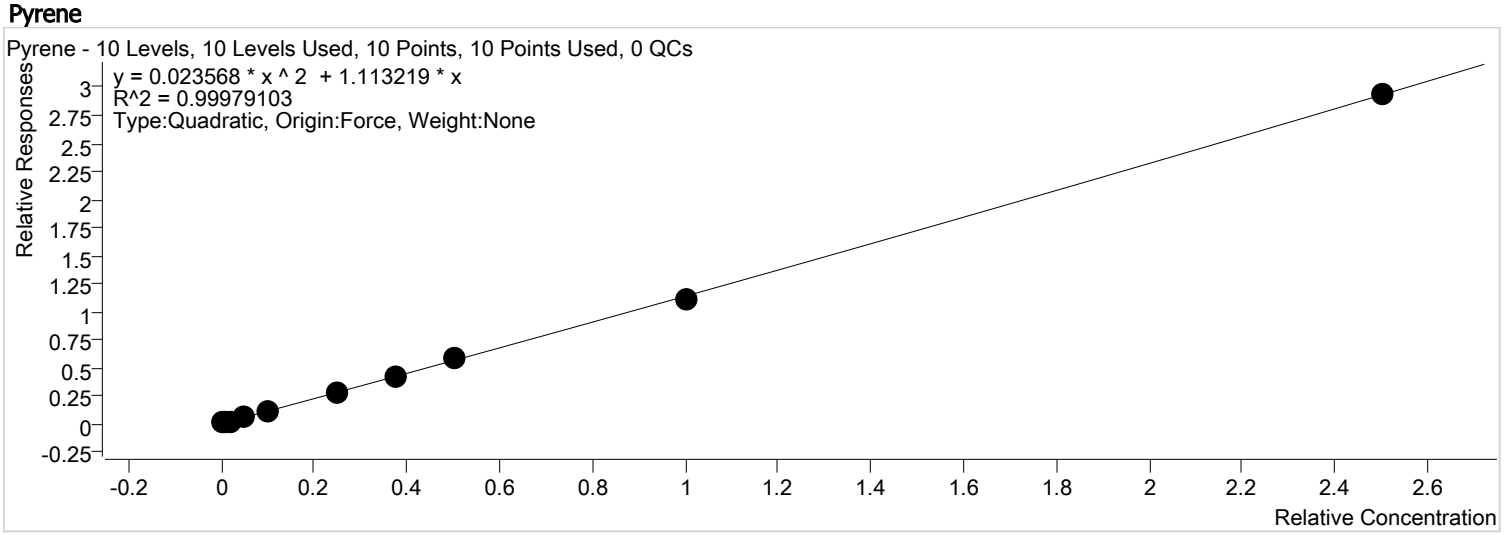
Fluoranthene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	662	10.0000	1.7091
D:\GC-21\Data\060320\060319.D	Calibration	2	x	923	20.0000	1.2237
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1756	40.0000	1.0876
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4200	100.0000	1.0363
D:\GC-21\Data\060320\060322.D	Calibration	5	x	9313	200.0000	1.1746
D:\GC-21\Data\060320\060323.D	Calibration	6	x	21847	500.0000	1.0777
D:\GC-21\Data\060320\060324.D	Calibration	7	x	36405	750.0000	1.1263
D:\GC-21\Data\060320\060325.D	Calibration	8	x	47609	1000.0000	1.1142
D:\GC-21\Data\060320\060326.D	Calibration	9	x	96129	2000.0000	1.1072
D:\GC-21\Data\060320\060327.D	Calibration	10	x	242789	5000.0000	1.1741

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

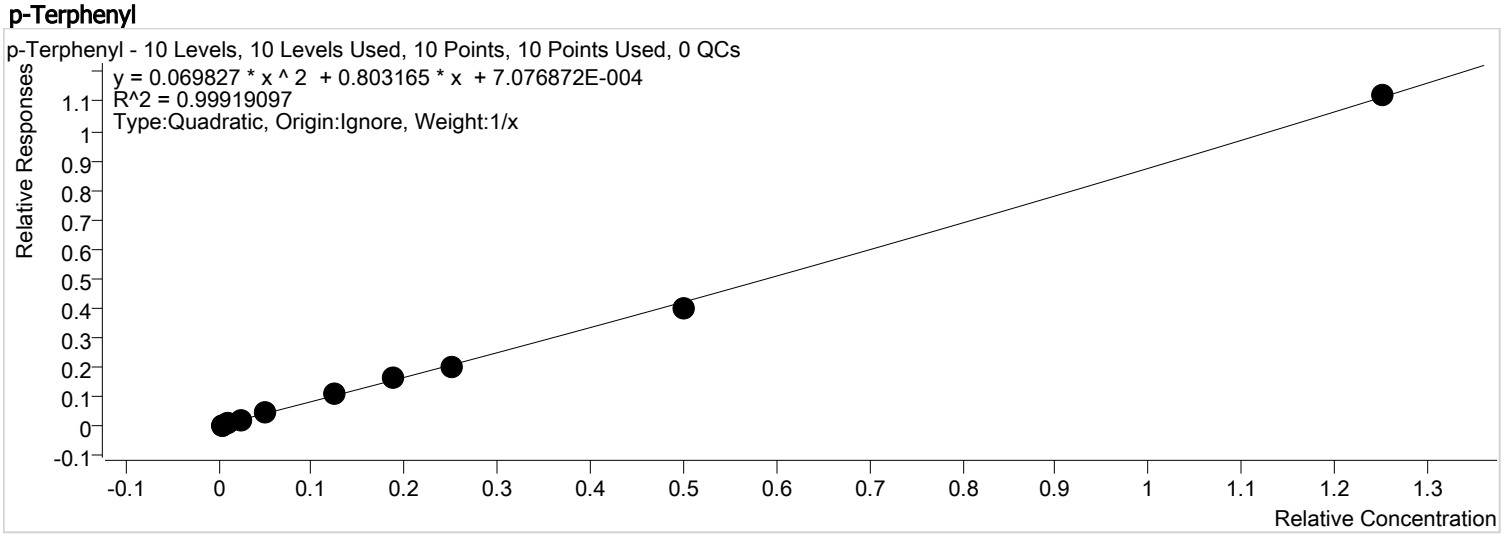
Pyrene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	434	10.0000	1.1217
D:\GC-21\Data\060320\060319.D	Calibration	2	x	1091	20.0000	1.4471
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1604	40.0000	0.9933
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4607	100.0000	1.1366
D:\GC-21\Data\060320\060322.D	Calibration	5	x	9569	200.0000	1.2070
D:\GC-21\Data\060320\060323.D	Calibration	6	x	22928	500.0000	1.1310
D:\GC-21\Data\060320\060324.D	Calibration	7	x	36042	750.0000	1.1151
D:\GC-21\Data\060320\060325.D	Calibration	8	x	50700	1000.0000	1.1865
D:\GC-21\Data\060320\060326.D	Calibration	9	x	96813	2000.0000	1.1150
D:\GC-21\Data\060320\060327.D	Calibration	10	x	242573	5000.0000	1.1730

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

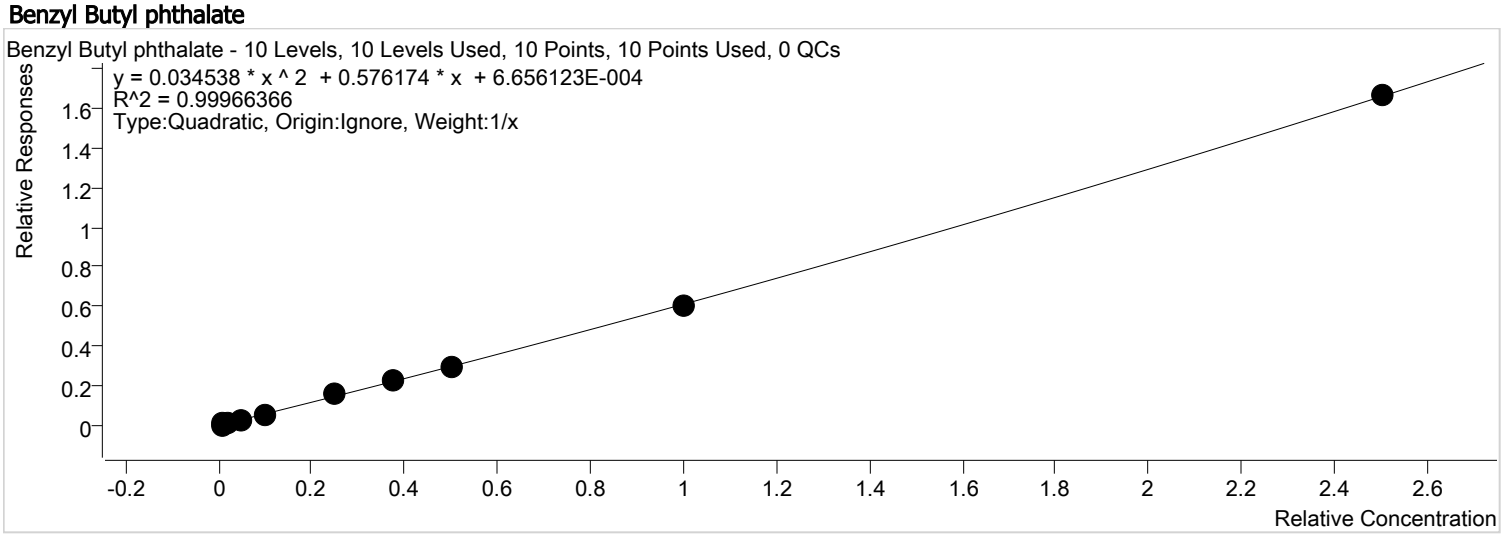
p-Terphenyl



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	227	5.0000	1.1732
D:\GC-21\Data\060320\060319.D	Calibration	2	x	293	10.0000	0.7762
D:\GC-21\Data\060320\060320.D	Calibration	3	x	703	20.0000	0.8714
D:\GC-21\Data\060320\060321.D	Calibration	4	x	1692	50.0000	0.8352
D:\GC-21\Data\060320\060322.D	Calibration	5	x	3423	100.0000	0.8636
D:\GC-21\Data\060320\060323.D	Calibration	6	x	8716	250.0000	0.8599
D:\GC-21\Data\060320\060324.D	Calibration	7	x	13854	375.0000	0.8572
D:\GC-21\Data\060320\060325.D	Calibration	8	x	17395	500.0000	0.8142
D:\GC-21\Data\060320\060326.D	Calibration	9	x	34958	1000.0000	0.8052
D:\GC-21\Data\060320\060327.D	Calibration	10	x	92594	2500.0000	0.8955

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

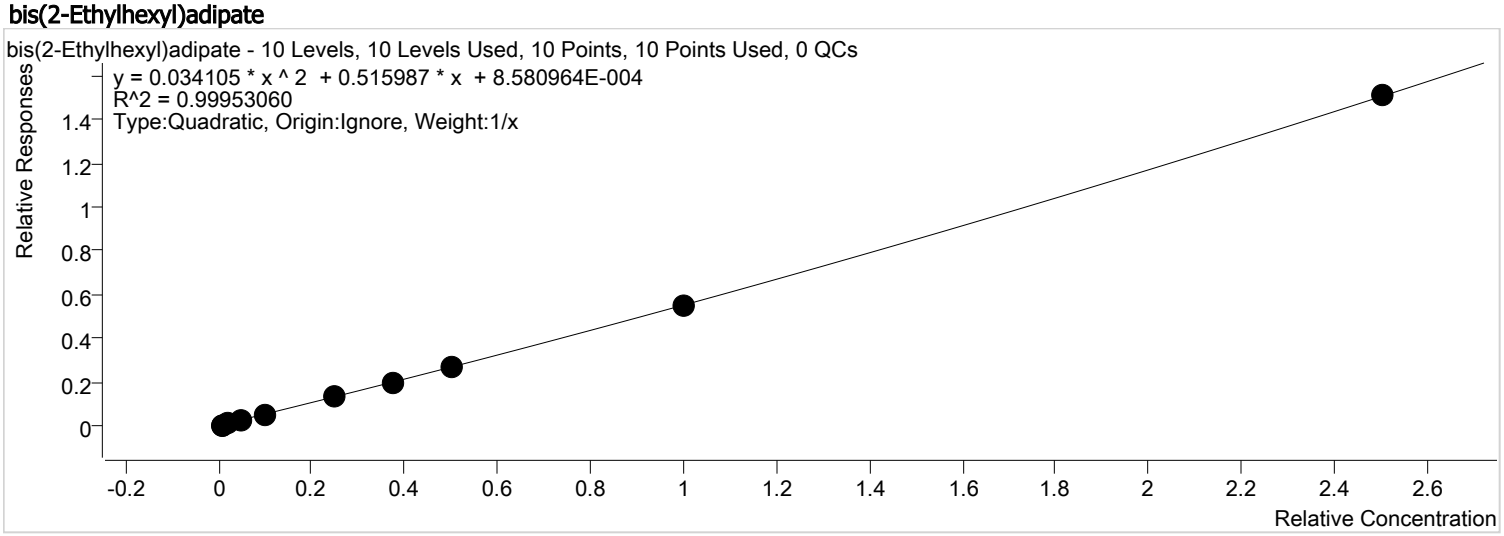
Benzyl Butyl phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	283	10.0000	0.7306
D:\GC-21\Data\060320\060319.D	Calibration	2	x	518	20.0000	0.6875
D:\GC-21\Data\060320\060320.D	Calibration	3	x	842	40.0000	0.5215
D:\GC-21\Data\060320\060321.D	Calibration	4	x	2399	100.0000	0.5919
D:\GC-21\Data\060320\060322.D	Calibration	5	x	4612	200.0000	0.5818
D:\GC-21\Data\060320\060323.D	Calibration	6	x	12479	500.0000	0.6156
D:\GC-21\Data\060320\060324.D	Calibration	7	x	19523	750.0000	0.6040
D:\GC-21\Data\060320\060325.D	Calibration	8	x	25283	1000.0000	0.5917
D:\GC-21\Data\060320\060326.D	Calibration	9	x	51975	2000.0000	0.5986
D:\GC-21\Data\060320\060327.D	Calibration	10	x	137388	5000.0000	0.6644

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

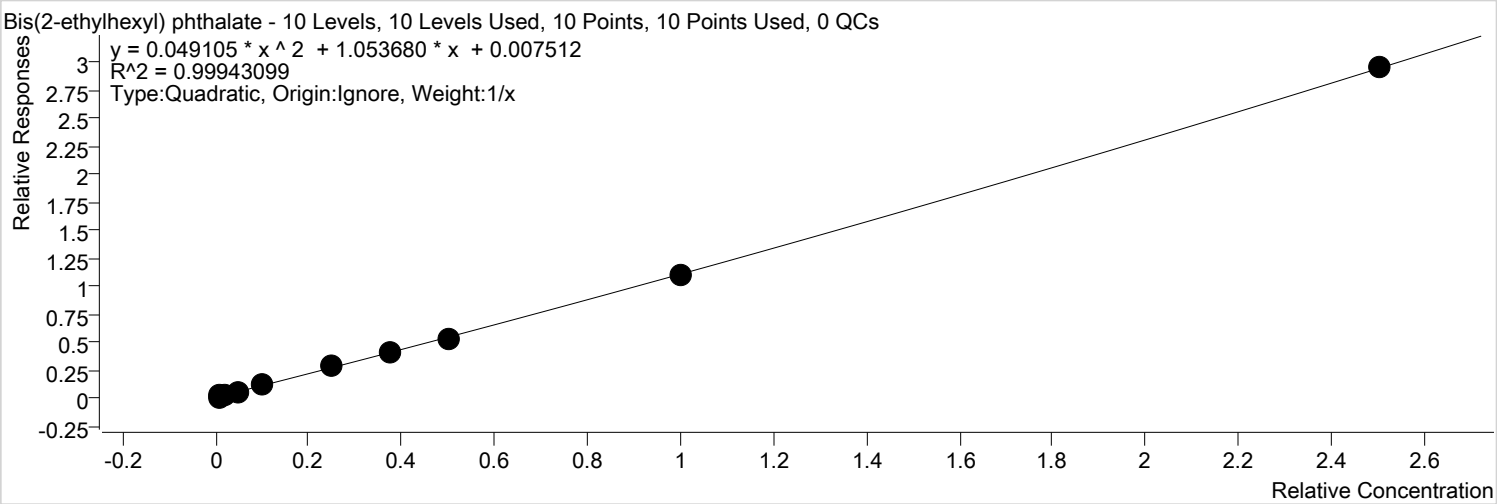
bis(2-Ethylhexyl)adipate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	283	10.0000	0.7304
D:\GC-21\Data\060320\060319.D	Calibration	2	x	344	20.0000	0.4565
D:\GC-21\Data\060320\060320.D	Calibration	3	x	994	40.0000	0.6155
D:\GC-21\Data\060320\060321.D	Calibration	4	x	2322	100.0000	0.5730
D:\GC-21\Data\060320\060322.D	Calibration	5	x	4123	200.0000	0.5201
D:\GC-21\Data\060320\060323.D	Calibration	6	x	11309	500.0000	0.5579
D:\GC-21\Data\060320\060324.D	Calibration	7	x	17251	750.0000	0.5337
D:\GC-21\Data\060320\060325.D	Calibration	8	x	22486	1000.0000	0.5262
D:\GC-21\Data\060320\060326.D	Calibration	9	x	47091	2000.0000	0.5424
D:\GC-21\Data\060320\060327.D	Calibration	10	x	124682	5000.0000	0.6029

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

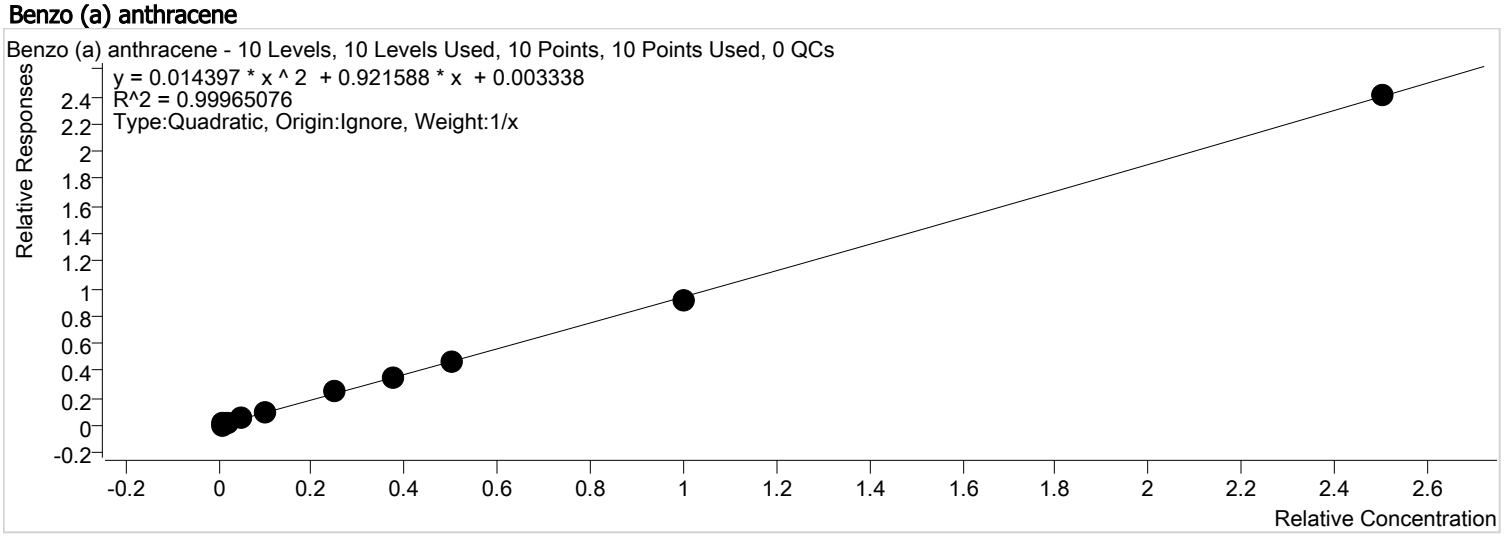
Bis(2-ethylhexyl) phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	841	10.0000	2.6584
D:\GC-21\Data\060320\060319.D	Calibration	2	x	1122	20.0000	1.8496
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1489	40.0000	1.1418
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4080	100.0000	1.2510
D:\GC-21\Data\060320\060322.D	Calibration	5	x	8047	200.0000	1.2155
D:\GC-21\Data\060320\060323.D	Calibration	6	x	19248	500.0000	1.1304
D:\GC-21\Data\060320\060324.D	Calibration	7	x	29583	750.0000	1.1062
D:\GC-21\Data\060320\060325.D	Calibration	8	x	37894	1000.0000	1.0750
D:\GC-21\Data\060320\060326.D	Calibration	9	x	78000	2000.0000	1.0933
D:\GC-21\Data\060320\060327.D	Calibration	10	x	206402	5000.0000	1.1821

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

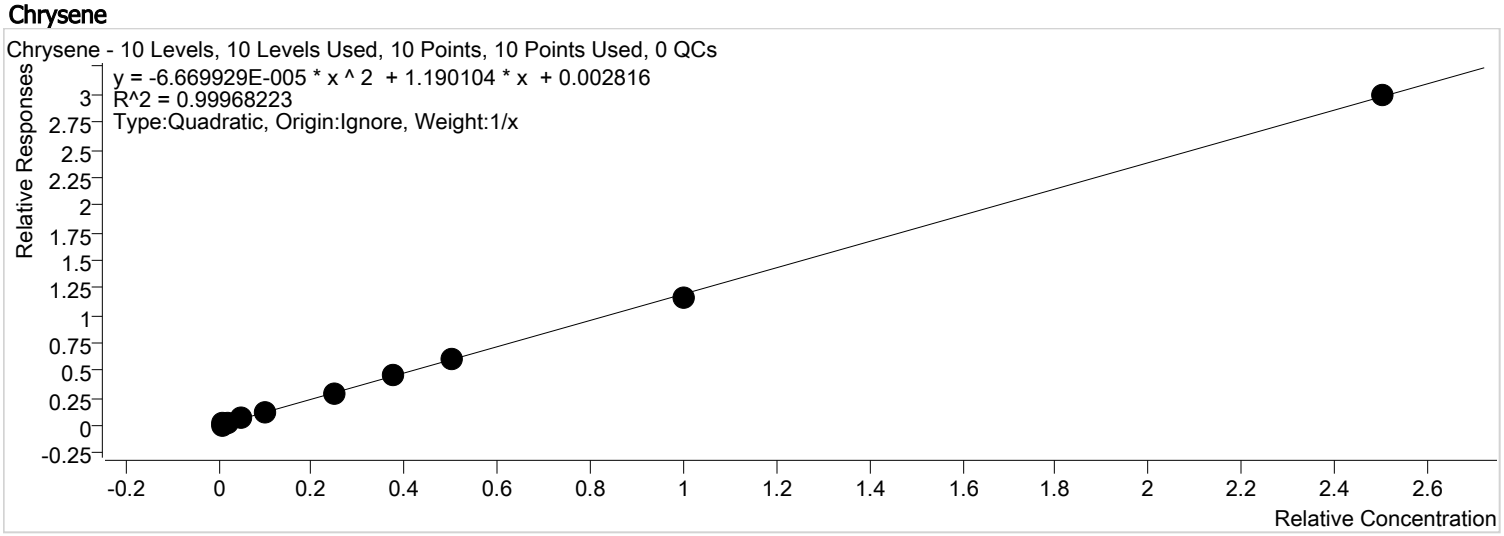
Benzo (a) anthracene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	558	10.0000	1.4403
D:\GC-21\Data\060320\060319.D	Calibration	2	x	1026	20.0000	1.3604
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1786	40.0000	1.1064
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4087	100.0000	1.0084
D:\GC-21\Data\060320\060322.D	Calibration	5	x	7332	200.0000	0.9248
D:\GC-21\Data\060320\060323.D	Calibration	6	x	19863	500.0000	0.9798
D:\GC-21\Data\060320\060324.D	Calibration	7	x	31028	750.0000	0.9599
D:\GC-21\Data\060320\060325.D	Calibration	8	x	39542	1000.0000	0.9254
D:\GC-21\Data\060320\060326.D	Calibration	9	x	79894	2000.0000	0.9202
D:\GC-21\Data\060320\060327.D	Calibration	10	x	198821	5000.0000	0.9615

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

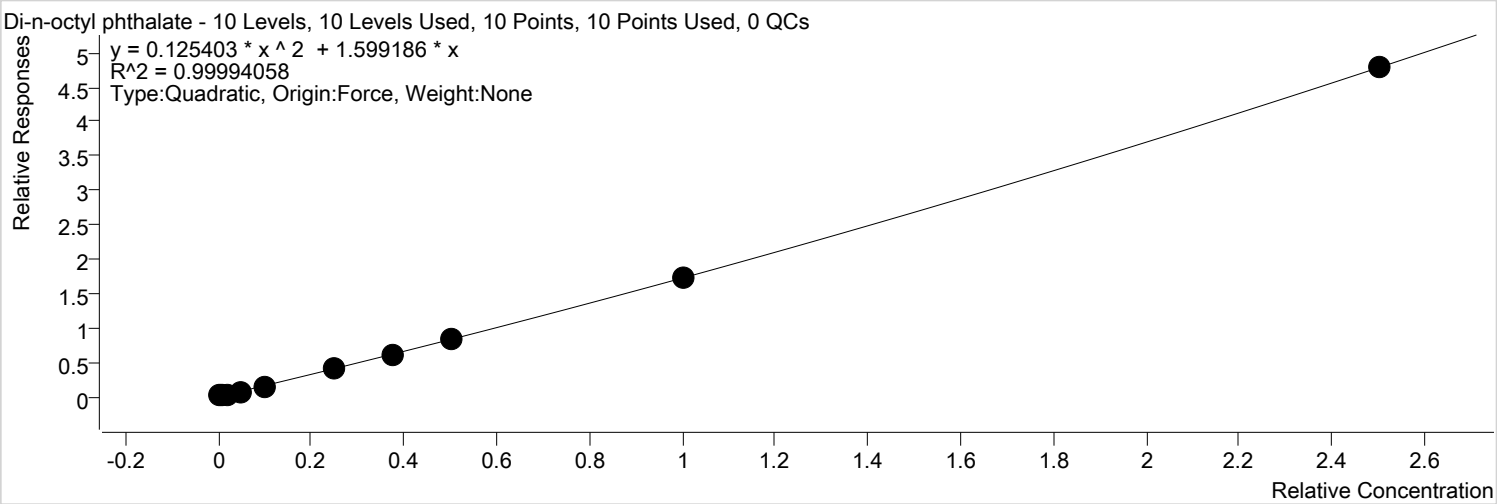
Chrysene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	557	10.0000	1.7589
D:\GC-21\Data\060320\060319.D	Calibration	2	x	827	20.0000	1.3629
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1709	40.0000	1.3101
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4278	100.0000	1.3118
D:\GC-21\Data\060320\060322.D	Calibration	5	x	8414	200.0000	1.2710
D:\GC-21\Data\060320\060323.D	Calibration	6	x	20328	500.0000	1.1939
D:\GC-21\Data\060320\060324.D	Calibration	7	x	32980	750.0000	1.2332
D:\GC-21\Data\060320\060325.D	Calibration	8	x	42278	1000.0000	1.1994
D:\GC-21\Data\060320\060326.D	Calibration	9	x	82968	2000.0000	1.1629
D:\GC-21\Data\060320\060327.D	Calibration	10	x	208631	5000.0000	1.1949

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

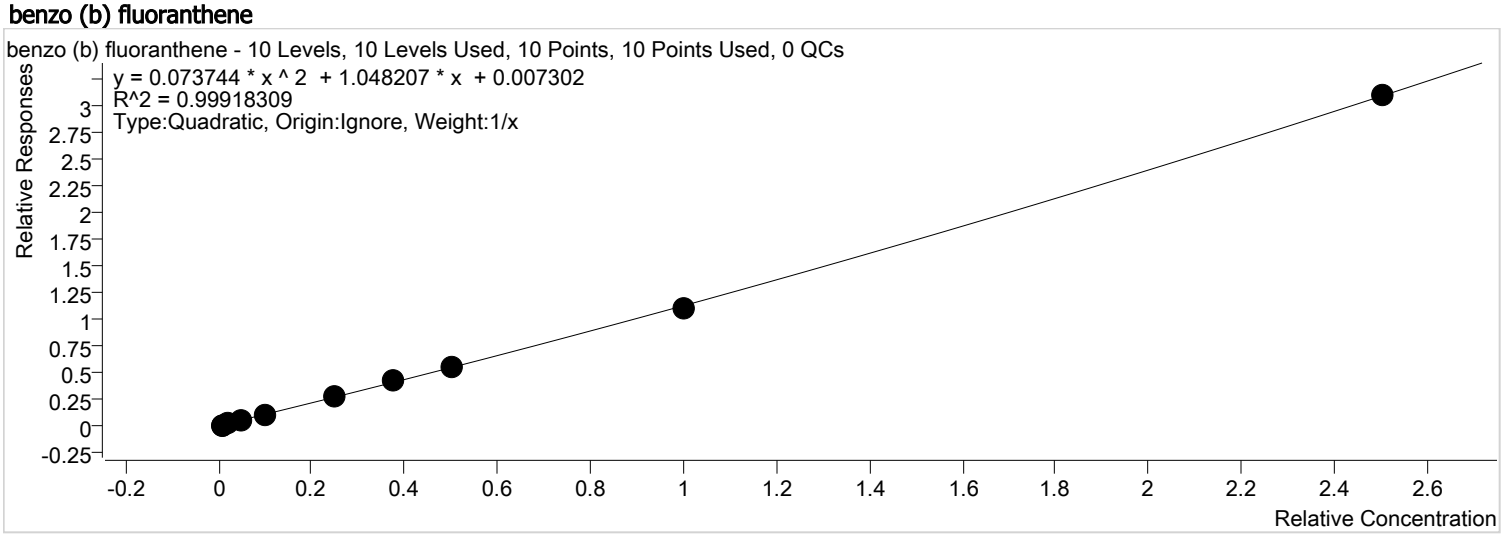
Di-n-octyl phthalate



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	741	10.0000	2.3397
D:\GC-21\Data\060320\060319.D	Calibration	2	x	941	20.0000	1.5516
D:\GC-21\Data\060320\060320.D	Calibration	3	x	2100	40.0000	1.6102
D:\GC-21\Data\060320\060321.D	Calibration	4	x	5009	100.0000	1.5359
D:\GC-21\Data\060320\060322.D	Calibration	5	x	10332	200.0000	1.5607
D:\GC-21\Data\060320\060323.D	Calibration	6	x	27284	500.0000	1.6024
D:\GC-21\Data\060320\060324.D	Calibration	7	x	42446	750.0000	1.5872
D:\GC-21\Data\060320\060325.D	Calibration	8	x	60271	1000.0000	1.7098
D:\GC-21\Data\060320\060326.D	Calibration	9	x	123004	2000.0000	1.7241
D:\GC-21\Data\060320\060327.D	Calibration	10	x	333945	5000.0000	1.9126

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

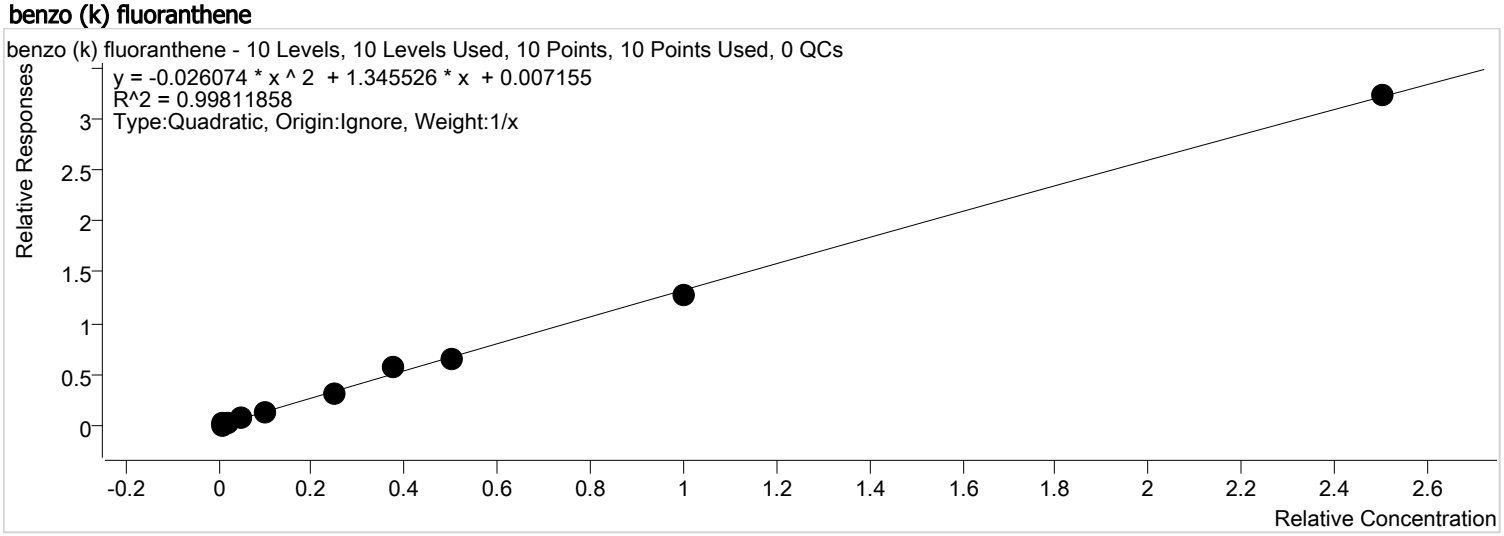
benzo (b) fluoranthene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	934	10.0000	2.9506
D:\GC-21\Data\060320\060319.D	Calibration	2	x	966	20.0000	1.5918
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1684	40.0000	1.2912
D:\GC-21\Data\060320\060321.D	Calibration	4	x	3473	100.0000	1.0650
D:\GC-21\Data\060320\060322.D	Calibration	5	x	6899	200.0000	1.0420
D:\GC-21\Data\060320\060323.D	Calibration	6	x	19846	500.0000	1.1655
D:\GC-21\Data\060320\060324.D	Calibration	7	x	30002	750.0000	1.1219
D:\GC-21\Data\060320\060325.D	Calibration	8	x	39092	1000.0000	1.1090
D:\GC-21\Data\060320\060326.D	Calibration	9	x	79266	2000.0000	1.1110
D:\GC-21\Data\060320\060327.D	Calibration	10	x	215976	5000.0000	1.2369

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

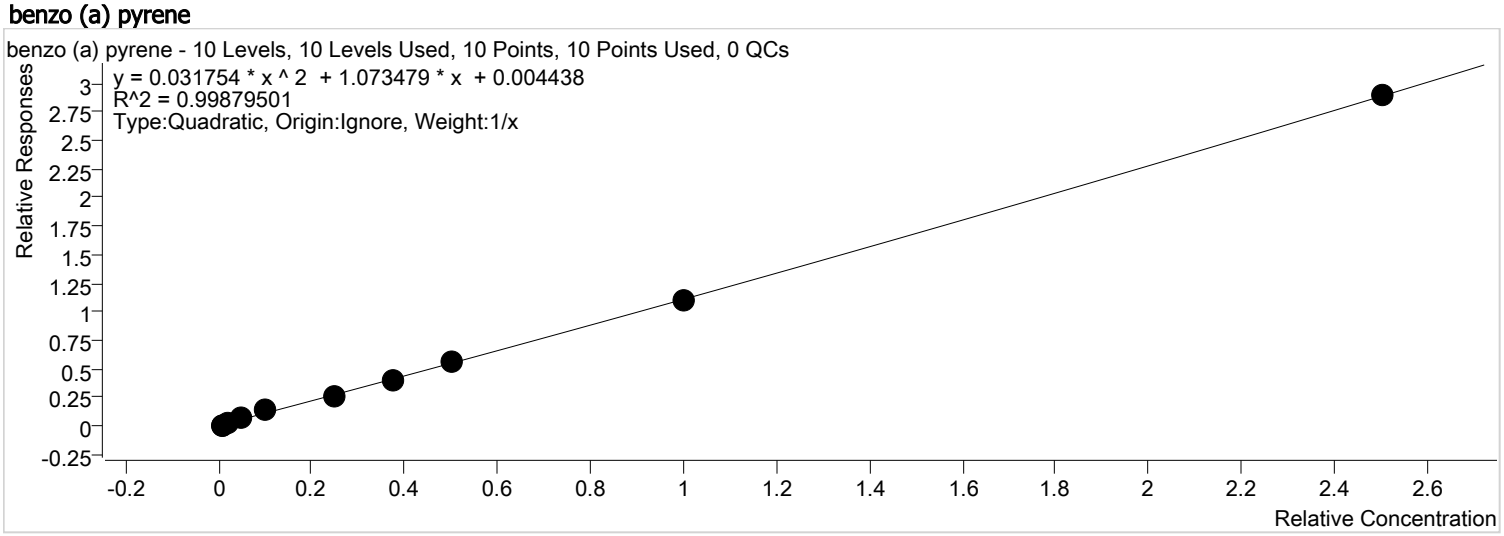
benzo (k) fluoranthene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	903	10.0000	2.8516
D:\GC-21\Data\060320\060319.D	Calibration	2	x	1267	20.0000	2.0883
D:\GC-21\Data\060320\060320.D	Calibration	3	x	2073	40.0000	1.5894
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4687	100.0000	1.4373
D:\GC-21\Data\060320\060322.D	Calibration	5	x	9496	200.0000	1.4344
D:\GC-21\Data\060320\060323.D	Calibration	6	x	22448	500.0000	1.3184
D:\GC-21\Data\060320\060324.D	Calibration	7	x	40800	750.0000	1.5257
D:\GC-21\Data\060320\060325.D	Calibration	8	x	45724	1000.0000	1.2971
D:\GC-21\Data\060320\060326.D	Calibration	9	x	92105	2000.0000	1.2910
D:\GC-21\Data\060320\060327.D	Calibration	10	x	224810	5000.0000	1.2875

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

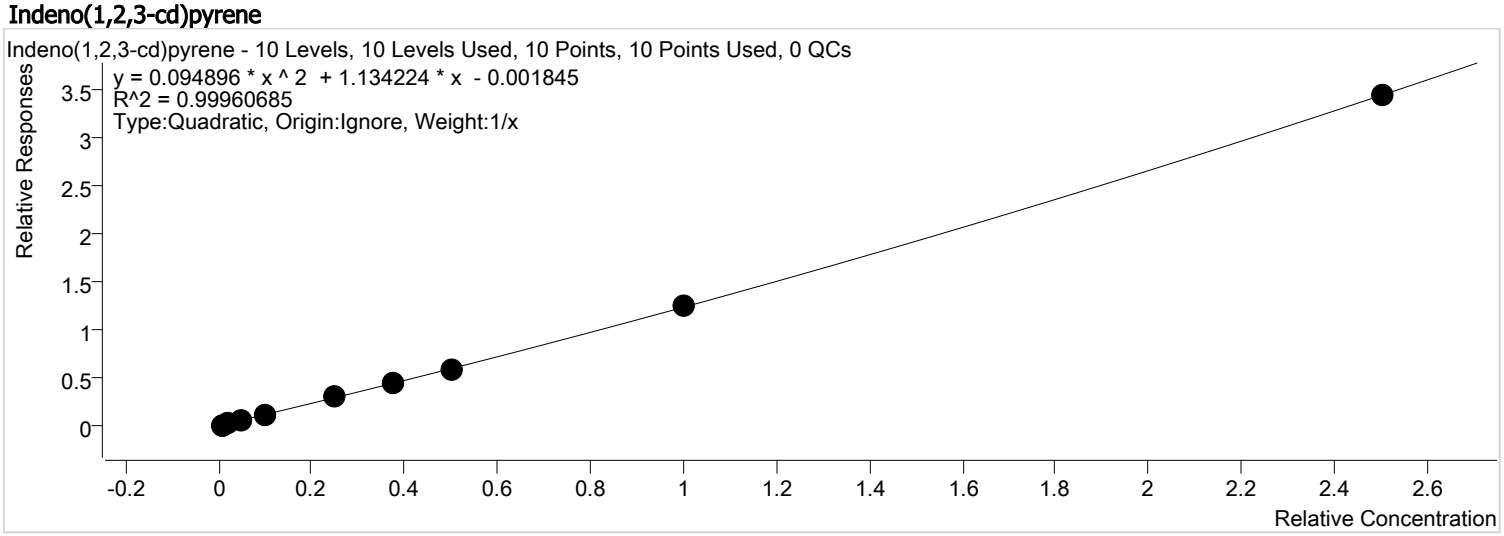
benzo (a) pyrene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	663	10.0000	2.0944
D:\GC-21\Data\060320\060319.D	Calibration	2	x	746	20.0000	1.2292
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1590	40.0000	1.2195
D:\GC-21\Data\060320\060321.D	Calibration	4	x	4133	100.0000	1.2673
D:\GC-21\Data\060320\060322.D	Calibration	5	x	8770	200.0000	1.3247
D:\GC-21\Data\060320\060323.D	Calibration	6	x	17768	500.0000	1.0435
D:\GC-21\Data\060320\060324.D	Calibration	7	x	28625	750.0000	1.0704
D:\GC-21\Data\060320\060325.D	Calibration	8	x	39236	1000.0000	1.1131
D:\GC-21\Data\060320\060326.D	Calibration	9	x	78482	2000.0000	1.1000
D:\GC-21\Data\060320\060327.D	Calibration	10	x	201911	5000.0000	1.1564

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

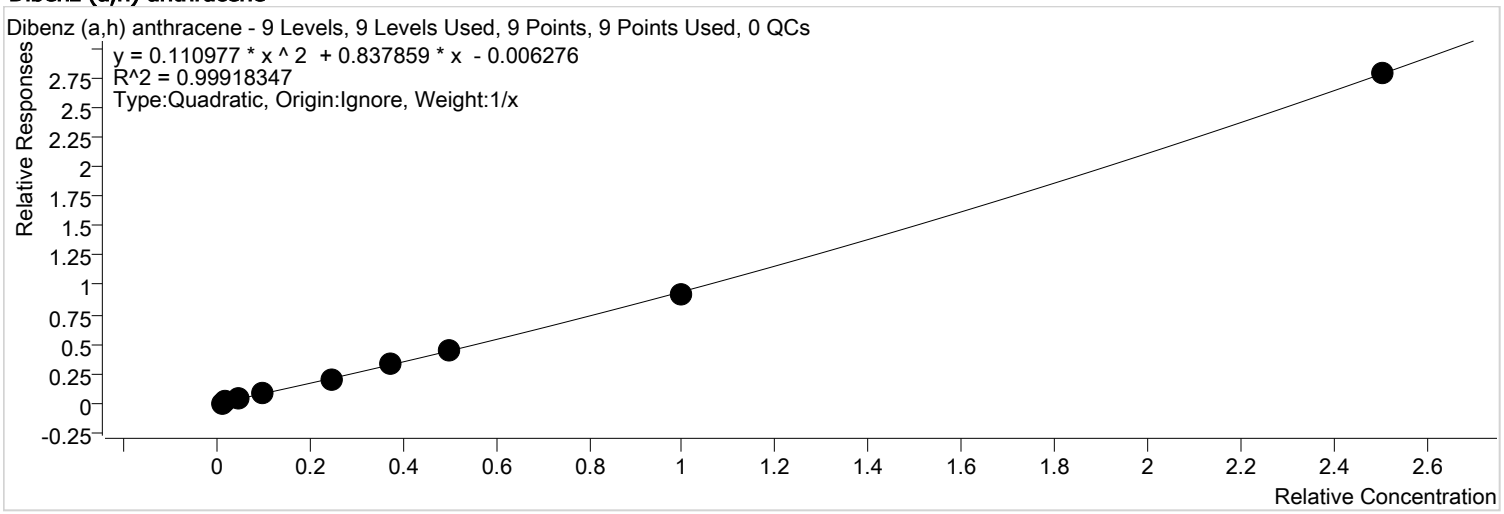
Indeno(1,2,3-cd)pyrene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	406	10.0000	1.1733
D:\GC-21\Data\060320\060319.D	Calibration	2	x	583	20.0000	0.8638
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1133	40.0000	0.7958
D:\GC-21\Data\060320\060321.D	Calibration	4	x	3676	100.0000	1.0224
D:\GC-21\Data\060320\060322.D	Calibration	5	x	7901	200.0000	1.1125
D:\GC-21\Data\060320\060323.D	Calibration	6	x	21760	500.0000	1.1520
D:\GC-21\Data\060320\060324.D	Calibration	7	x	34954	750.0000	1.1894
D:\GC-21\Data\060320\060325.D	Calibration	8	x	44893	1000.0000	1.1610
D:\GC-21\Data\060320\060326.D	Calibration	9	x	99570	2000.0000	1.2398
D:\GC-21\Data\060320\060327.D	Calibration	10	x	258009	5000.0000	1.3689

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

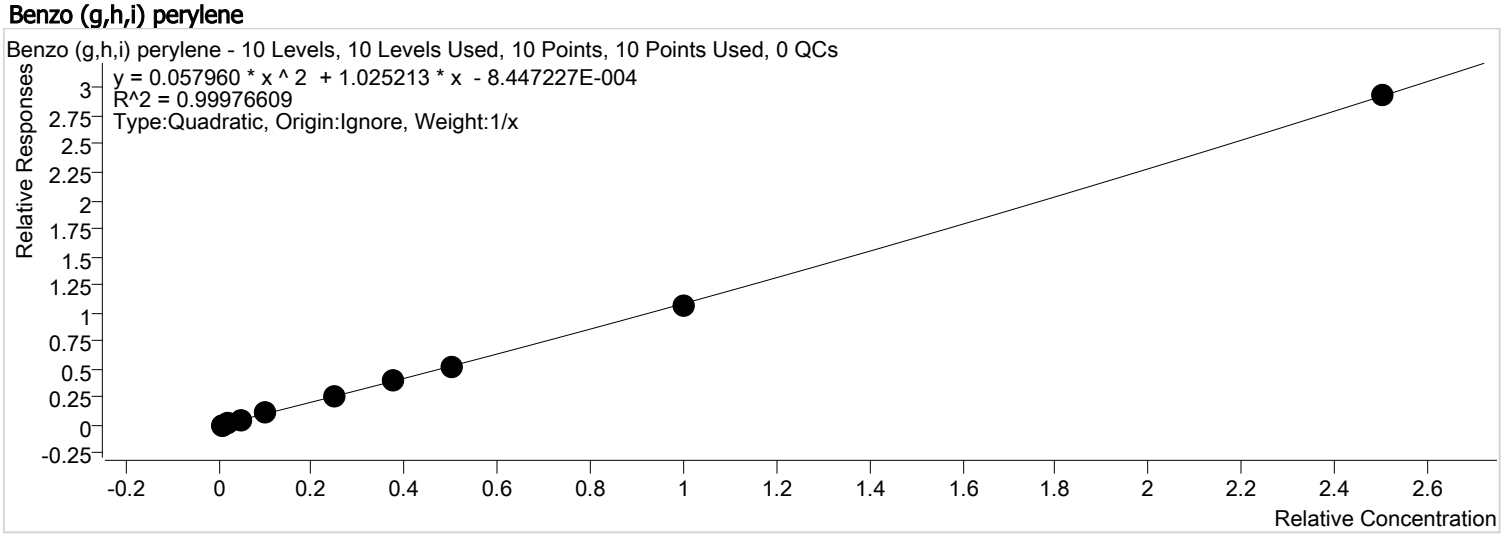
Dibenz (a,h) anthracene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060319.D	Calibration	2	x	111	20.0000	0.1646
D:\GC-21\Data\060320\060320.D	Calibration	3	x	740	40.0000	0.5199
D:\GC-21\Data\060320\060321.D	Calibration	4	x	2652	100.0000	0.7375
D:\GC-21\Data\060320\060322.D	Calibration	5	x	6144	200.0000	0.8651
D:\GC-21\Data\060320\060323.D	Calibration	6	x	14104	500.0000	0.7467
D:\GC-21\Data\060320\060324.D	Calibration	7	x	26521	750.0000	0.9025
D:\GC-21\Data\060320\060325.D	Calibration	8	x	34835	1000.0000	0.9009
D:\GC-21\Data\060320\060326.D	Calibration	9	x	74688	2000.0000	0.9300
D:\GC-21\Data\060320\060327.D	Calibration	10	x	209949	5000.0000	1.1139

Batch Path	D:\GC-21\Data\060320\QuantResults\SEMI CAL.batch.bin		
Analysis Time	6/4/2020 10:24:14 AM	**Analyst Name**	FA\lab
Report Time	6/4/2020 10:26:45 AM	**Reporter Name**	lab
Last Calib Update	6/4/2020 10:23:34 AM	**Batch State**	Processed

Benzo (g,h,i) perylene



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor
D:\GC-21\Data\060320\060318.D	Calibration	1	x	338	10.0000	0.9777
D:\GC-21\Data\060320\060319.D	Calibration	2	x	585	20.0000	0.8670
D:\GC-21\Data\060320\060320.D	Calibration	3	x	1334	40.0000	0.9366
D:\GC-21\Data\060320\060321.D	Calibration	4	x	3418	100.0000	0.9507
D:\GC-21\Data\060320\060322.D	Calibration	5	x	7638	200.0000	1.0755
D:\GC-21\Data\060320\060323.D	Calibration	6	x	19330	500.0000	1.0233
D:\GC-21\Data\060320\060324.D	Calibration	7	x	31635	750.0000	1.0765
D:\GC-21\Data\060320\060325.D	Calibration	8	x	40851	1000.0000	1.0565
D:\GC-21\Data\060320\060326.D	Calibration	9	x	85604	2000.0000	1.0659
D:\GC-21\Data\060320\060327.D	Calibration	10	x	220822	5000.0000	1.1716

Semivolatile Calibration

Intermediate

Date: 05/26/2020

Analyst: Sam Beltman

MeCl2: 20E3149 99

Cal		ICV	
8270 Megamix:	23298	**8270 Megamix:**	23297
2,4-DNP:	23446	**2,4-DNP:**	23305
Benzoic Acid:	23363	**Benzoic Acid:**	23362

23057

8270 Surrogate: 23454 / 23712 (ICB/ICV surr) **IS** 23709

Spike Conc. (ppb)	BN/Acid Surr Conc. (ppb)	2° Spike (uL)	B/N Surr (uL)	Internal Standard (uL)	Remove (uL)	Final Vol. (mL)	Comments
10	10/5	1	--	10	11	1	
20	20/10	2	--	10	12	1	
40	40/20	4	--	10	14	1	
100	100/50	10	--	10	20	1	
200	200/100	20	--	10	30	1	
500	500/250	~~40~~ 50	--	10	60	1	
750	750/375	75	--	10	85	1	
1000	1000/500	100	--	10	110	1	
2000	2000/1000	200	--	10	210	1	
5000	5000/2500	500	--	10	510	1	
ICB	1000/500		1	10	11	1	
ICV (1000 ppb)	1000/500	~~100~~ (2° SS)	-- 1	10	~~110~~ 14	1	

	Mega Mix (uL)	2,4-DNP (uL)	Benzoic Acid (uL)	8270 Surr (uL)	Final Volume (mL)
2° Intermediate (cal)	100	100	100	100	10
2° Intermediate (SS)	50	50	50	50	5

Signature and Date: 5/26/2020

Signature: EM

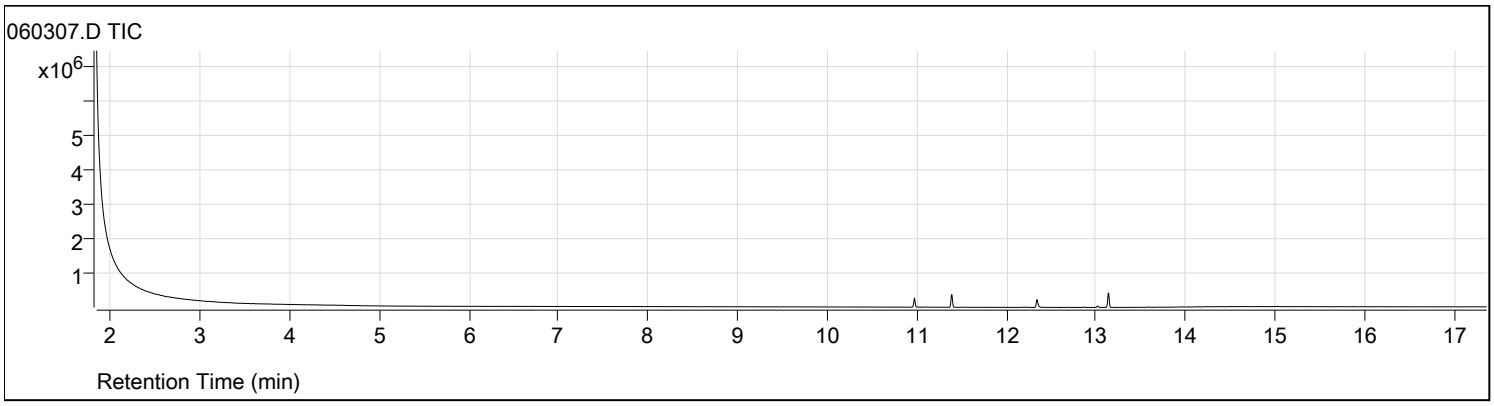
700 Building Calibration Template - SVOC v1.1

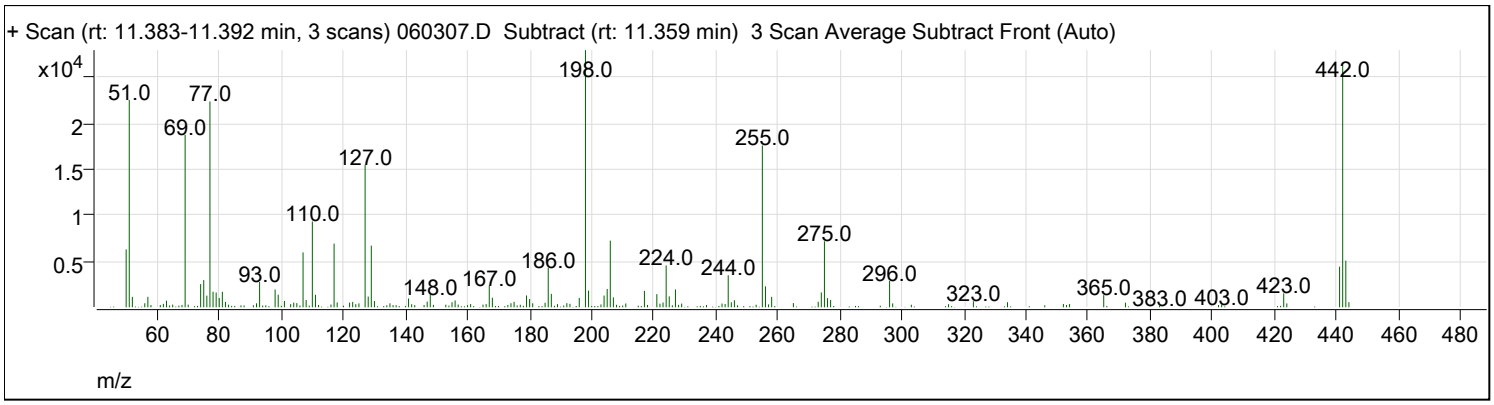
Official Approval: 11/14/2019

Tunes

Tune Evaluation Report

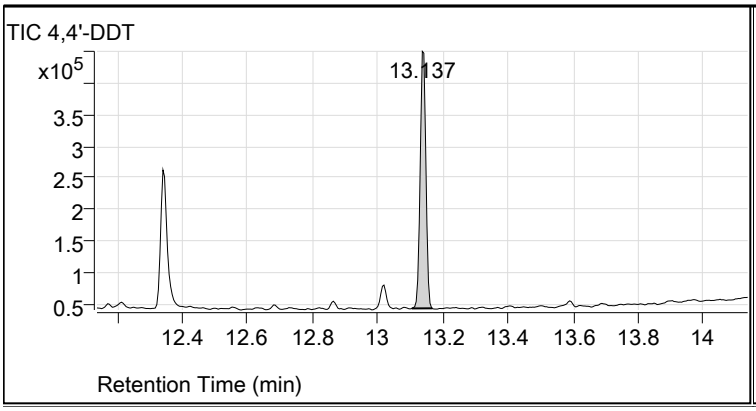
Data Path:	D:\GC-21\Data\060320\060307.D
Acq on:	6/3/2020 10:29:33 AM
Operator:	SNB
Sample:	TUNE
Inst Name:	GC-21
ALS Vial:	1
Method:	D:\MassHunter\Methods\Quant\DFTPPwBreak&TailingGC218270E.m

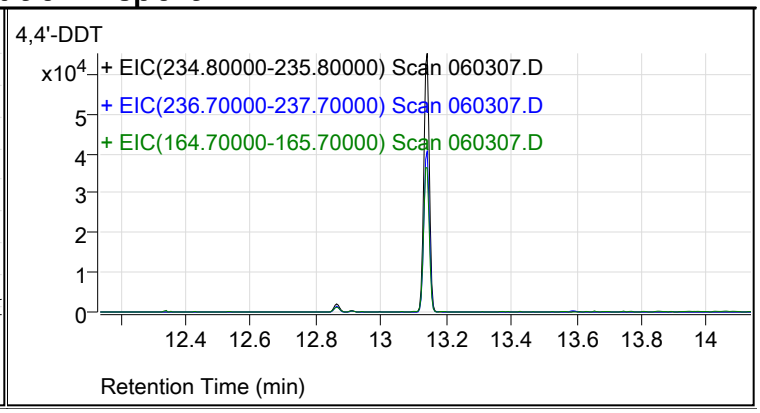


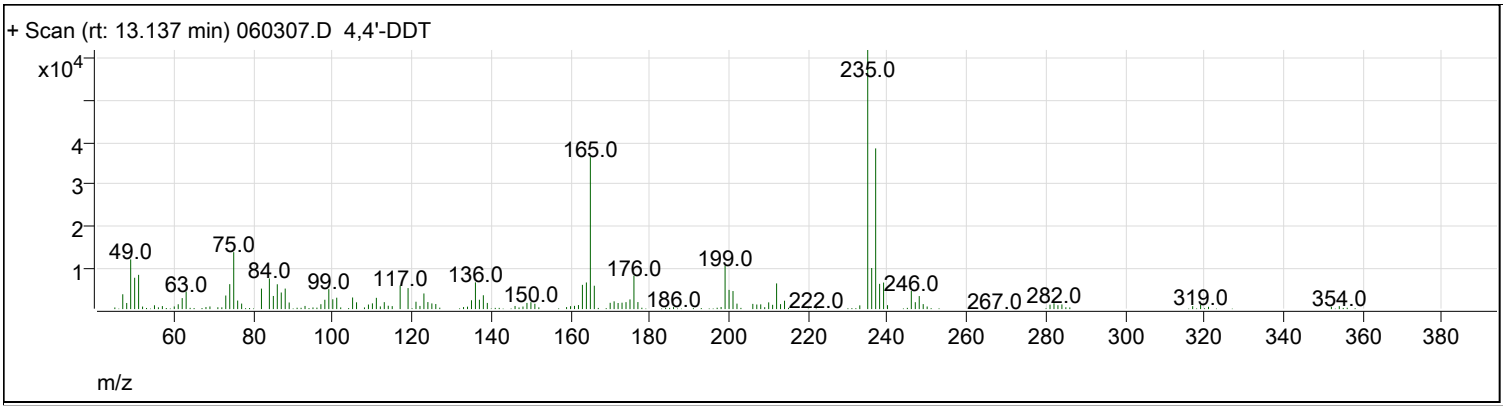


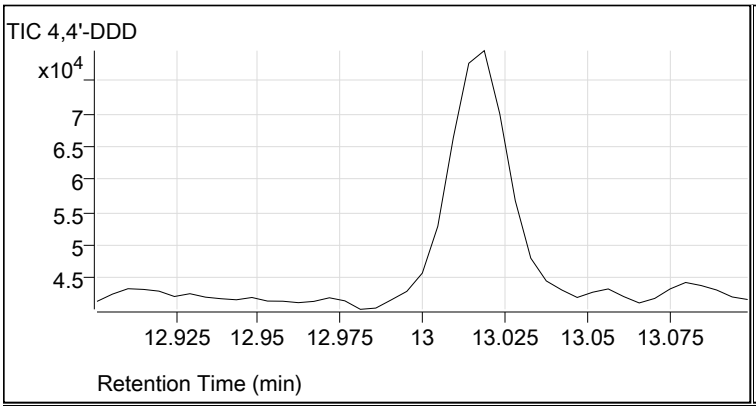
Target Mass	Rel. To Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Pass/Fail
68	69	0	2	1.4	255	Pass
70	69	0	2	1.5	286	Pass
197	198	0	2	0.0	0	Pass
198	198	100	100	100.0	27925	Pass
199	198	5	9	6.5	1812	Pass
365	198	1	100	4.7	1314	Pass
441	443	1E-10	150	87.1	4417	Pass
442	442	100	100	100.0	26549	Pass
443	442	15	24	19.1	5069	Pass
69	69	100	100	100.0	18724	Pass

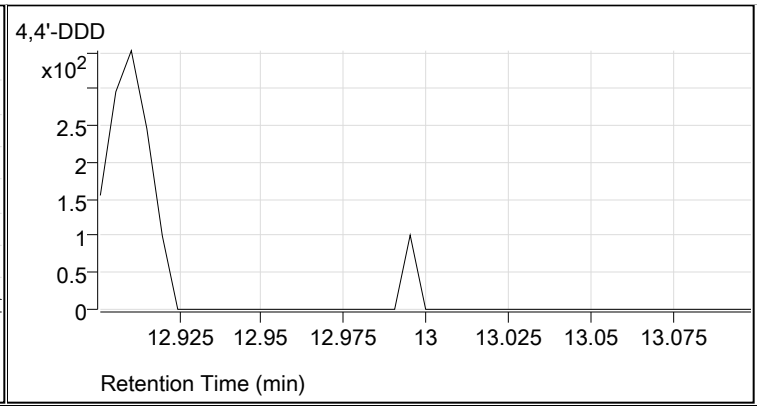
Tune Evaluation Report

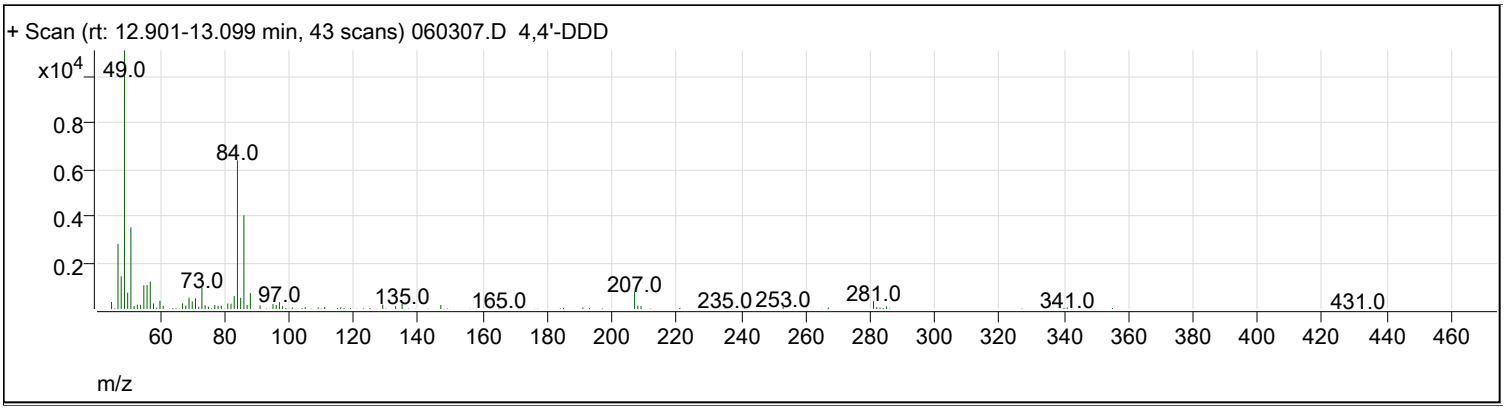






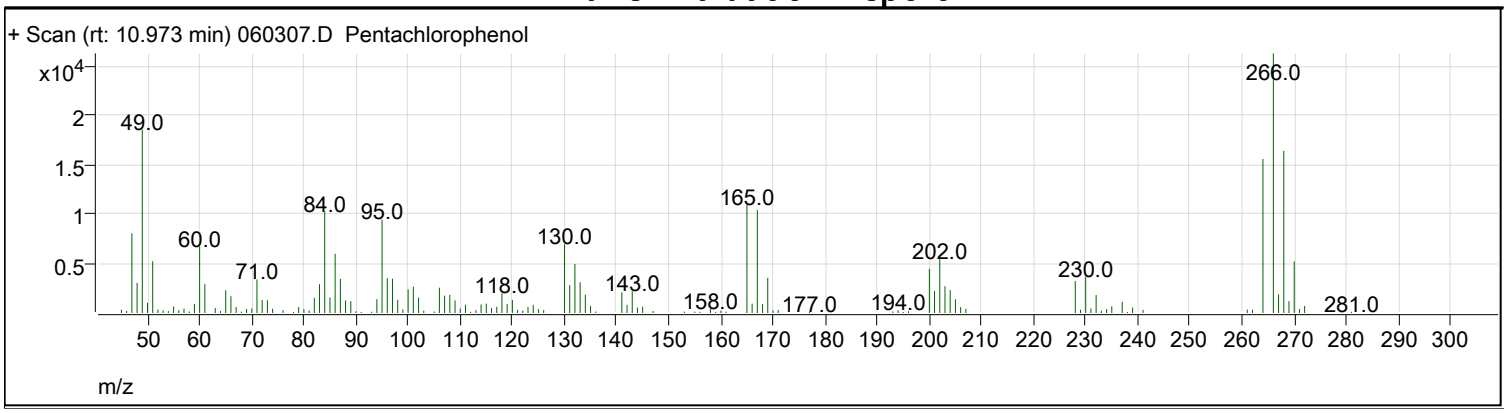


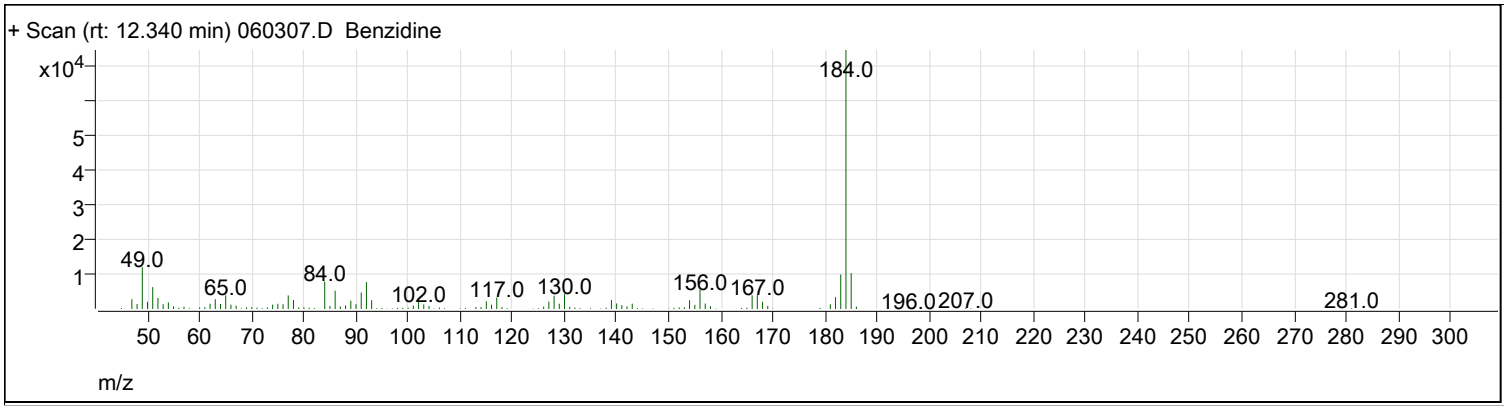




Compound Name	Expected RT	Observed RT	TIC Area	Breakdown %	Pass/Fail
4,4'-DDT	13.137	13.137	495796	0.0	Pass
4,4'-DDD	13.000	0.000	0		

Tune Evaluation Report

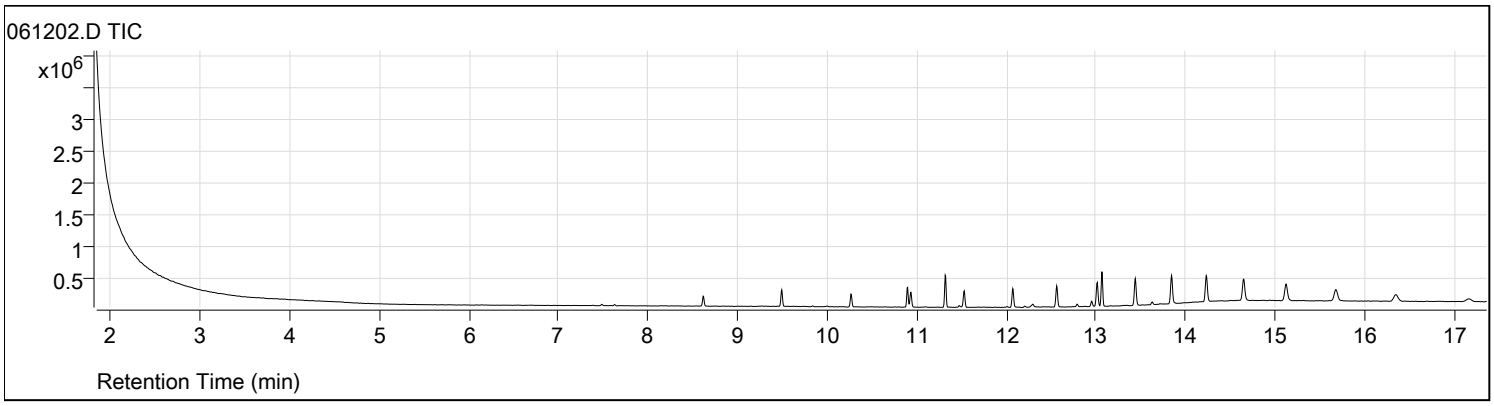


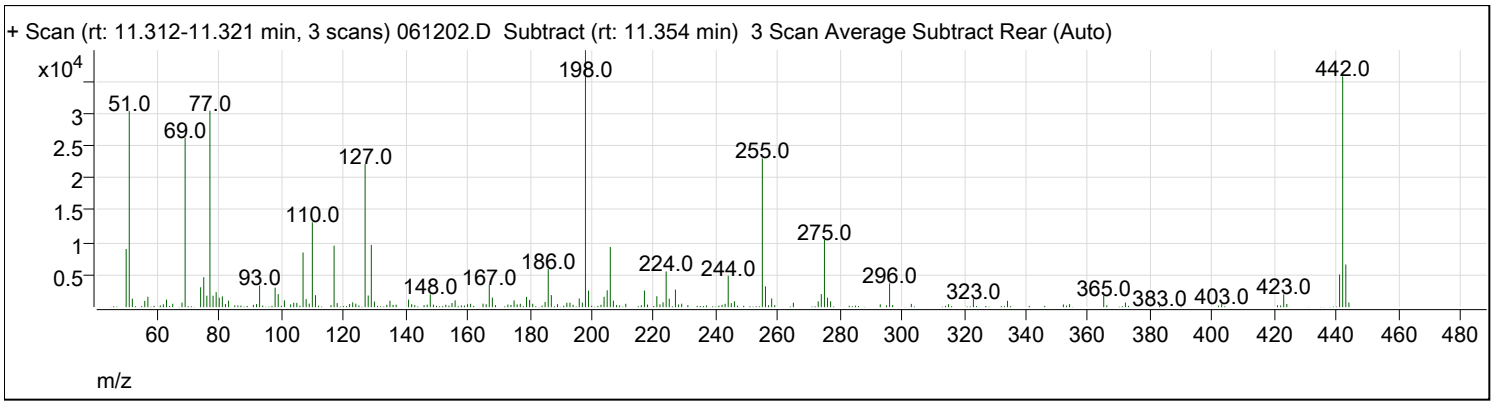


Compound Name	Expected RT	Observed RT	Tailing Factor	PGF	Pass/Fail
Pentachlorophenol	10.900	10.973	1.2	3.4	Pass
Benzidine	12.400	12.340	1.8	2.9	Pass

Tune Evaluation Report

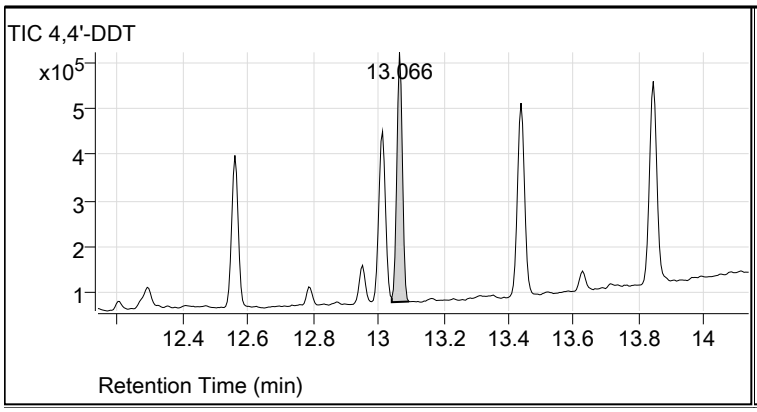
Data Path:	D:\GC-21\Data\061220\061202.D
Acq on:	6/12/2020 9:57:34 AM
Operator:	SNB
Sample:	TUNE
Inst Name:	GC-21
ALS Vial:	1
Method:	D:\MassHunter\Methods\Quant\DFTPPwBreak&TailingGC218270E.m

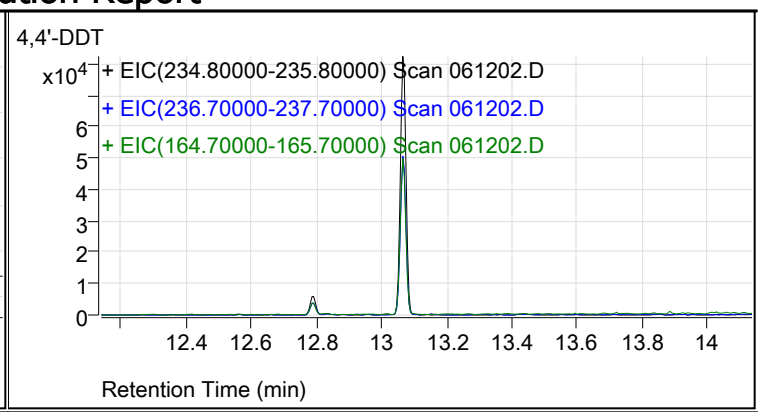


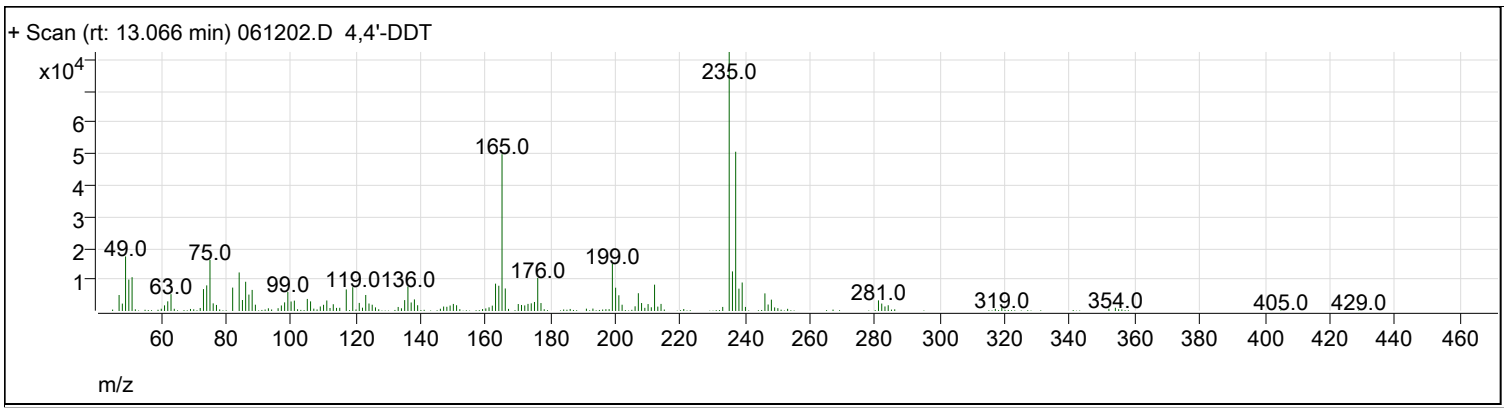


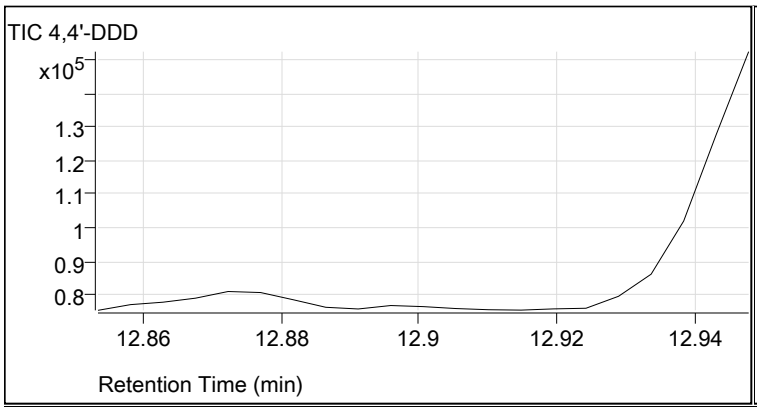
Target Mass	Rel. To Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Pass/Fail
68	69	0	2	2.7	713	Fail
70	69	0	2	0.6	154	Pass
197	198	0	2	1.8	708	Pass
198	198	100	100	100.0	39784	Pass
199	198	5	9	6.5	2569	Pass
365	198	1	100	4.5	1787	Pass
441	443	1E-10	150	76.6	5062	Pass
442	442	100	100	100.0	35723	Pass
443	442	15	24	18.5	6611	Pass
69	69	100	100	100.0	26213	Pass

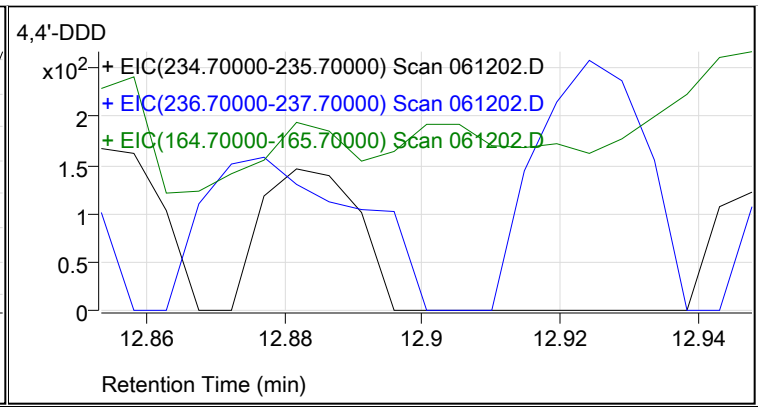
Tune Evaluation Report

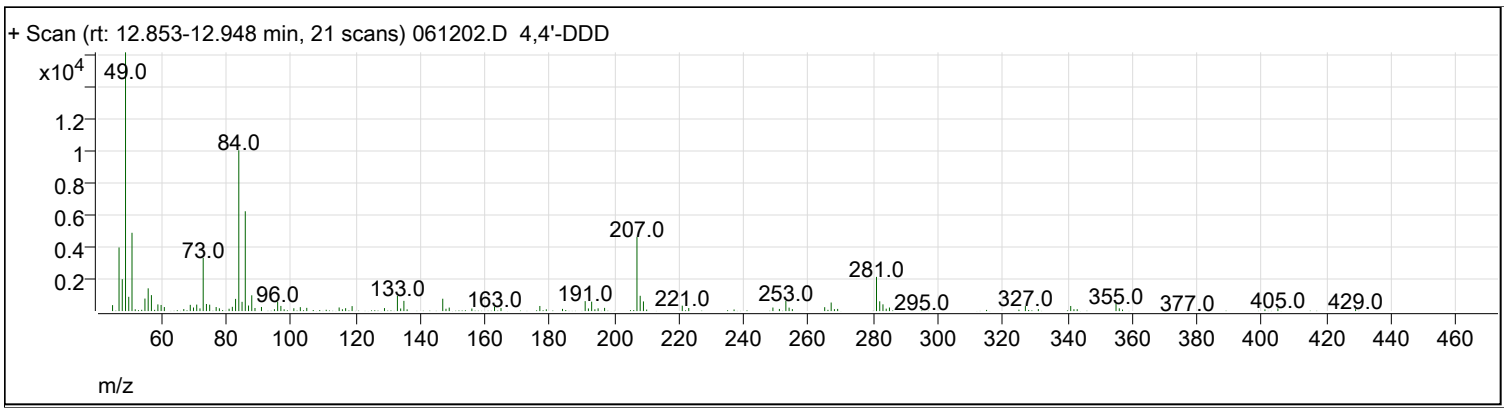






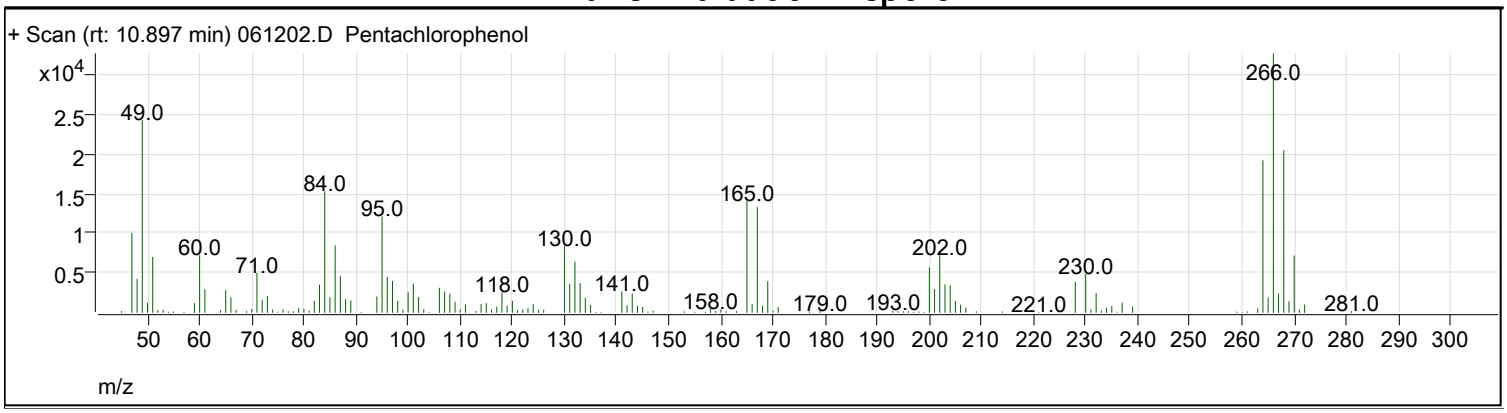


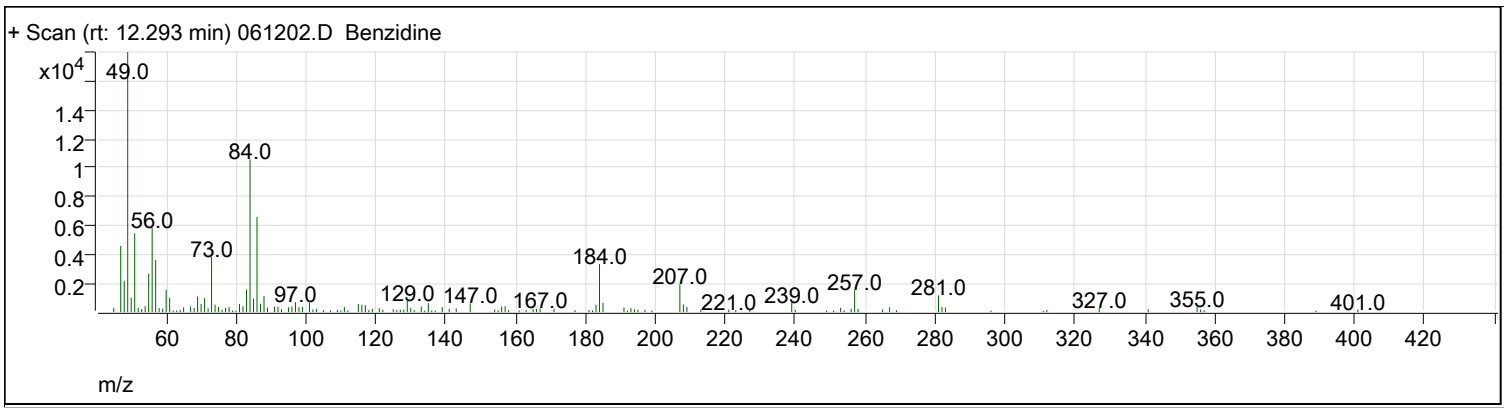




Compound Name	Expected RT	Observed RT	TIC Area	Breakdown %	Pass/Fail
4,4'-DDT	13.137	13.066	642047	0.0	Pass
4,4'-DDD	12.900	0.000	0		

Tune Evaluation Report

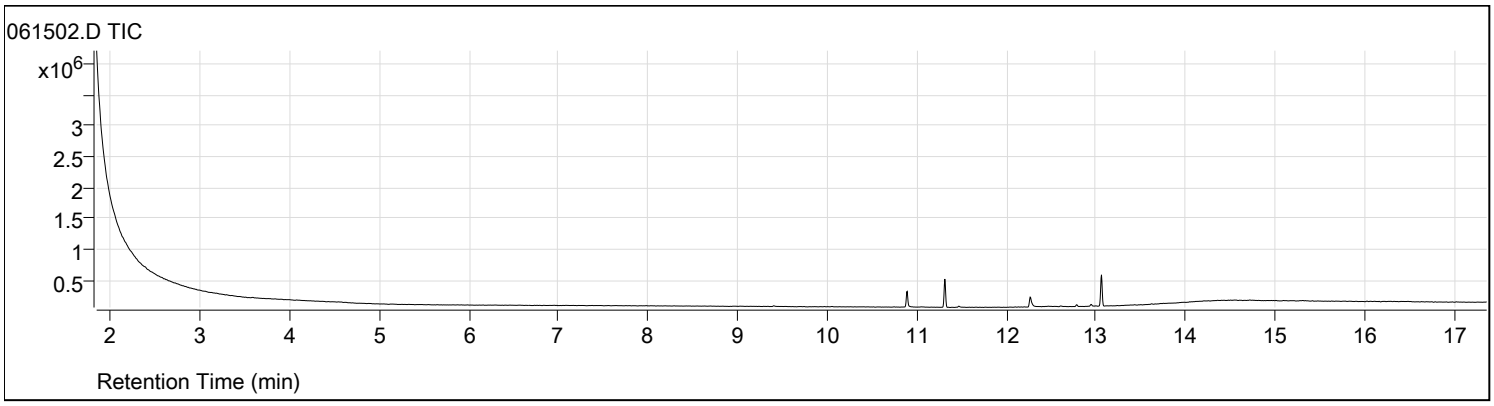


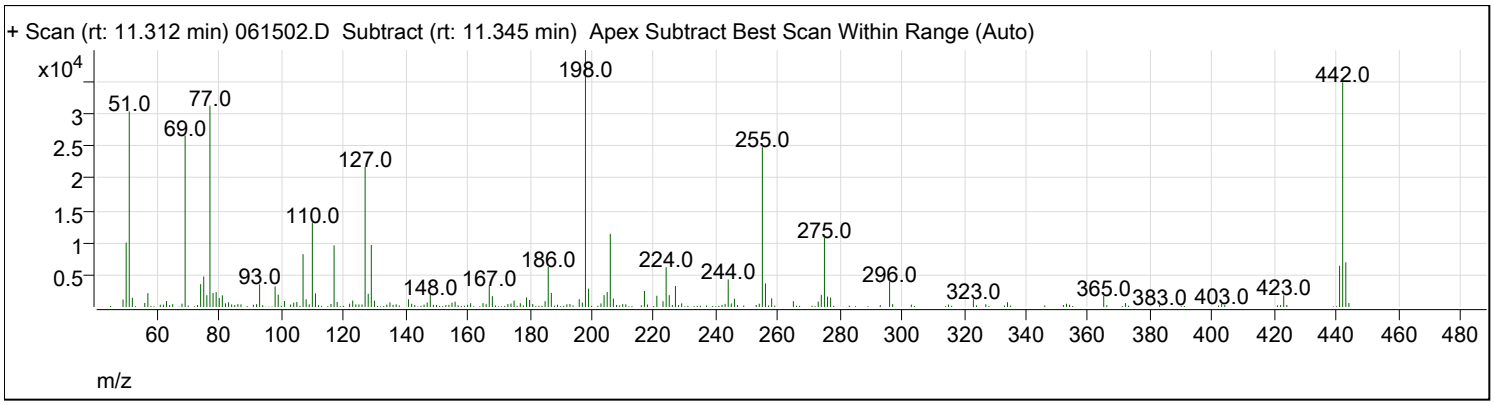


Compound Name	Expected RT	Observed RT	Tailing Factor	PGF	Pass/Fail
Pentachlorophenol	10.900	10.897	1.0	7.9	Pass
Benzidine	12.400	12.293	1.2	5.2	Pass

Tune Evaluation Report

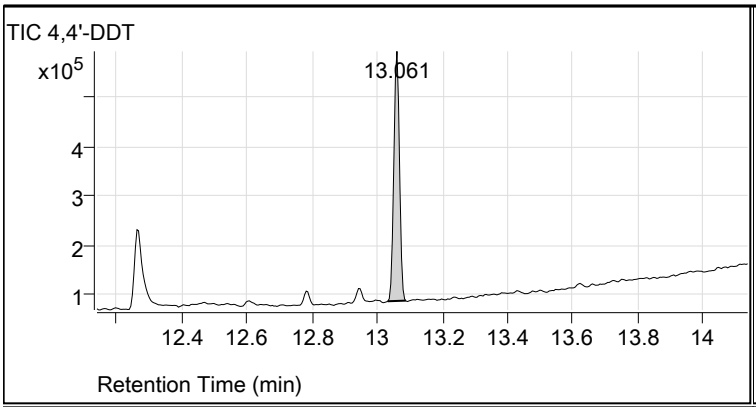
Data Path:	D:\GC-21\Data\061520\061502.D
Acq on:	6/15/2020 9:55:56 AM
Operator:	SNB
Sample:	TUNE
Inst Name:	GC-21
ALS Vial:	1
Method:	D:\MassHunter\Methods\Quant\DFTPPwBreak&TailingGC218270E.m

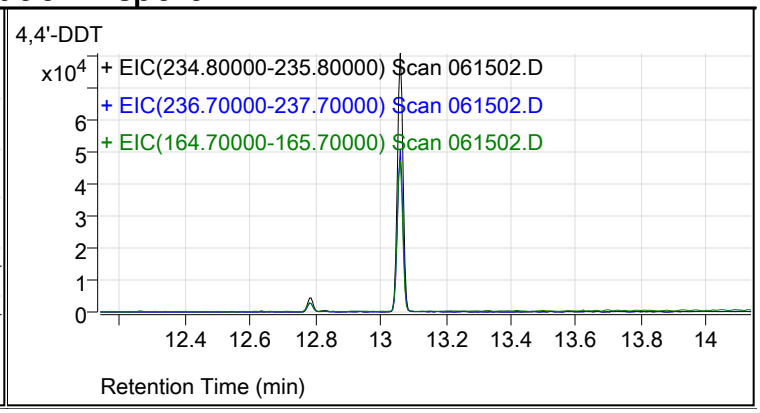


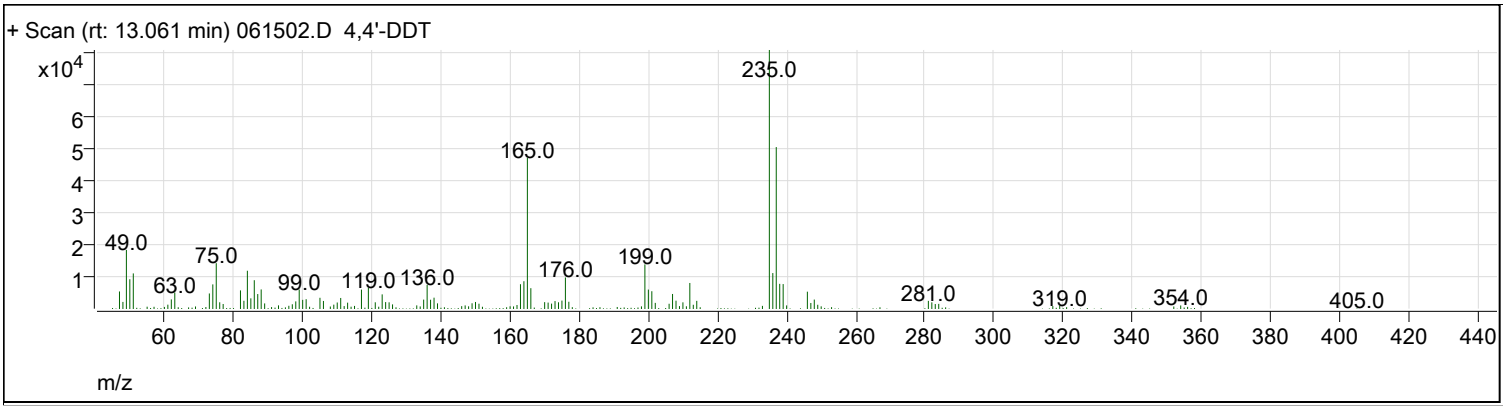


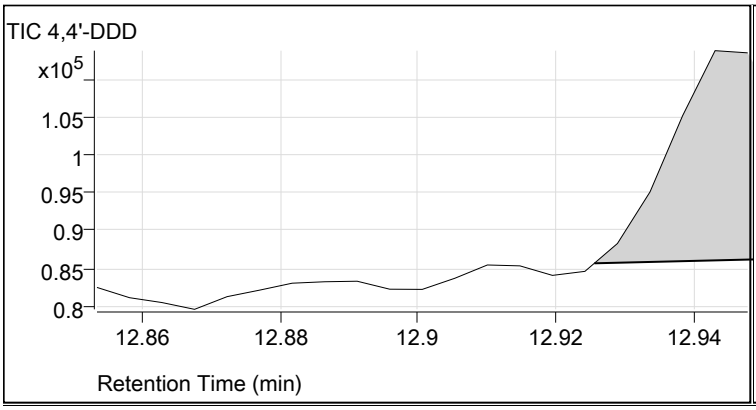
Target Mass	Rel. To Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Pass/Fail
68	69	0	2	1.9	510	Pass
70	69	0	2	0.9	228	Pass
197	198	0	2	1.8	704	Pass
198	198	100	100	100.0	39880	Pass
199	198	5	9	7.2	2855	Pass
365	198	1	100	4.3	1712	Pass
441	443	1E-10	150	92.3	6404	Pass
442	442	100	100	100.0	34888	Pass
443	442	15	24	19.9	6942	Pass
69	69	100	100	100.0	26598	Pass

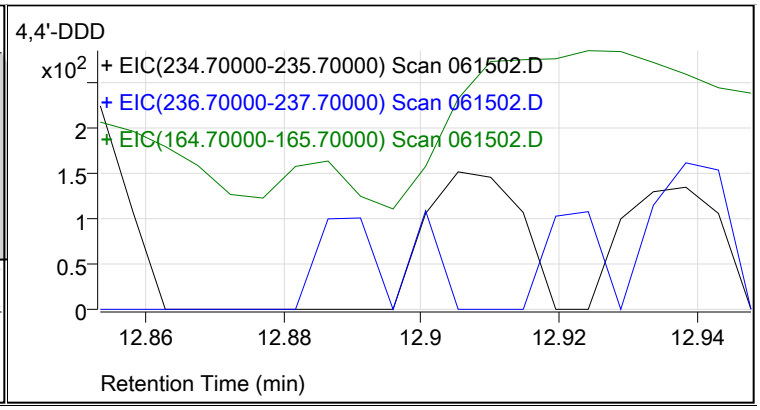
Tune Evaluation Report

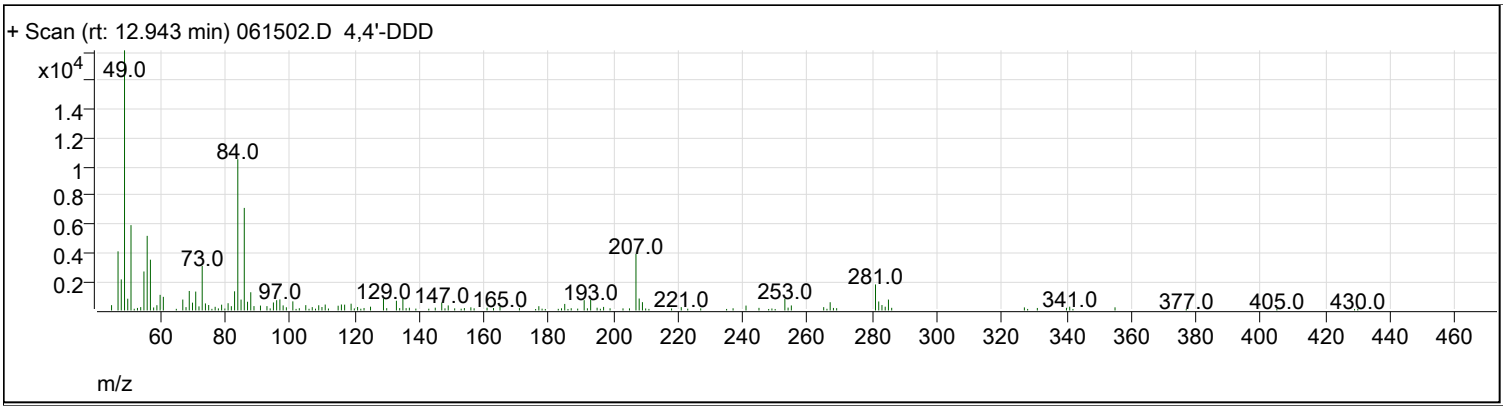






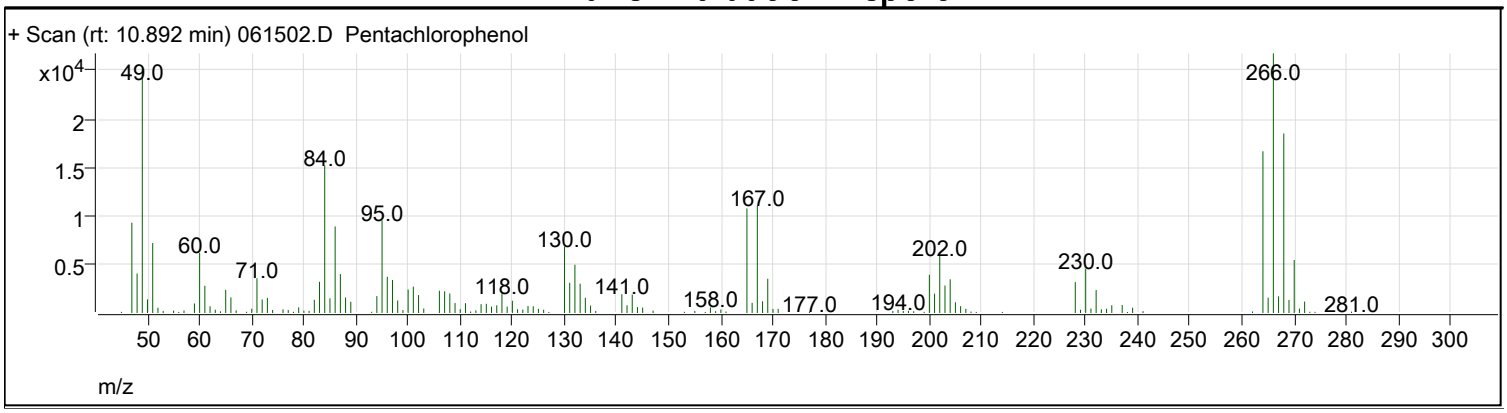


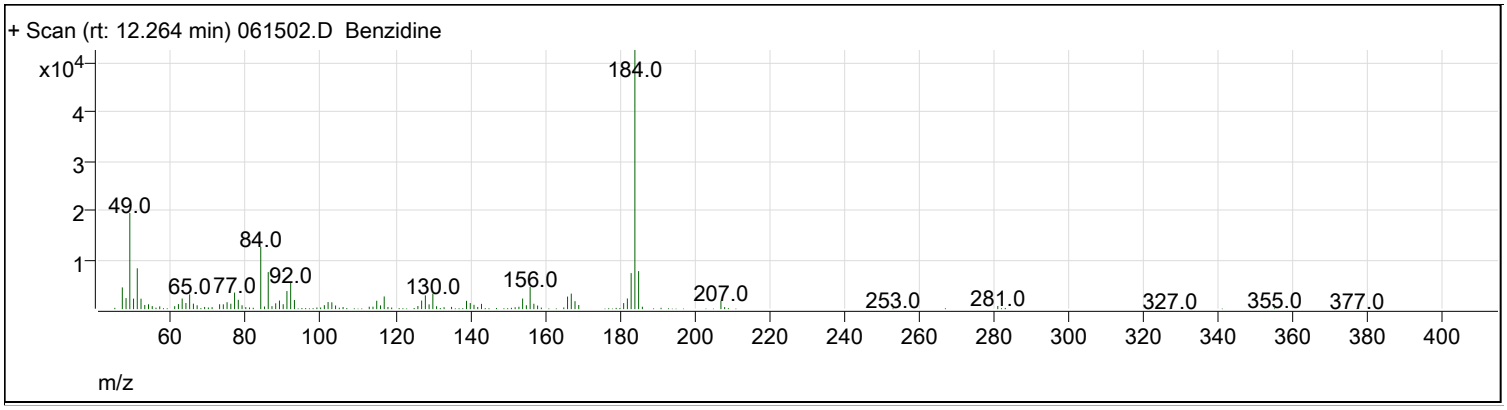




Compound Name	Expected RT	Observed RT	TIC Area	Breakdown %	Pass/Fail
4,4'-DDT	13.137	13.061	605045	5.3	Pass
4,4'-DDD	12.900	12.943	33942		

Tune Evaluation Report





Compound Name	Expected RT	Observed RT	Tailing Factor	PGF	Pass/Fail
Pentachlorophenol	10.900	10.892	1.0	5.5	Pass
Benzidine	12.400	12.264	2.6	4.1	Fail

DATA SET for Review -- Deliverable Requirements

Metals Analysis by EPA 200.8

Fremont Analytical Work Order No. 2006085

Libby Environmental

Project Name: Hardel Site

Project No. L200603-7

This Data contains the following:

- Analytical Sequence Summary for **Work Order 2006085**
- Calibration Information for **Work Order 2006085**
- Tune Information for **Work Order 2006085**

Dataset Report

User Name: lab
Computer Name: DT28
Dataset File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060820co\
Report Date/Time: Tuesday, June 09, 2020 10:27:26

The Dataset

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	wash	08:53:58 Mon 08-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0608	
	wash	08:59:34 Mon 08-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0608	
	wash	09:05:08 Mon 08-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0608	
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2006047-001ADIL	17:01:15 Mon 08-JSample	C:\Users\Public\DocumSD,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006047-001AMS	17:06:49 Mon 08-JSample	C:\Users\Public\DocumMS,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006047-001AMSD	17:11:40 Mon 08-JSample	C:\Users\Public\DocumMSD,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006047-001APDS	17:16:29 Mon 08-JSample	C:\Users\Public\DocumPDS,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006047-002A	17:21:18 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006047-003A	17:26:07 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
CCV	17:30:56 Mon 08-JQC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0608
CCB	17:35:46 Mon 08-JQC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0608
2006047-004A	17:40:36 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006047-005A	17:45:25 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-001A	17:50:14 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-002A	17:55:03 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-003A	17:59:51 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-004A	18:04:40 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-005A	18:09:29 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-006A	18:14:17 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-007A	18:19:06 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-008A	18:23:54 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
CCV	18:28:44 Mon 08-JQC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0608
CCB	18:33:32 Mon 08-JQC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0608
2006058-009A	18:38:22 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-010A	18:43:11 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-011A	18:47:59 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-012A	18:52:48 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-013A	18:57:36 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-014A	19:02:25 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
2006058-015A	19:07:13 Mon 08-JSample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0608
CCV	19:12:03 Mon 08-JQC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0608
CCB	19:16:52 Mon 08-JQC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0608
2%	19:21:41 Mon 08-JQC Std #7	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0608
DI	19:26:30 Mon 08-JQC Std #8	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0608

Dataset Report

User Name: lab
Computer Name: DT28
Dataset File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060920CO\
Report Date/Time: Wednesday, June 10, 2020 08:00:13

The Dataset

Batch ID	Sample ID	Date and Time	Read Type	Samp. File Name	Description
	cone conditioning	08:57:26 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	cone conditioning	09:03:00 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	cone conditioning	09:08:34 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	cone conditioning	09:14:08 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	cone conditioning	09:19:42 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	hcl wash	09:25:18 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	hcl wash	09:30:51 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	wash	09:36:25 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	wash	09:41:59 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	CAL BLK IS 22718	09:47:33 Tue 09-Jı	Blank	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 1	09:53:07 Tue 09-Jı	Standard #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 2	09:58:40 Tue 09-Jı	Standard #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 3	10:04:14 Tue 09-Jı	Standard #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 4	10:09:47 Tue 09-Jı	Standard #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 5	10:15:21 Tue 09-Jı	Standard #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 6	10:20:54 Tue 09-Jı	Standard #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 7	10:26:27 Tue 09-Jı	Standard #7	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 8	10:32:01 Tue 09-Jı	Standard #8	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 9	10:37:34 Tue 09-Jı	Standard #9	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 10	10:43:07 Tue 09-Jı	Standard #10	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 11	10:48:41 Tue 09-Jı	Standard #11	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	WASH	10:54:16 Tue 09-Jı	QC Std #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	ICB	10:59:49 Tue 09-Jı	QC Std #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	ICV LL	11:05:24 Tue 09-Jı	QC Std #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	ICV	11:11:08 Tue 09-Jı	QC Std #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	ICSA	11:31:12 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	ICSAB	11:36:46 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	wash	11:42:20 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	2006047-001A 10X	12:15:14 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\060
	2006047-002A 10X	12:20:46 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\060
	2006047-003A 100X	12:26:20 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\060
	2006047-004A 10X	12:31:54 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\060
	2006058-005A 10X	12:37:27 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\060
	2006087-001CMS	12:43:00 Tue 09-Jı	Sample	C:\Users\Public\DocumMS,M-200.8-T	gistix\ICPMS\DataSet\June2020\060
	2006085-002B	12:48:34 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\060
	CCV	12:54:08 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	CCB	13:01:50 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	MB1-28596	13:20:16 Tue 09-Jı	Sample	C:\Users\Public\DocumMBLK,M-TCLP	gistix\ICPMS\DataSet\June2020\060
	LCS-28596	13:25:50 Tue 09-Jı	Sample	C:\Users\Public\DocumLCS,M-TCLP	gistix\ICPMS\DataSet\June2020\060
	2006095-001A	13:31:24 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\June2020\060
	2006095-001ADUP	13:36:57 Tue 09-Jı	Sample	C:\Users\Public\DocumDUP,M-TCLP	gistix\ICPMS\DataSet\June2020\060
	2006095-001AMS	13:42:31 Tue 09-Jı	Sample	C:\Users\Public\DocumMS,M-TCLP	gistix\ICPMS\DataSet\June2020\060
	2006095-001AMSD	13:48:04 Tue 09-Jı	Sample	C:\Users\Public\DocumMSD,M-TCLP	gistix\ICPMS\DataSet\June2020\060
	2006103-001A	13:53:38 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\June2020\060
	MB2-28596	13:59:11 Tue 09-Jı	Sample	C:\Users\Public\DocumMBLK,M-TCLP	gistix\ICPMS\DataSet\June2020\060
	2006061-001C	14:04:45 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\June2020\060
	&SampID	14:10:18 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	CCV	14:15:52 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	CCB	14:22:05 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	MB-28586	14:37:40 Tue 09-Jı	Sample	C:\Users\Public\DocumMBLK,M-6020-S	gistix\ICPMS\DataSet\June2020\060

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2006058-016A	14:48:47 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006058-016ADUP	14:54:20 Tue 09-Jı	Sample	C:\Users\Public\DocumDUP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006058-016ADIL	14:59:54 Tue 09-Jı	Sample	C:\Users\Public\DocumSD,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006058-016AMS	15:05:28 Tue 09-Jı	Sample	C:\Users\Public\DocumMS,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006058-016AMSD	15:11:02 Tue 09-Jı	Sample	C:\Users\Public\DocumMSD,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006058-016APDS	15:16:36 Tue 09-Jı	Sample	C:\Users\Public\DocumPDS,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006058-017A	15:22:10 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006062-002A	15:27:43 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
CCV	15:33:18 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	15:39:12 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
2006064-001A	15:44:46 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-004A	15:50:20 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-007A	15:55:54 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-010A	16:01:28 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-013A	16:07:02 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-016A	16:12:36 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-019A	16:18:10 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-022A	16:23:44 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-025A	16:29:17 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-028A	16:34:51 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
CCV	16:40:25 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	16:49:24 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
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2006064-034A	17:24:47 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006075-001A 10X	17:30:21 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006075-002A 10X	17:35:55 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006075-003A 10X	17:41:29 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006085-008A	17:47:03 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006085-009A	17:52:36 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
&SampID	17:58:11 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
MB-28597	18:03:46 Tue 09-Jı	Sample	C:\Users\Public\DocumMBLK,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
LCS-28597	18:09:20 Tue 09-Jı	Sample	C:\Users\Public\DocumLCS,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
CCV	18:14:55 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	18:20:29 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
2006062-002A 10X	18:26:04 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006119-001D	18:31:38 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006119-001DDUP	18:37:12 Tue 09-Jı	Sample	C:\Users\Public\DocumDUP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006119-001DMS	18:42:46 Tue 09-Jı	Sample	C:\Users\Public\DocumMS,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006119-001DMSD	18:48:20 Tue 09-Jı	Sample	C:\Users\Public\DocumMSD,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006124-001D	18:53:54 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006124-002D	18:59:28 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006124-003D	19:05:02 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006090-001A	19:10:36 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006094-001E	19:16:10 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
CCV	19:21:45 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	19:27:19 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
2006098-001A	19:32:54 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006100-001A	19:38:28 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006101-001A	19:44:02 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006101-002A	19:49:36 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006107-001E	19:55:09 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006109-001A	20:00:43 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006109-002A	20:06:18 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006109-003A	20:11:52 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006109-004A	20:17:26 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006109-005A	20:22:59 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
CCV	20:28:34 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	20:34:08 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
2006111-001C	20:39:43 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609

2006121-001E	20:45:17 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T gistix\ICPMS\DataSet\June2020\0609
&SampID	20:50:52 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
MB-28598	20:56:26 Tue 09-Jı	Sample	C:\Users\Public\DocumMBLK,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
LCS-28598	21:02:00 Tue 09-Jı	Sample	C:\Users\Public\DocumLCS,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006070-001A	21:07:34 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006070-001ADUP	21:13:08 Tue 09-Jı	Sample	C:\Users\Public\DocumDUP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006070-001AMS	21:18:42 Tue 09-Jı	Sample	C:\Users\Public\DocumMS,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006070-001AMSD	21:24:16 Tue 09-Jı	Sample	C:\Users\Public\DocumMSD,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006114-001A	21:29:50 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
CCV	21:35:25 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	21:40:59 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
2006114-002A	21:46:34 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006120-001A	21:52:08 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006120-002A	21:57:42 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006126-001A	22:03:16 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006126-002A	22:08:50 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2005353-003B	22:14:25 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T gistix\ICPMS\DataSet\June2020\0609
CCV	22:19:59 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	22:25:33 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
hcl wash	22:31:07 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
hcl wash	22:36:41 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCV	22:42:15 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	22:47:49 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
wash	22:53:23 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
wash	22:58:57 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CAL BLK	23:04:30 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 1	23:10:04 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 2	23:15:38 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 3	23:21:11 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 4	23:26:45 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 5	23:32:18 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 6	23:37:52 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 7	23:43:25 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 8	23:48:59 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 9	23:54:32 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 10	00:00:06 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 11	00:05:39 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
WASH	00:11:14 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
ICB	00:16:47 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
ICV LL	00:22:22 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
ICV LL	00:27:56 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
ICV	00:33:30 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
ICV	00:39:04 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
wash	00:44:38 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
WASH	00:50:12 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
MB-28580	00:55:46 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-200.8-T gistix\ICPMS\DataSet\June2020\0609
MB-28535	01:01:20 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-200.8-T gistix\ICPMS\DataSet\June2020\0609
MB-28482	01:06:53 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-200.8-T gistix\ICPMS\DataSet\June2020\0609
MB-28513	01:12:27 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-200.8-T gistix\ICPMS\DataSet\June2020\0609
MB-28586	01:18:00 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-6020-S gistix\ICPMS\DataSet\June2020\0609
MB-28579	01:23:34 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-6020-S gistix\ICPMS\DataSet\June2020\0609
MB-28563	01:29:07 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-6020-S gistix\ICPMS\DataSet\June2020\0609
MB-28562	01:34:41 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-6020-S gistix\ICPMS\DataSet\June2020\0609
CCV	01:40:15 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	01:45:49 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
WASH	01:51:23 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
LOQ 1	01:56:57 Wed 10-J	Sample	C:\Users\Public\DocumSAMP,M-6020-S gistix\ICPMS\DataSet\June2020\0609
LOQ 2	02:02:31 Wed 10-J	Sample	C:\Users\Public\DocumSAMP,M-6020-S gistix\ICPMS\DataSet\June2020\0609
LOQ 3	02:08:04 Wed 10-J	Sample	C:\Users\Public\DocumSAMP,M-6020-S gistix\ICPMS\DataSet\June2020\0609
LOQ 4	02:13:38 Wed 10-J	Sample	C:\Users\Public\DocumSAMP,M-6020-S gistix\ICPMS\DataSet\June2020\0609

wash	02:19:12 Wed 10-Jun-2020	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
wash	02:24:46 Wed 10-Jun-2020	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
LOQ 1	02:30:20 Wed 10-Jun-2020	Sample	C:\Users\Public\DocumSAMP,M-200.8-T _ gistix\ICPMS\DataSet\June2020\0609
LOQ 2	02:35:54 Wed 10-Jun-2020	Sample	C:\Users\Public\DocumSAMP,M-200.8-T _ gistix\ICPMS\DataSet\June2020\0609
LOQ 3	02:41:27 Wed 10-Jun-2020	Sample	C:\Users\Public\DocumSAMP,M-200.8-T _ gistix\ICPMS\DataSet\June2020\0609
CCV	02:47:02 Wed 10-Jun-2020	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	02:52:36 Wed 10-Jun-2020	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
2%	02:58:09 Wed 10-Jun-2020	QC Std #7	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
DI	03:03:43 Wed 10-Jun-2020	QC Std #8	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609

Calibration

Table 1: Calibration Standards

Element	Calibration Standard ug/L						
	Cal 1	**Cal 2**	**Cal 3**	**Cal 4**	**Cal 5**	**Cal 6**	**Cal 7**
Antimony	0.025	0.05	0.25	1.25	5.0	10.0	25.0
Arsenic	0.5	1.0	5.0	25.0	100.0	200.	500
Barium	0.5	1.0	5.0	25.0	100.0	200.	500
Beryllium	0.025	0.05	0.25	1.25	5.0	10.0	25.0
Cadmium	0.025	0.05	0.25	1.25	5.0	10.0	25.0
Chromium	0.5	1.0	5.0	25.0	100.0	200.0	500
Cobalt	0.5	1.0	5.0	25.0	100.0	200.0	500
Copper	0.5	1.0	5.0	25.0	100.0	200.0	500
Lead	0.25	0.5	2.5	12.5	50	100	250
Manganese	0.5	1.0	5.0	25.0	100.0	200.0	500
Molybdenum	0.5	1.0	5.0	25.0	100.0	200.0	500
Nickel	0.5	1.0	5.0	25.0	100.0	200.0	500
Selenium	0.05	0.1	0.5	2.5	10.0	20.0	50.0
Silver	0.025	0.05	0.25	1.25	5.0	10.0	25
Strontium	0.5	1.0	5.0	25.0	100.0	200.0	500
Thallium	0.0125	0.025	0.125	0.625	2.5	5.0	12.5
Tin	0.5	1.0	5.0	25.0	100.0	200.0	500
Titanium	0.5	1.0	5.0	25.0	100.0	200.0	500
Uranium	0.25	0.5	2.5	12.5	50	100	250
Vanadium	0.5	1.0	5.0	25.0	100.0	200.	500
Zinc	0.5	1.0	5.0	25.0	100.0	200.	500
Aluminum						50	100
Boron						25	50
Calcium						50	100
Iron						50	100
Magnesium						50	100
Phosphorous						50	100
Potassium						50	100
Sodium						50	100

Element					
		Cal 8	**Cal 9**	**Cal 10**	**Cal 11**
Aluminum	Al	500	1000	2500	5000
Boron	B	250	500	1250	2500
Calcium	Ca	500	1000	2500	5000
Iron	Fe	500	1000	2500	5000
Magnesium	Mg	500	1000	2500	5000
Phosphorous	P	500	1000	2500	5000
Potassium	K	500	1000	2500	5000
Sodium	Na	500	1000	2500	5000
Mercury	Hg	500	1000	2500	5000

Quantitative Analysis Calibration Report

File Name: 060820CO.cal
File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\060820CO.cal
Calibration Type: External Calibration

Analyte	Mass	Curve Type	Slope	Intercept	Corr. Coeff.
Li	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be	9.012	Linear Thru Zero	0.04	0.00	0.999967
B	11.009	Linear Thru Zero	0.05	0.00	0.999647
Na	22.990	Weighted Linear	0.00	0.00	0.998865
Mg	24.986	Weighted Linear	0.02	0.01	0.999641
Al	26.982	Linear Thru Zero	0.00	0.00	0.999834
K	38.964	Linear Thru Zero	0.00	0.00	0.999960
Fe	56.935	Linear Thru Zero	0.00	0.00	0.999827
Ca	43.956	Linear Thru Zero	0.01	0.00	0.999646
P	30.994	Linear Thru Zero	0.01	0.00	0.999256
Sc-5	44.956	Linear Thru Zero	0.00	0.00	0.000000
Ti	46.952	Linear Thru Zero	0.01	0.00	0.999932
V	50.944	Weighted Linear	0.13	-0.10	0.999989
Mn	54.938	Linear Thru Zero	0.16	0.00	0.999862
Be-2	9.012	Linear Thru Zero	0.03	0.00	0.999956
Co	58.933	Linear Thru Zero	0.12	0.00	0.999998
Ni	59.933	Linear Thru Zero	0.03	0.00	0.999920
Cr-1	51.941	Linear Thru Zero	0.11	0.00	0.999941
Cu	62.930	Linear Thru Zero	0.06	0.00	0.999992
Cu-2	64.928	Linear Thru Zero	0.03	0.00	0.999980
Zn	65.926	Linear Thru Zero	0.01	0.00	0.999900
As	74.922	Linear Thru Zero	0.01	0.00	0.999960
Se	81.917	Linear Thru Zero	0.00	0.00	0.999716
Kr	82.914	Linear Thru Zero	0.00	0.00	0.000000
Sr	87.906	Linear Thru Zero	0.18	0.00	0.999994
Mo	96.906	Linear Thru Zero	0.01	0.00	0.999919
Rh-3	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag	106.905	Linear Thru Zero	0.05	0.00	0.999919
Sb-1	120.904	Linear Thru Zero	0.05	0.00	0.999999
Ag-2	108.905	Linear Thru Zero	0.06	0.00	0.999909
Cd	110.904	Linear Thru Zero	0.02	0.00	0.999952
Sn	117.902	Linear Thru Zero	0.06	0.00	0.999998
In	114.904	Linear Thru Zero	0.00	0.00	0.000000
Sb	120.904	Weighted Linear	0.03	0.00	0.999530
Sb-1	122.904	Linear Thru Zero	0.02	0.00	0.999920
Ba	136.904	Linear Thru Zero	0.02	0.00	0.999950
Tb	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho	164.930	Linear Thru Zero	0.00	0.00	0.000000
Tl	204.975	Linear Thru Zero	0.10	0.00	0.999909
Pb	207.977	Weighted Linear	0.13	0.00	0.999298
U	238.050	Linear Thru Zero	0.13	0.00	0.999976
Li-1	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be-1	9.012	Linear Thru Zero	0.04	0.00	0.999125
B-1	11.009	Linear Thru Zero	0.01	0.00	0.999590
Se-2	77.917	Linear Thru Zero	0.00	0.00	0.999579
Sb-3	120.904	Simple Linear	0.02	0.00	0.999987
Mo-1	97.906	Linear Thru Zero	0.03	0.00	0.999988
Rh-1	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag-1	106.905	Simple Linear	0.07	-0.00	0.999999
Na-1	22.990	Weighted Linear	0.01	0.01	0.999142
Ca-1	43.956	Linear Thru Zero	0.00	0.00	0.998986
Mg-1	23.985	Weighted Linear	0.00	0.00	0.998141
Al-1	26.982	Weighted Linear	0.00	-0.00	0.998101
Ba-1	137.905	Linear Thru Zero	0.04	0.00	0.999993
Cd-1	110.904	Linear Thru Zero	0.01	0.00	0.999954

K-1	38.964	Weighted Linear	0.00	-0.00	0.998268
Sc-6	44.956	Linear Thru Zero	0.00	0.00	0.000000
V-1	50.944	Linear Thru Zero	0.01	0.00	0.999979
Cr-2	51.941	Linear Thru Zero	0.02	0.00	0.999986
Fe-1	56.935	Weighted Linear	0.00	-0.00	0.999247
Ni-1	59.933	Linear Thru Zero	0.02	0.00	0.999992
Cu-1	62.930	Linear Thru Zero	0.04	0.00	0.999919
Zn-2	65.926	Linear Thru Zero	0.00	0.00	0.999867
As-3	74.922	Linear Thru Zero	0.00	0.00	0.999907
Rh-2	102.905	Linear Thru Zero	0.00	0.00	0.000000
In-1	114.904	Linear Thru Zero	0.00	0.00	0.000000
Tb-1	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho-1	164.930	Linear Thru Zero	0.00	0.00	0.000000
Pb-1	207.977	Linear Thru Zero	0.17	0.00	0.999999

Quantitative Analysis Calibration Report

File Name: 060920CO.cal
File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\060920CO.cal
Calibration Type: External Calibration

Analyte	Mass	Curve Type	Slope	Intercept	Corr. Coeff.
Li	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be	9.012	Linear Thru Zero	0.04	0.00	0.999903
B	11.009	Linear Thru Zero	0.05	0.00	0.999787
Na	22.990	Weighted Linear	0.00	0.01	0.999076
Mg	24.986	Weighted Linear	0.02	0.00	0.999762
Al	26.982	Weighted Linear	0.00	0.00	0.999742
K	38.964	Weighted Linear	0.00	0.00	0.999783
Fe	56.935	Weighted Linear	0.00	-0.00	0.999699
Ca	43.956	Linear Thru Zero	0.01	0.00	0.998525
P	30.994	Linear Thru Zero	0.01	0.00	0.999623
Sc-5	44.956	Linear Thru Zero	0.00	0.00	0.000000
Ti	46.952	Linear Thru Zero	0.01	0.00	0.999987
V	50.944	Weighted Linear	0.12	-0.00	0.999952
Mn	54.938	Linear Thru Zero	0.14	0.00	0.999993
Be-2	9.012	Linear Thru Zero	0.03	0.00	0.999924
Co	58.933	Linear Thru Zero	0.11	0.00	0.999973
Ni	59.933	Weighted Linear	0.03	0.00	0.998302
Cr-1	51.941	Linear Thru Zero	0.10	0.00	0.999981
Cu	62.930	Weighted Linear	0.06	0.00	0.999064
Cu-2	64.928	Weighted Linear	0.03	-0.00	0.998882
Zn	65.926	Weighted Linear	0.01	-0.01	0.999837
As	74.922	Linear Thru Zero	0.01	0.00	0.999980
Se	81.917	Linear Thru Zero	0.00	0.00	0.999772
Kr	82.914	Linear Thru Zero	0.00	0.00	0.000000
Sr	87.906	Linear Thru Zero	0.17	0.00	0.999990
Mo	96.906	Linear Thru Zero	0.01	0.00	0.999933
Rh-3	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag	106.905	Weighted Linear	0.06	-0.00	0.998301
Sb-1	120.904	Linear Thru Zero	0.05	0.00	0.999977
Ag-2	108.905	Linear Thru Zero	0.07	0.00	0.999712
Cd	110.904	Linear Thru Zero	0.02	0.00	0.999966
Sn	117.902	Linear Thru Zero	0.06	0.00	0.999943
In	114.904	Linear Thru Zero	0.00	0.00	0.000000
Sb	120.904	Simple Linear	0.04	0.00	0.999933
Sb-1	122.904	Linear Thru Zero	0.03	0.00	0.999658
Ba	136.904	Weighted Linear	0.02	0.00	0.998702
Tb	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho	164.930	Linear Thru Zero	0.00	0.00	0.000000
Tl	204.975	Linear Thru Zero	0.12	0.00	0.999634
Pb	207.977	Linear Thru Zero	0.16	0.00	0.999976
U	238.050	Weighted Linear	0.15	0.00	0.998286
Li-1	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be-1	9.012	Linear Thru Zero	0.04	0.00	0.999348
B-1	11.009	Linear Thru Zero	0.01	0.00	0.999956
Se-2	77.917	Simple Linear	0.00	0.00	0.999976
Sb-3	120.904	Weighted Linear	0.01	0.00	0.999867
Mo-1	97.906	Linear Thru Zero	0.03	0.00	0.999979
Rh-1	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag-1	106.905	Weighted Linear	0.07	-0.00	0.999352
Na-1	22.990	Linear Thru Zero	0.00	0.00	0.999723
Ca-1	43.956	Linear Thru Zero	0.00	0.00	0.999729
Mg-1	23.985	Linear Thru Zero	0.00	0.00	0.999647
Al-1	26.982	Linear Thru Zero	0.00	0.00	0.999340
Ba-1	137.905	Simple Linear	0.03	0.00	0.999996
Cd-1	110.904	Weighted Linear	0.01	0.00	0.999953

K-1	38.964	Linear Thru Zero	0.00	0.00	0.999346
Sc-6	44.956	Linear Thru Zero	0.00	0.00	0.000000
V-1	50.944	Linear Thru Zero	0.01	0.00	0.999991
Cr-2	51.941	Linear Thru Zero	0.02	0.00	0.999986
Fe-1	56.935	Linear Thru Zero	0.00	0.00	0.999738
Ni-1	59.933	Linear Thru Zero	0.02	0.00	0.999976
Cu-1	62.930	Linear Thru Zero	0.04	0.00	0.999981
Zn-2	65.926	Simple Linear	0.00	-0.00	0.999953
As-3	74.922	Linear Thru Zero	0.00	0.00	0.999965
Rh-2	102.905	Linear Thru Zero	0.00	0.00	0.000000
In-1	114.904	Linear Thru Zero	0.00	0.00	0.000000
Tb-1	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho-1	164.930	Linear Thru Zero	0.00	0.00	0.000000
Pb-1	207.977	Linear Thru Zero	0.19	0.00	0.999998

Tunes

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\FA_SmartTune Daily.swz

Start Time: 6/8/2020 8:36:55 AM
End Time: 6/8/2020 8:39:15 AM

Lab Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 10974.28
Obtained Intensity (Mg 24): 50865.27
Obtained Intensity (In 115): 95901.72
Obtained Intensity (U 238): 71459.91
Obtained Intensity (Bkgd 220): 0.63
Obtained Formula (CeO 156 / Ce 140): 0.020 (=1475.94 / 74970.96)
Obtained Formula (Ce++ 70 / Ce 140): 0.025 (=1879.39 / 74970.96)
Obtained RSD (Be 9): 0.0156
Obtained RSD (Mg 24): 0.0112
Obtained RSD (In 115): 0.0107
Obtained RSD (U 238): 0.0139

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\FA_SmartTune Daily.swz

Optimization Status

Start Time: 6/8/2020 8:36:55 AM

Lab Performance Check

Optimization Settings:

Method: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\FA_Daily Performance.mth.
Intensity Criterion: Be 9 > 2000
Intensity Criterion: Mg 24 > 15000
Intensity Criterion: In 115 > 40000
Intensity Criterion: U 238 > 30000
Intensity Criterion: Bkgd 220 <= 5
Formula Criterion: CeO 156 / Ce 140 <= 0.03
Formula Criterion: Ce++ 70 / Ce 140 <= 0.05
RSD Criterion: Be 9.0122 < 0.05
RSD Criterion: Mg 23.985 < 0.05
RSD Criterion: In 114.904 < 0.05
RSD Criterion: U 238.05 < 0.05

Optimization Results:

Initial Try

Obtained Intensity (Be 9): 10974.28
Obtained Intensity (Mg 24): 50865.27
Obtained Intensity (In 115): 95901.72
Obtained Intensity (U 238): 71459.91
Obtained Intensity (Bkgd 220): 0.63
Obtained Formula (CeO 156 / Ce 140): 0.020 (=1475.94 / 74970.96)
Obtained Formula (Ce++ 70 / Ce 140): 0.025 (=1879.39 / 74970.96)
Obtained RSD (Be 9): 0.0156
Obtained RSD (Mg 24): 0.0112
Obtained RSD (In 115): 0.0107
Obtained RSD (U 238): 0.0139

[Passed] Optimum value(s): N/A

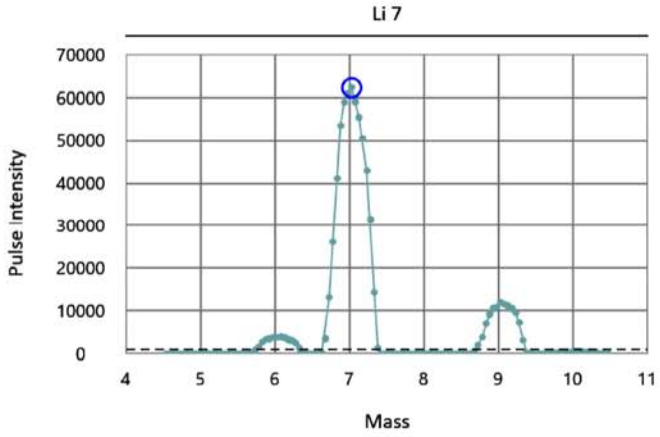
End Time: 6/8/2020 8:39:15 AM

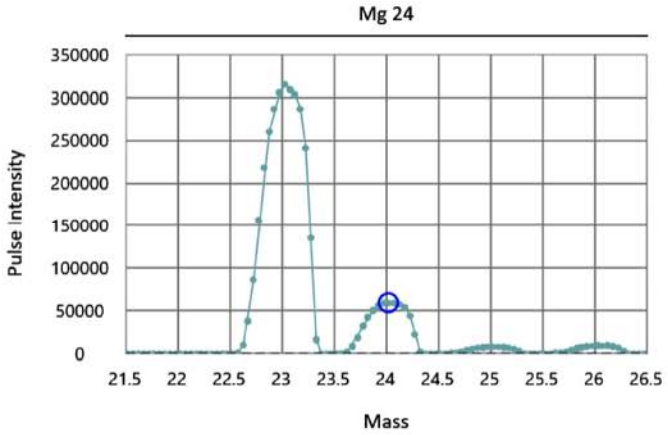
Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.700)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.694)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.694)
Target/Obtained mass (207.977/207.975), Target/Obtained resolution (0.7/0.699)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.703)

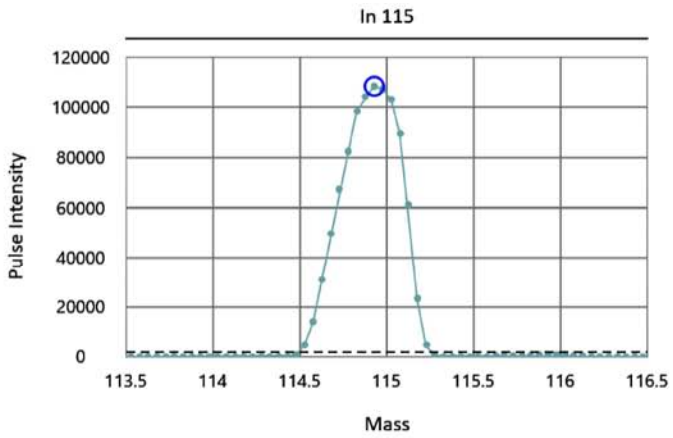
Acq. Date/Time: 6/8/2020 8:28:56 AM

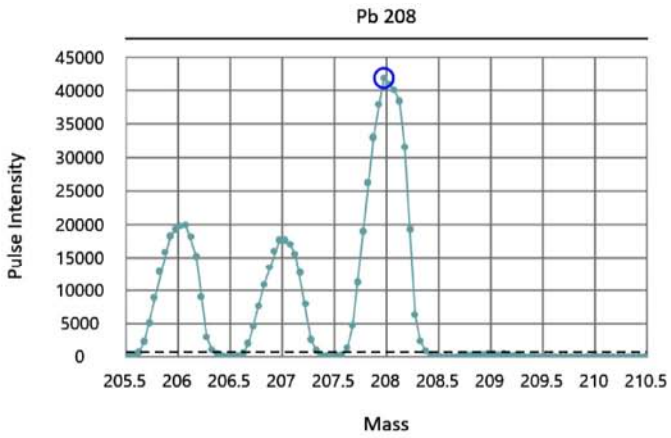
Sent to file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

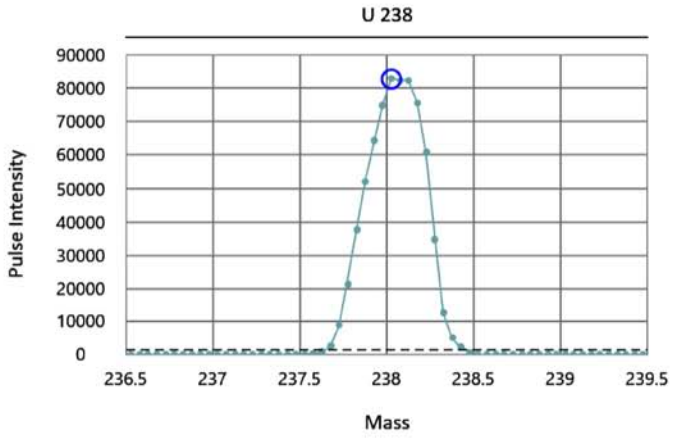
Analyte	Exact Mass	Meas. Mass	Mass DAC	Res DAC	Meas. Peak Width	Custom Res
Li	7.016	7.025	1318	2021	0.700	
Mg	23.985	24.025	4713	2021	0.694	
In	114.904	114.925	22858	2038	0.694	
Pb	207.977	207.975	41420	2060	0.699	
U	238.05	238.025	47420	2068	0.703	











SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\FA_SmartTune Daily.swz

Start Time: 6/9/2020 8:52:34 AM
End Time: 6/9/2020 8:54:54 AM

Lab Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 11152.62
Obtained Intensity (Mg 24): 50193.30
Obtained Intensity (In 115): 97774.08
Obtained Intensity (U 238): 74514.19
Obtained Intensity (Bkgd 220): 0.73
Obtained Formula (CeO 156 / Ce 140): 0.019 (=1554.75 / 80645.55)
Obtained Formula (Ce++ 70 / Ce 140): 0.021 (=1668.96 / 80645.55)
Obtained RSD (Be 9): 0.0119
Obtained RSD (Mg 24): 0.0086
Obtained RSD (In 115): 0.0096
Obtained RSD (U 238): 0.0135

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\FA_SmartTune Daily.swz

Optimization Status

Start Time: 6/9/2020 8:52:34 AM

Lab Performance Check

Optimization Settings:

Method: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\FA_Daily Performance.mth.
Intensity Criterion: Be 9 > 2000
Intensity Criterion: Mg 24 > 15000
Intensity Criterion: In 115 > 40000
Intensity Criterion: U 238 > 30000
Intensity Criterion: Bkgd 220 <= 5
Formula Criterion: CeO 156 / Ce 140 <= 0.03
Formula Criterion: Ce++ 70 / Ce 140 <= 0.05
RSD Criterion: Be 9.0122 < 0.05
RSD Criterion: Mg 23.985 < 0.05
RSD Criterion: In 114.904 < 0.05
RSD Criterion: U 238.05 < 0.05

Optimization Results:

Initial Try

Obtained Intensity (Be 9): 11152.62
Obtained Intensity (Mg 24): 50193.30
Obtained Intensity (In 115): 97774.08
Obtained Intensity (U 238): 74514.19
Obtained Intensity (Bkgd 220): 0.73
Obtained Formula (CeO 156 / Ce 140): 0.019 (=1554.75 / 80645.55)
Obtained Formula (Ce++ 70 / Ce 140): 0.021 (=1668.96 / 80645.55)
Obtained RSD (Be 9): 0.0119
Obtained RSD (Mg 24): 0.0086
Obtained RSD (In 115): 0.0096
Obtained RSD (U 238): 0.0135

[Passed] Optimum value(s): N/A

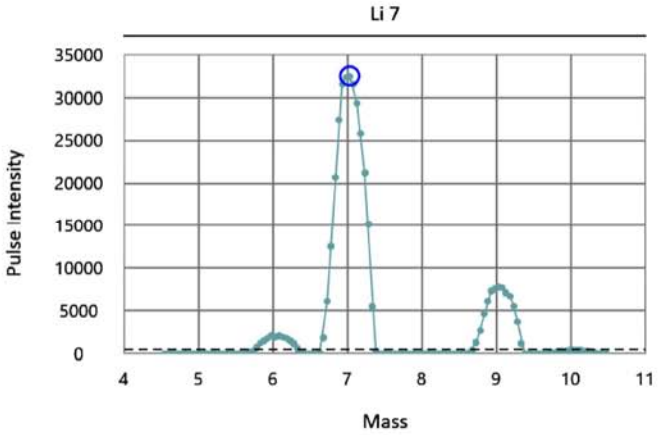
End Time: 6/9/2020 8:54:54 AM

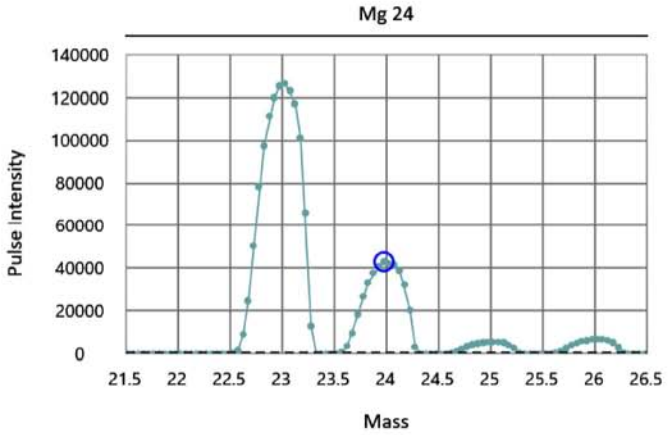
Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.695)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.689)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.703)
Target/Obtained mass (207.977/207.975), Target/Obtained resolution (0.7/0.698)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.716)

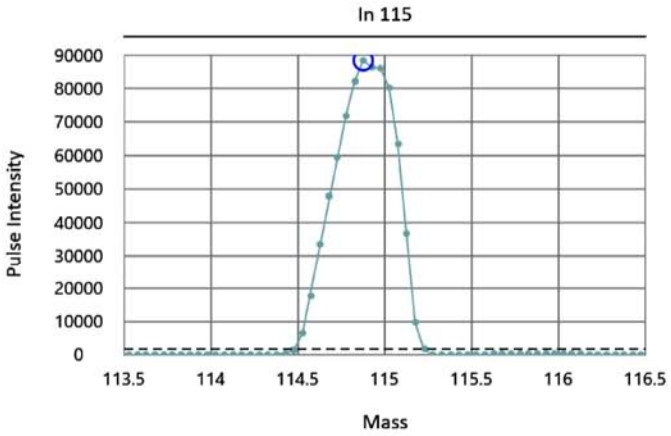
Acq. Date/Time: 6/9/2020 8:40:36 AM

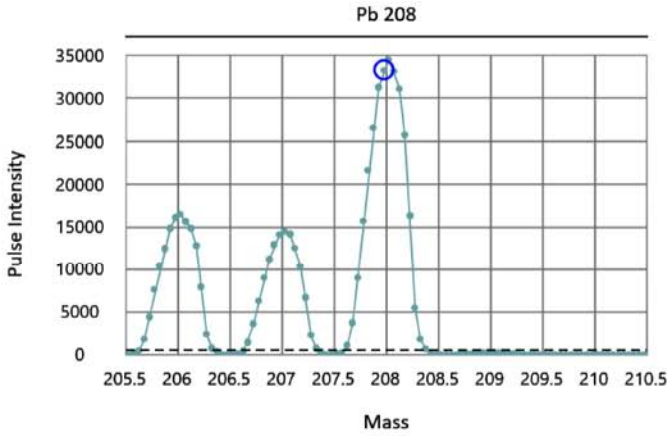
Sent to file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

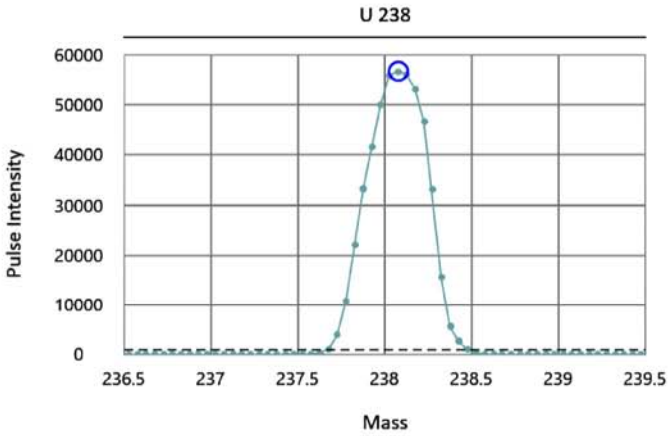
Analyte	Exact Mass	Meas. Mass	Mass DAC	Res DAC	Meas. Peak Width	Custom Res
Li	7.016	7.025	1319	2021	0.695	
Mg	23.985	23.975	4711	2021	0.689	
In	114.904	114.875	22852	2038	0.703	
Pb	207.977	207.975	41419	2060	0.698	
U	238.05	238.075	47424	2068	0.716	











DATA SET for Review -- Deliverable Requirements

Metals Analysis by EPA 6020

Fremont Analytical Work Order No. 2006085

Libby Environmental

Project Name: Hardel Site

Project No. L200603-7

This Data contains the following:

- Analytical Sequence Summary for **Work Order 2006085**
- Calibration Information for **Work Order 2006085**
- Tune Information for **Work Order 2006085**

Dataset Report

User Name: lab
Computer Name: DT28
Dataset File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060920CO\
Report Date/Time: Wednesday, June 10, 2020 08:00:13

The Dataset

Batch ID	Sample ID	Date and Time	Read Type	Samp. File Name	Description
	cone conditioning	08:57:26 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	cone conditioning	09:03:00 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	cone conditioning	09:08:34 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	cone conditioning	09:14:08 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	cone conditioning	09:19:42 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	hcl wash	09:25:18 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	hcl wash	09:30:51 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	wash	09:36:25 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	wash	09:41:59 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	CAL BLK IS 22718	09:47:33 Tue 09-Jı	Blank	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 1	09:53:07 Tue 09-Jı	Standard #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 2	09:58:40 Tue 09-Jı	Standard #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 3	10:04:14 Tue 09-Jı	Standard #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 4	10:09:47 Tue 09-Jı	Standard #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 5	10:15:21 Tue 09-Jı	Standard #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 6	10:20:54 Tue 09-Jı	Standard #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 7	10:26:27 Tue 09-Jı	Standard #7	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 8	10:32:01 Tue 09-Jı	Standard #8	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 9	10:37:34 Tue 09-Jı	Standard #9	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 10	10:43:07 Tue 09-Jı	Standard #10	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	Standard 11	10:48:41 Tue 09-Jı	Standard #11	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	WASH	10:54:16 Tue 09-Jı	QC Std #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	ICB	10:59:49 Tue 09-Jı	QC Std #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	ICV LL	11:05:24 Tue 09-Jı	QC Std #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	ICV	11:11:08 Tue 09-Jı	QC Std #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	ICSA	11:31:12 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	ICSAB	11:36:46 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	wash	11:42:20 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
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	2006047-002A 10X	12:20:46 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\060
	2006047-003A 100X	12:26:20 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\060
	2006047-004A 10X	12:31:54 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\060
	2006058-005A 10X	12:37:27 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\060
	2006087-001CMS	12:43:00 Tue 09-Jı	Sample	C:\Users\Public\DocumMS,M-200.8-T	gistix\ICPMS\DataSet\June2020\060
	2006085-002B	12:48:34 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\060
	CCV	12:54:08 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	CCB	13:01:50 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	MB1-28596	13:20:16 Tue 09-Jı	Sample	C:\Users\Public\DocumMBLK,M-TCLP	gistix\ICPMS\DataSet\June2020\060
	LCS-28596	13:25:50 Tue 09-Jı	Sample	C:\Users\Public\DocumLCS,M-TCLP	gistix\ICPMS\DataSet\June2020\060
	2006095-001A	13:31:24 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\June2020\060
	2006095-001ADUP	13:36:57 Tue 09-Jı	Sample	C:\Users\Public\DocumDUP,M-TCLP	gistix\ICPMS\DataSet\June2020\060
	2006095-001AMS	13:42:31 Tue 09-Jı	Sample	C:\Users\Public\DocumMS,M-TCLP	gistix\ICPMS\DataSet\June2020\060
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	2006103-001A	13:53:38 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\June2020\060
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	2006061-001C	14:04:45 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\June2020\060
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	CCB	14:22:05 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\060	
	MB-28586	14:37:40 Tue 09-Jı	Sample	C:\Users\Public\DocumMBLK,M-6020-S	gistix\ICPMS\DataSet\June2020\060

LCS-28586	14:43:13 Tue 09-Jı	Sample	C:\Users\Public\DocumLCS,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
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2006058-016AMS	15:05:28 Tue 09-Jı	Sample	C:\Users\Public\DocumMS,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006058-016AMSD	15:11:02 Tue 09-Jı	Sample	C:\Users\Public\DocumMSD,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006058-016APDS	15:16:36 Tue 09-Jı	Sample	C:\Users\Public\DocumPDS,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006058-017A	15:22:10 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006062-002A	15:27:43 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
CCV	15:33:18 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	15:39:12 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
2006064-001A	15:44:46 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-004A	15:50:20 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-007A	15:55:54 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-010A	16:01:28 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-013A	16:07:02 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
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2006064-019A	16:18:10 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-022A	16:23:44 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-025A	16:29:17 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006064-028A	16:34:51 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
CCV	16:40:25 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	16:49:24 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
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2006075-001A 10X	17:30:21 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006075-002A 10X	17:35:55 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006075-003A 10X	17:41:29 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006085-008A	17:47:03 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006085-009A	17:52:36 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
&SampID	17:58:11 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
MB-28597	18:03:46 Tue 09-Jı	Sample	C:\Users\Public\DocumMBLK,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
LCS-28597	18:09:20 Tue 09-Jı	Sample	C:\Users\Public\DocumLCS,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
CCV	18:14:55 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	18:20:29 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
2006062-002A 10X	18:26:04 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\0609
2006119-001D	18:31:38 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006119-001DDUP	18:37:12 Tue 09-Jı	Sample	C:\Users\Public\DocumDUP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006119-001DMS	18:42:46 Tue 09-Jı	Sample	C:\Users\Public\DocumMS,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006119-001DMSD	18:48:20 Tue 09-Jı	Sample	C:\Users\Public\DocumMSD,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006124-001D	18:53:54 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006124-002D	18:59:28 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006124-003D	19:05:02 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006090-001A	19:10:36 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006094-001E	19:16:10 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
CCV	19:21:45 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	19:27:19 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
2006098-001A	19:32:54 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006100-001A	19:38:28 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006101-001A	19:44:02 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006101-002A	19:49:36 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006107-001E	19:55:09 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006109-001A	20:00:43 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006109-002A	20:06:18 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006109-003A	20:11:52 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006109-004A	20:17:26 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
2006109-005A	20:22:59 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609
CCV	20:28:34 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	20:34:08 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
2006111-001C	20:39:43 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\0609

2006121-001E	20:45:17 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T gistix\ICPMS\DataSet\June2020\0609
&SampID	20:50:52 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
MB-28598	20:56:26 Tue 09-Jı	Sample	C:\Users\Public\DocumMBLK,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
LCS-28598	21:02:00 Tue 09-Jı	Sample	C:\Users\Public\DocumLCS,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006070-001A	21:07:34 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006070-001ADUP	21:13:08 Tue 09-Jı	Sample	C:\Users\Public\DocumDUP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006070-001AMS	21:18:42 Tue 09-Jı	Sample	C:\Users\Public\DocumMS,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006070-001AMSD	21:24:16 Tue 09-Jı	Sample	C:\Users\Public\DocumMSD,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006114-001A	21:29:50 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
CCV	21:35:25 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	21:40:59 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
2006114-002A	21:46:34 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006120-001A	21:52:08 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006120-002A	21:57:42 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006126-001A	22:03:16 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2006126-002A	22:08:50 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\June2020\0609
2005353-003B	22:14:25 Tue 09-Jı	Sample	C:\Users\Public\DocumSAMP,M-200.8-T gistix\ICPMS\DataSet\June2020\0609
CCV	22:19:59 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	22:25:33 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
hcl wash	22:31:07 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
hcl wash	22:36:41 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCV	22:42:15 Tue 09-Jı	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	22:47:49 Tue 09-Jı	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
wash	22:53:23 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
wash	22:58:57 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CAL BLK	23:04:30 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 1	23:10:04 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 2	23:15:38 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 3	23:21:11 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 4	23:26:45 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 5	23:32:18 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 6	23:37:52 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 7	23:43:25 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 8	23:48:59 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 9	23:54:32 Tue 09-Jı	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 10	00:00:06 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
HCl Standard 11	00:05:39 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
WASH	00:11:14 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
ICB	00:16:47 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
ICV LL	00:22:22 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
ICV LL	00:27:56 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
ICV	00:33:30 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
ICV	00:39:04 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
wash	00:44:38 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
WASH	00:50:12 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
MB-28580	00:55:46 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-200.8-T gistix\ICPMS\DataSet\June2020\0609
MB-28535	01:01:20 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-200.8-T gistix\ICPMS\DataSet\June2020\0609
MB-28482	01:06:53 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-200.8-T gistix\ICPMS\DataSet\June2020\0609
MB-28513	01:12:27 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-200.8-T gistix\ICPMS\DataSet\June2020\0609
MB-28586	01:18:00 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-6020-S gistix\ICPMS\DataSet\June2020\0609
MB-28579	01:23:34 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-6020-S gistix\ICPMS\DataSet\June2020\0609
MB-28563	01:29:07 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-6020-S gistix\ICPMS\DataSet\June2020\0609
MB-28562	01:34:41 Wed 10-J	Sample	C:\Users\Public\DocumMBLK,M-6020-S gistix\ICPMS\DataSet\June2020\0609
CCV	01:40:15 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	01:45:49 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
WASH	01:51:23 Wed 10-J	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
LOQ 1	01:56:57 Wed 10-J	Sample	C:\Users\Public\DocumSAMP,M-6020-S gistix\ICPMS\DataSet\June2020\0609
LOQ 2	02:02:31 Wed 10-J	Sample	C:\Users\Public\DocumSAMP,M-6020-S gistix\ICPMS\DataSet\June2020\0609
LOQ 3	02:08:04 Wed 10-J	Sample	C:\Users\Public\DocumSAMP,M-6020-S gistix\ICPMS\DataSet\June2020\0609
LOQ 4	02:13:38 Wed 10-J	Sample	C:\Users\Public\DocumSAMP,M-6020-S gistix\ICPMS\DataSet\June2020\0609

wash	02:19:12 Wed 10-Jun-2020	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
wash	02:24:46 Wed 10-Jun-2020	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
LOQ 1	02:30:20 Wed 10-Jun-2020	Sample	C:\Users\Public\DocumSAMP,M-200.8-T _ gistix\ICPMS\DataSet\June2020\0609
LOQ 2	02:35:54 Wed 10-Jun-2020	Sample	C:\Users\Public\DocumSAMP,M-200.8-T _ gistix\ICPMS\DataSet\June2020\0609
LOQ 3	02:41:27 Wed 10-Jun-2020	Sample	C:\Users\Public\DocumSAMP,M-200.8-T _ gistix\ICPMS\DataSet\June2020\0609
CCV	02:47:02 Wed 10-Jun-2020	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
CCB	02:52:36 Wed 10-Jun-2020	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
2%	02:58:09 Wed 10-Jun-2020	QC Std #7	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609
DI	03:03:43 Wed 10-Jun-2020	QC Std #8	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0609

Dataset Report

User Name: lab
Computer Name: DT28
Dataset File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061020co\
Report Date/Time: Thursday, June 11, 2020 11:44:43

The Dataset

Batch ID	Sample ID	Date and Time	Read Type	Samp. File Name	Description
	cone conditioning	08:48:38 Wed 10-	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	cone conditioning	08:54:11 Wed 10-	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	cone conditioning	08:59:45 Wed 10-	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	cone conditioning	09:05:19 Wed 10-	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	cone conditioning	09:13:40 Wed 10-	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	wash	09:19:13 Wed 10-	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	wash	09:24:47 Wed 10-	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	CAL BLK IS 22718	09:30:21 Wed 10-	Blank	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	CAL BLK IS 22718	09:59:39 Wed 10-	Blank	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	Standard 1	10:06:19 Wed 10-	Standard #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	Standard 2	10:11:53 Wed 10-	Standard #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	Standard 3	10:17:26 Wed 10-	Standard #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	Standard 4	10:23:00 Wed 10-	Standard #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	Standard 5	10:28:33 Wed 10-	Standard #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	Standard 6	10:34:07 Wed 10-	Standard #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	Standard 7	10:39:40 Wed 10-	Standard #7	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	Standard 8	10:45:13 Wed 10-	Standard #8	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	Standard 9	10:50:47 Wed 10-	Standard #9	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	Standard 10	10:56:21 Wed 10-	Standard #10	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	Standard 11	11:01:54 Wed 10-	Standard #11	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	WASH	11:07:29 Wed 10-	QC Std #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	ICB	11:13:03 Wed 10-	QC Std #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	ICV LL	11:18:37 Wed 10-	QC Std #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	ICV	11:24:12 Wed 10-	QC Std #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	ICSA	11:38:23 Wed 10-	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	ICSAB	11:43:57 Wed 10-	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	&SampID	11:49:31 Wed 10-	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	2006062-002A 10X	11:55:06 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\061
	2006062-002A 10X	12:02:45 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\061
	2006075-001A 100X	12:08:19 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\061
	2006075-002A 1000X	12:13:52 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\061
	2006075-003A 10000	12:19:26 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\061
	2006085-008A	12:25:00 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\061
	2006085-009A	12:30:34 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\061
	CCV	12:36:08 Wed 10-	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	CCB	12:41:42 Wed 10-	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	2006124-001D 5X	12:47:33 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\061
	2006124-002D 5X	12:53:07 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\061
	2006124-003D 5X	12:58:41 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\061
	2006098-001A 100X	13:04:15 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\061
	2006098-001A 5X	13:09:49 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\061
	2006109-003A	13:15:23 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\061
	2006109-005A	13:20:56 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\061
	2006121-001E	13:29:59 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\061
	2006109-003A 5X	13:53:12 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\061
	2006109-005A 5X	13:58:46 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\061
	CCV	14:04:20 Wed 10-	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	CCB	14:09:55 Wed 10-	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061	
	MB-28612	14:18:19 Wed 10-	Sample	C:\Users\Public\DocumMBLK,M-200.8-D	gistix\ICPMS\DataSet\June2020\061
	LCS-28612	14:23:53 Wed 10-	Sample	C:\Users\Public\DocumLCS,M-200.8-D	gistix\ICPMS\DataSet\June2020\061

MB-28599FB	14:29:26 Wed 10-	Sample	C:\Users\Public\DocumMBLK,M-200.8-D . gistix\ICPMS\DataSet\June2020\061
2006124-001G	14:35:00 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\June2020\061
2006124-001GDUP	14:40:35 Wed 10-	Sample	C:\Users\Public\DocumDUP,M-200.8-D . gistix\ICPMS\DataSet\June2020\061
2006124-001GMS	14:46:09 Wed 10-	Sample	C:\Users\Public\DocumMS,M-200.8-D . gistix\ICPMS\DataSet\June2020\061
2006124-001GMSD	14:51:43 Wed 10-	Sample	C:\Users\Public\DocumMSD,M-200.8-D . gistix\ICPMS\DataSet\June2020\061
2006124-002G	14:57:17 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\June2020\061
2006124-003G	15:02:51 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\June2020\061
2006130-001D	15:08:24 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\June2020\061
CCV	15:13:59 Wed 10-	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
CCB	15:19:43 Wed 10-	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
2006124-001G 5X	15:29:43 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\June2020\061
2006124-002G 5X	15:35:17 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\June2020\061
2006124-003G 5X	15:40:51 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\June2020\061
2006085-009A 10X	15:46:25 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006121-001E 5X	15:51:59 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\061
CCV	15:57:35 Wed 10-	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
CCB	16:03:22 Wed 10-	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
MB-28613	16:12:47 Wed 10-	Sample	C:\Users\Public\DocumMBLK,M-6020-S . gistix\ICPMS\DataSet\June2020\061
LCS-28613	16:18:21 Wed 10-	Sample	C:\Users\Public\DocumLCS,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006085-010A	16:23:55 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006085-010ADUP	16:29:29 Wed 10-	Sample	C:\Users\Public\DocumDUP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006085-010ADIL	16:35:03 Wed 10-	Sample	C:\Users\Public\DocumSD,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006085-010AMS	16:40:37 Wed 10-	Sample	C:\Users\Public\DocumMS,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006085-010AMSD	16:46:11 Wed 10-	Sample	C:\Users\Public\DocumMSD,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006085-010APDS	16:51:45 Wed 10-	Sample	C:\Users\Public\DocumPDS,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006085-011A	16:57:19 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006085-012A	17:02:53 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
CCV	17:08:28 Wed 10-	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
CCB	17:14:02 Wed 10-	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
2006085-013A	17:19:37 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006085-014A	17:25:11 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006085-015A	17:30:45 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006085-016A	17:36:19 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2005309-029A	17:41:53 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006115-001A	17:47:27 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006115-002A	17:53:01 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006115-003A	17:58:35 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006115-004A	18:04:09 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006115-005A	18:09:43 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
CCV	18:15:18 Wed 10-	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
CCB	18:20:52 Wed 10-	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
2006115-006A	18:26:27 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006115-007A	18:32:00 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006115-008A	18:37:34 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006115-009A	18:43:07 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006115-010A	18:48:41 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006125-001A	18:54:14 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
2006125-002A	18:59:48 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\June2020\061
&SampID	19:05:21 Wed 10-	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
wash	19:10:55 Wed 10-	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
wash	19:16:30 Wed 10-	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
CCV	19:22:04 Wed 10-	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
CCB	19:27:38 Wed 10-	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
MB-28616	19:33:12 Wed 10-	Sample	C:\Users\Public\DocumMBLK,M-200.8-T . gistix\ICPMS\DataSet\June2020\061
LCS-28616	19:38:46 Wed 10-	Sample	C:\Users\Public\DocumLCS,M-200.8-T . gistix\ICPMS\DataSet\June2020\061
2006130-001C	19:44:19 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\061
2006130-001CDUP	19:49:53 Wed 10-	Sample	C:\Users\Public\DocumDUP,M-200.8-T . gistix\ICPMS\DataSet\June2020\061
2006130-001CMS	19:55:26 Wed 10-	Sample	C:\Users\Public\DocumMS,M-200.8-T . gistix\ICPMS\DataSet\June2020\061
2006130-001CMSD	20:01:00 Wed 10-	Sample	C:\Users\Public\DocumMSD,M-200.8-T . gistix\ICPMS\DataSet\June2020\061
2006127-001A	20:06:33 Wed 10-	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\June2020\061

2006139-001A	20:12:07 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
2006139-002A	20:17:40 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
wash	20:23:15 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
CCV	20:28:48 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
CCB	20:34:22 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
2006142-001A	20:39:56 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
2006142-002A	20:45:30 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
2006147-003A	20:51:03 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
2006147-004A	20:56:37 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
2006148-001A	21:02:10 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
2006149-001A	21:07:44 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
2006149-002A	21:13:17 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
2006150-001B	21:18:51 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
2006152-001A	21:24:24 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
2006153-001A	21:29:58 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
CCV	21:35:32 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
CCB	21:41:06 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
hcl wash	21:46:40 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
WASH	21:52:14 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
WASH	21:57:48 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
2004009-030E	22:03:22 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
2004009-030E	22:08:55 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0610SAMP,M-200.8-T_gistix\ICPMS\DataSet\June2020\061
CCV	22:14:29 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061
CCB	22:20:03 Wed 10-Jun-2020	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061

Dataset Report

User Name: lab
Computer Name: DT28
Dataset File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\061520co\
Report Date/Time: Tuesday, June 16, 2020 08:01:53

The Dataset

Batch ID	Sample ID	Date and Time	Read Type	Samp. File Name	Description
	WASH	08:59:04 Mon 15-	JSample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	WASH	09:04:38 Mon 15-	JSample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	CAL BLK IS 22718	09:10:12 Mon 15-	JBlank	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	Standard 1	09:15:46 Mon 15-	JStandard #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	Standard 2	09:21:20 Mon 15-	JStandard #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	Standard 3	09:26:54 Mon 15-	JStandard #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	Standard 4	09:32:28 Mon 15-	JStandard #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	Standard 5	09:38:02 Mon 15-	JStandard #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	Standard 6	09:43:35 Mon 15-	JStandard #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	Standard 7	09:49:09 Mon 15-	JStandard #7	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	Standard 8	09:54:43 Mon 15-	JStandard #8	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	Standard 9	10:00:17 Mon 15-	JStandard #9	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	Standard 10	10:05:51 Mon 15-	JStandard #10	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	Standard 11	10:11:25 Mon 15-	JStandard #11	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	WASH	10:17:00 Mon 15-	JQC Std #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	ICB	10:22:34 Mon 15-	JQC Std #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	ICV LL	10:28:09 Mon 15-	JQC Std #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	ICV	10:33:43 Mon 15-	JQC Std #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	ICV LL	10:53:06 Mon 15-	JSample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	ICSA	11:03:42 Mon 15-	JSample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	ICSAB	11:09:16 Mon 15-	JSample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	WASH	11:14:51 Mon 15-	JSample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	2006085-010A	11:20:25 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	LCS-28638	11:25:59 Mon 15-	JSample	C:\Users\Public\DocumLCS,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006116-001A	11:31:33 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006116-001AMS	11:37:07 Mon 15-	JSample	C:\Users\Public\DocumMS,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006116-001AMSD	11:42:41 Mon 15-	JSample	C:\Users\Public\DocumMSD,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006116-001APDS	11:58:06 Mon 15-	JSample	C:\Users\Public\DocumPDS,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006135-001A	12:03:40 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	CCV	12:09:15 Mon 15-	JQC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	CCB	12:14:50 Mon 15-	JQC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	2006136-002A	12:28:22 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006138-001A	12:33:56 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006183-001A	12:39:30 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006175-001A	12:45:03 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006175-002A	12:50:37 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006175-003A	12:56:11 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006175-004A	13:01:46 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006116-003A	13:07:20 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006175-001A 20X	13:12:54 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006175-002A 20X	13:18:29 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	CCV	13:24:04 Mon 15-	JQC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	CCB	13:35:55 Mon 15-	JSample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	2006175-003A 20X	13:42:01 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006175-004A 20X	13:47:35 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	2006175-004A 10X	13:53:09 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
	&SampID	13:58:44 Mon 15-	JSample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
	MB-28659	14:04:19 Mon 15-	JSample	C:\Users\Public\DocumMBLK,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
	LCS-28659	14:09:53 Mon 15-	JSample	C:\Users\Public\DocumLCS,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
	2006230-001A	14:15:26 Mon 15-	JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615

2006230-001ADUP	14:21:00 Mon 15-JSample	C:\Users\Public\DocumDUP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006230-001AMS	14:26:34 Mon 15-JSample	C:\Users\Public\DocumMS,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006230-001AMSD	14:32:08 Mon 15-JSample	C:\Users\Public\DocumMSD,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
CCV	14:37:43 Mon 15-JQC Std #4	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
CCB	14:43:48 Mon 15-JQC Std #5	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
CCV	14:49:45 Mon 15-JSample	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
CCB	14:55:24 Mon 15-JSample	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
CCV	15:06:03 Mon 15-JSample	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
CCB	15:12:02 Mon 15-JSample	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
MB-28660	15:21:18 Mon 15-JSample	C:\Users\Public\DocumMBLK,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
LCS-28660	15:26:52 Mon 15-JSample	C:\Users\Public\DocumLCS,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006167-001A	15:32:26 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006167-001ADUP	15:38:00 Mon 15-JSample	C:\Users\Public\DocumDUP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006167-001ADIL	15:43:34 Mon 15-JSample	C:\Users\Public\DocumSD,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006167-001AMS	15:49:08 Mon 15-JSample	C:\Users\Public\DocumMS,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006167-001AMSD	15:54:42 Mon 15-JSample	C:\Users\Public\DocumMSD,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006167-001APDS	16:00:16 Mon 15-JSample	C:\Users\Public\DocumPDS,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006232-001A	16:05:50 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
CCV	16:12:08 Mon 15-JQC Std #4	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
CCB	16:17:42 Mon 15-JQC Std #5	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
2006122-001A	16:26:28 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006122-002A	16:32:02 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006122-003A	16:37:36 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006177-001A	16:43:10 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006177-002A	16:48:43 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006177-003A	16:54:17 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006177-004A	16:59:51 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006177-005A	17:05:25 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
WASH	17:11:00 Mon 15-JSample	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
2006177-006A	17:15:50 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
CCV	17:20:40 Mon 15-JQC Std #4	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
CCB	17:25:29 Mon 15-JQC Std #5	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
2006177-007A	17:30:19 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006177-008A	17:35:08 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006177-009A	17:39:57 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006177-010A	17:44:46 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006177-011A	17:49:35 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006188-001A	17:54:24 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006198-001A	17:59:13 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006198-002A	18:04:02 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
2006241-001A	18:08:51 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\June2020\0615
WASH	18:13:41 Mon 15-JSample	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
CCV	18:18:30 Mon 15-JQC Std #4	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
CCB	18:23:19 Mon 15-JQC Std #5	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
MB-28645	18:28:09 Mon 15-JSample	C:\Users\Public\DocumMBLK,M-TCLP	gistix\ICPMS\DataSet\June2020\0615
LCS-28645	18:32:58 Mon 15-JSample	C:\Users\Public\DocumLCS,M-TCLP	gistix\ICPMS\DataSet\June2020\0615
2006129-001A	18:37:47 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\June2020\0615
2006129-001ADUP	18:42:36 Mon 15-JSample	C:\Users\Public\DocumDUP,M-TCLP	gistix\ICPMS\DataSet\June2020\0615
2006129-001AMS	18:47:25 Mon 15-JSample	C:\Users\Public\DocumMS,M-TCLP	gistix\ICPMS\DataSet\June2020\0615
2006129-001AMSD	18:52:14 Mon 15-JSample	C:\Users\Public\DocumMSD,M-TCLP	gistix\ICPMS\DataSet\June2020\0615
2006175-001A	18:57:03 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\June2020\0615
2006175-002A	19:01:52 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\June2020\0615
2006175-003A	19:06:41 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\June2020\0615
2006175-004A	19:11:30 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\June2020\0615
CCV	19:16:20 Mon 15-JQC Std #4	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
CCB	19:21:09 Mon 15-JQC Std #5	C:\Users\Public\Documents\PerkinElmer Sy	ngistix\ICPMS\DataSet\June2020\0615
2006180-001A 10X	19:25:59 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\June2020\0615
2006180-001A	19:30:48 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\June2020\0615
MB2-28645	19:35:37 Mon 15-JSample	C:\Users\Public\DocumMBLK,M-TCLP	gistix\ICPMS\DataSet\June2020\0615
2006224-001A	19:40:27 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615

2006229-001A	19:45:16 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006229-002A	19:50:05 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006229-003A	19:54:54 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006229-004A	19:59:43 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006229-005A	20:04:32 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006229-006A	20:09:20 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
CCV	20:14:10 Mon 15-JQC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
CCB	20:18:59 Mon 15-JQC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
2006229-007A	20:23:48 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006229-008A	20:28:37 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006229-009A	20:33:26 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006229-010A	20:38:14 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006228-001A	20:43:48 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006228-002A	20:49:21 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006228-003A	20:54:55 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006228-004A	21:00:28 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006228-005A	21:06:02 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006228-006A	21:11:36 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
CCV	21:17:10 Mon 15-JQC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
CCB	21:22:44 Mon 15-JQC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
2006236-001A	21:28:18 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
2006237-001A	21:33:51 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\June2020\0615
&SampID	21:39:26 Mon 15-JSample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
MB-28658	21:45:00 Mon 15-JSample	C:\Users\Public\DocumMBLK,M-200.8-DW	gistix\ICPMS\DataSet\June2020\0615
LCS-28658	21:50:34 Mon 15-JSample	C:\Users\Public\DocumLCS,M-200.8-DW	gistix\ICPMS\DataSet\June2020\0615
2006156-001A	21:56:07 Mon 15-JSample	C:\Users\Public\DocumSAMP,M-200.8-DW	gistix\ICPMS\DataSet\June2020\0615
2006156-001ADUP	22:01:41 Mon 15-JSample	C:\Users\Public\DocumDUP,M-200.8-DW	gistix\ICPMS\DataSet\June2020\0615
2006156-001AMS	22:07:14 Mon 15-JSample	C:\Users\Public\DocumMS,M-200.8-DW	gistix\ICPMS\DataSet\June2020\0615
2006156-001AMSD	22:12:48 Mon 15-JSample	C:\Users\Public\DocumMSD,M-200.8-DW	gistix\ICPMS\DataSet\June2020\0615
CCV	22:18:22 Mon 15-JQC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
CCB	22:23:56 Mon 15-JQC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
2%	22:29:30 Mon 15-JQC Std #7	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	
DI	22:35:04 Mon 15-JQC Std #8	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\June2020\0615	

Calibration

Table 1: Calibration Standards

Element	Calibration Standard ug/L						
	Cal 1	**Cal 2**	**Cal 3**	**Cal 4**	**Cal 5**	**Cal 6**	**Cal 7**
Antimony	0.025	0.05	0.25	1.25	5.0	10.0	25.0
Arsenic	0.5	1.0	5.0	25.0	100.0	200.	500
Barium	0.5	1.0	5.0	25.0	100.0	200.	500
Beryllium	0.025	0.05	0.25	1.25	5.0	10.0	25.0
Cadmium	0.025	0.05	0.25	1.25	5.0	10.0	25.0
Chromium	0.5	1.0	5.0	25.0	100.0	200.0	500
Cobalt	0.5	1.0	5.0	25.0	100.0	200.0	500
Copper	0.5	1.0	5.0	25.0	100.0	200.0	500
Lead	0.25	0.5	2.5	12.5	50	100	250
Manganese	0.5	1.0	5.0	25.0	100.0	200.0	500
Molybdenum	0.5	1.0	5.0	25.0	100.0	200.0	500
Nickel	0.5	1.0	5.0	25.0	100.0	200.0	500
Selenium	0.05	0.1	0.5	2.5	10.0	20.0	50.0
Silver	0.025	0.05	0.25	1.25	5.0	10.0	25
Strontium	0.5	1.0	5.0	25.0	100.0	200.0	500
Thallium	0.0125	0.025	0.125	0.625	2.5	5.0	12.5
Tin	0.5	1.0	5.0	25.0	100.0	200.0	500
Titanium	0.5	1.0	5.0	25.0	100.0	200.0	500
Uranium	0.25	0.5	2.5	12.5	50	100	250
Vanadium	0.5	1.0	5.0	25.0	100.0	200.	500
Zinc	0.5	1.0	5.0	25.0	100.0	200.	500
Aluminum						50	100
Boron						25	50
Calcium						50	100
Iron						50	100
Magnesium						50	100
Phosphorous						50	100
Potassium						50	100
Sodium						50	100

Element					
		Cal 8	**Cal 9**	**Cal 10**	**Cal 11**
Aluminum	Al	500	1000	2500	5000
Boron	B	250	500	1250	2500
Calcium	Ca	500	1000	2500	5000
Iron	Fe	500	1000	2500	5000
Magnesium	Mg	500	1000	2500	5000
Phosphorous	P	500	1000	2500	5000

Potassium	K	500	1000	2500	5000
Sodium	Na	500	1000	2500	5000
Mercury	Hg	500	1000	2500	5000

Quantitative Analysis Calibration Report

File Name: 060920CO.cal
File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\060920CO.cal
Calibration Type: External Calibration

Analyte	Mass	Curve Type	Slope	Intercept	Corr. Coeff.
Li	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be	9.012	Linear Thru Zero	0.04	0.00	0.999903
B	11.009	Linear Thru Zero	0.05	0.00	0.999787
Na	22.990	Weighted Linear	0.00	0.01	0.999076
Mg	24.986	Weighted Linear	0.02	0.00	0.999762
Al	26.982	Weighted Linear	0.00	0.00	0.999742
K	38.964	Weighted Linear	0.00	0.00	0.999783
Fe	56.935	Weighted Linear	0.00	-0.00	0.999699
Ca	43.956	Linear Thru Zero	0.01	0.00	0.998525
P	30.994	Linear Thru Zero	0.01	0.00	0.999623
Sc-5	44.956	Linear Thru Zero	0.00	0.00	0.000000
Ti	46.952	Linear Thru Zero	0.01	0.00	0.999987
V	50.944	Weighted Linear	0.12	-0.00	0.999952
Mn	54.938	Linear Thru Zero	0.14	0.00	0.999993
Be-2	9.012	Linear Thru Zero	0.03	0.00	0.999924
Co	58.933	Linear Thru Zero	0.11	0.00	0.999973
Ni	59.933	Weighted Linear	0.03	0.00	0.998302
Cr-1	51.941	Linear Thru Zero	0.10	0.00	0.999981
Cu	62.930	Weighted Linear	0.06	0.00	0.999064
Cu-2	64.928	Weighted Linear	0.03	-0.00	0.998882
Zn	65.926	Weighted Linear	0.01	-0.01	0.999837
As	74.922	Linear Thru Zero	0.01	0.00	0.999980
Se	81.917	Linear Thru Zero	0.00	0.00	0.999772
Kr	82.914	Linear Thru Zero	0.00	0.00	0.000000
Sr	87.906	Linear Thru Zero	0.17	0.00	0.999990
Mo	96.906	Linear Thru Zero	0.01	0.00	0.999933
Rh-3	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag	106.905	Weighted Linear	0.06	-0.00	0.998301
Sb-1	120.904	Linear Thru Zero	0.05	0.00	0.999977
Ag-2	108.905	Linear Thru Zero	0.07	0.00	0.999712
Cd	110.904	Linear Thru Zero	0.02	0.00	0.999966
Sn	117.902	Linear Thru Zero	0.06	0.00	0.999943
In	114.904	Linear Thru Zero	0.00	0.00	0.000000
Sb	120.904	Simple Linear	0.04	0.00	0.999933
Sb-1	122.904	Linear Thru Zero	0.03	0.00	0.999658
Ba	136.904	Weighted Linear	0.02	0.00	0.998702
Tb	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho	164.930	Linear Thru Zero	0.00	0.00	0.000000
Tl	204.975	Linear Thru Zero	0.12	0.00	0.999634
Pb	207.977	Linear Thru Zero	0.16	0.00	0.999976
U	238.050	Weighted Linear	0.15	0.00	0.998286
Li-1	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be-1	9.012	Linear Thru Zero	0.04	0.00	0.999348
B-1	11.009	Linear Thru Zero	0.01	0.00	0.999956
Se-2	77.917	Simple Linear	0.00	0.00	0.999976
Sb-3	120.904	Weighted Linear	0.01	0.00	0.999867
Mo-1	97.906	Linear Thru Zero	0.03	0.00	0.999979
Rh-1	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag-1	106.905	Weighted Linear	0.07	-0.00	0.999352
Na-1	22.990	Linear Thru Zero	0.00	0.00	0.999723
Ca-1	43.956	Linear Thru Zero	0.00	0.00	0.999729
Mg-1	23.985	Linear Thru Zero	0.00	0.00	0.999647
Al-1	26.982	Linear Thru Zero	0.00	0.00	0.999340
Ba-1	137.905	Simple Linear	0.03	0.00	0.999996
Cd-1	110.904	Weighted Linear	0.01	0.00	0.999953

K-1	38.964	Linear Thru Zero	0.00	0.00	0.999346
Sc-6	44.956	Linear Thru Zero	0.00	0.00	0.000000
V-1	50.944	Linear Thru Zero	0.01	0.00	0.999991
Cr-2	51.941	Linear Thru Zero	0.02	0.00	0.999986
Fe-1	56.935	Linear Thru Zero	0.00	0.00	0.999738
Ni-1	59.933	Linear Thru Zero	0.02	0.00	0.999976
Cu-1	62.930	Linear Thru Zero	0.04	0.00	0.999981
Zn-2	65.926	Simple Linear	0.00	-0.00	0.999953
As-3	74.922	Linear Thru Zero	0.00	0.00	0.999965
Rh-2	102.905	Linear Thru Zero	0.00	0.00	0.000000
In-1	114.904	Linear Thru Zero	0.00	0.00	0.000000
Tb-1	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho-1	164.930	Linear Thru Zero	0.00	0.00	0.000000
Pb-1	207.977	Linear Thru Zero	0.19	0.00	0.999998

Quantitative Analysis Calibration Report

File Name: 061020CO.cal
File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\061020CO.cal
Calibration Type: External Calibration

Analyte	Mass	Curve Type	Slope	Intercept	Corr. Coeff.
Li	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be	9.012	Linear Thru Zero	0.04	0.00	0.999954
B	11.009	Linear Thru Zero	0.05	0.00	0.999795
Na	22.990	Linear Thru Zero	0.00	0.00	0.999796
Mg	24.986	Linear Thru Zero	0.02	0.00	0.999120
Al	26.982	Linear Thru Zero	0.00	0.00	0.999930
K	38.964	Linear Thru Zero	0.00	0.00	0.999716
Fe	56.935	Linear Thru Zero	0.00	0.00	0.999481
Ca	43.956	Linear Thru Zero	0.01	0.00	0.999520
P	30.994	Linear Thru Zero	0.01	0.00	0.999732
Sc-5	44.956	Linear Thru Zero	0.00	0.00	0.000000
Ti	46.952	Linear Thru Zero	0.01	0.00	0.999947
V	50.944	Linear Thru Zero	0.13	0.00	0.999979
Mn	54.938	Linear Thru Zero	0.15	0.00	1.000000
Be-2	9.012	Linear Thru Zero	0.03	0.00	0.999959
Co	58.933	Linear Thru Zero	0.11	0.00	0.999876
Ni	59.933	Linear Thru Zero	0.02	0.00	0.999900
Cr-1	51.941	Linear Thru Zero	0.11	0.00	0.999984
Cu	62.930	Linear Thru Zero	0.05	0.00	0.999975
Cu-2	64.928	Linear Thru Zero	0.03	0.00	0.999903
Zn	65.926	Linear Thru Zero	0.01	0.00	0.999972
As	74.922	Linear Thru Zero	0.01	0.00	0.999987
Se	81.917	Linear Thru Zero	0.00	0.00	0.999843
Kr	82.914	Linear Thru Zero	0.00	0.00	0.000000
Sr	87.906	Linear Thru Zero	0.18	0.00	0.999846
Mo	96.906	Linear Thru Zero	0.01	0.00	0.999987
Rh-3	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag	106.905	Linear Thru Zero	0.06	0.00	0.999547
Sb-1	120.904	Linear Thru Zero	0.05	0.00	0.999972
Ag-2	108.905	Linear Thru Zero	0.07	0.00	0.999490
Cd	110.904	Linear Thru Zero	0.02	0.00	0.999981
Sn	117.902	Linear Thru Zero	0.06	0.00	0.999997
In	114.904	Linear Thru Zero	0.00	0.00	0.000000
Sb	120.904	Weighted Linear	0.03	0.00	0.999739
Sb-1	122.904	Linear Thru Zero	0.02	0.00	0.999980
Ba	136.904	Linear Thru Zero	0.02	0.00	0.999794
Tb	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho	164.930	Linear Thru Zero	0.00	0.00	0.000000
Tl	204.975	Linear Thru Zero	0.09	0.00	0.999998
Pb	207.977	Linear Thru Zero	0.11	0.00	0.999810
U	238.050	Linear Thru Zero	0.11	0.00	0.999992
Li-1	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be-1	9.012	Linear Thru Zero	0.03	0.00	0.999721
B-1	11.009	Linear Thru Zero	0.01	0.00	0.999872
Se-2	77.917	Simple Linear	0.00	-0.00	0.999957
Sb-3	120.904	Weighted Linear	0.02	0.00	0.999616
Mo-1	97.906	Linear Thru Zero	0.03	0.00	0.999975
Rh-1	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag-1	106.905	Simple Linear	0.07	-0.00	0.998151
Na-1	22.990	Linear Thru Zero	0.01	0.00	0.999977
Ca-1	43.956	Linear Thru Zero	0.00	0.00	0.999808
Mg-1	23.985	Linear Thru Zero	0.00	0.00	0.999804
Al-1	26.982	Linear Thru Zero	0.00	0.00	0.999913
Ba-1	137.905	Linear Thru Zero	0.04	0.00	0.999953
Cd-1	110.904	Linear Thru Zero	0.01	0.00	0.999851

K-1	38.964	Linear Thru Zero	0.00	0.00	0.999858
Sc-6	44.956	Linear Thru Zero	0.00	0.00	0.000000
V-1	50.944	Linear Thru Zero	0.01	0.00	0.999944
Cr-2	51.941	Linear Thru Zero	0.02	0.00	0.999935
Fe-1	56.935	Linear Thru Zero	0.00	0.00	0.999623
Ni-1	59.933	Linear Thru Zero	0.01	0.00	0.999950
Cu-1	62.930	Linear Thru Zero	0.04	0.00	0.999945
Zn-2	65.926	Simple Linear	0.00	0.00	0.999981
As-3	74.922	Linear Thru Zero	0.00	0.00	0.999928
Rh-2	102.905	Linear Thru Zero	0.00	0.00	0.000000
In-1	114.904	Linear Thru Zero	0.00	0.00	0.000000
Tb-1	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho-1	164.930	Linear Thru Zero	0.00	0.00	0.000000
Pb-1	207.977	Linear Thru Zero	0.17	0.00	0.999854

Quantitative Analysis Calibration Report

File Name: 061520CO.cal
File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\061520CO.cal
Calibration Type: External Calibration

Analyte	Mass	Curve Type	Slope	Intercept	Corr. Coeff.
Li	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be	9.012	Linear Thru Zero	0.03	0.00	0.999933
B	11.009	Linear Thru Zero	0.04	0.00	0.999807
Na	22.990	Linear Thru Zero	0.00	0.00	0.999915
Mg	24.986	Linear Thru Zero	0.02	0.00	0.999948
Al	26.982	Linear Thru Zero	0.00	0.00	0.999991
K	38.964	Linear Thru Zero	0.00	0.00	0.999634
Fe	56.935	Linear Thru Zero	0.00	0.00	0.999946
Ca	43.956	Linear Thru Zero	0.01	0.00	0.998886
P	30.994	Linear Thru Zero	0.01	0.00	0.999778
Sc-5	44.956	Linear Thru Zero	0.00	0.00	0.000000
Ti	46.952	Weighted Linear	0.01	0.00	0.998131
V	50.944	Weighted Linear	0.12	-0.02	0.999155
Mn	54.938	Linear Thru Zero	0.14	0.00	0.999992
Be-2	9.012	Linear Thru Zero	0.02	0.00	0.999949
Co	58.933	Linear Thru Zero	0.11	0.00	0.999992
Ni	59.933	Linear Thru Zero	0.02	0.00	0.999633
Cr-1	51.941	Linear Thru Zero	0.10	0.00	0.999983
Cu	62.930	Linear Thru Zero	0.05	0.00	0.999987
Cu-2	64.928	Linear Thru Zero	0.02	0.00	0.999878
Zn	65.926	Linear Thru Zero	0.01	0.00	0.999213
As	74.922	Linear Thru Zero	0.01	0.00	0.999321
Se	81.917	Linear Thru Zero	0.00	0.00	0.999953
Kr	82.914	Linear Thru Zero	0.00	0.00	0.000000
Sr	87.906	Linear Thru Zero	0.15	0.00	0.999975
Mo	96.906	Weighted Linear	0.01	0.00	0.999284
Rh-3	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag	106.905	Weighted Linear	0.06	-0.00	0.998471
Sb-1	120.904	Linear Thru Zero	0.05	0.00	0.999982
Ag-2	108.905	Weighted Linear	0.06	-0.00	0.998479
Cd	110.904	Linear Thru Zero	0.02	0.00	0.999994
Sn	117.902	Weighted Linear	0.05	0.00	0.999627
In	114.904	Linear Thru Zero	0.00	0.00	0.000000
Sb	120.904	Weighted Linear	0.03	0.00	0.999275
Sb-1	122.904	Linear Thru Zero	0.02	0.00	0.999983
Ba	136.904	Linear Thru Zero	0.01	0.00	0.999666
Tb	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho	164.930	Linear Thru Zero	0.00	0.00	0.000000
Tl	204.975	Linear Thru Zero	0.09	0.00	0.999999
Pb	207.977	Linear Thru Zero	0.10	0.00	0.999537
U	238.050	Linear Thru Zero	0.09	0.00	0.999973
Li-1	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be-1	9.012	Linear Thru Zero	0.03	0.00	0.999976
B-1	11.009	Linear Thru Zero	0.01	0.00	0.999656
Se-2	77.917	Linear Thru Zero	0.00	0.00	0.999984
Sb-3	120.904	Weighted Linear	0.01	0.00	0.999790
Mo-1	97.906	Weighted Linear	0.03	-0.00	0.999433
Rh-1	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag-1	106.905	Linear Thru Zero	0.07	0.00	0.998450
Na-1	22.990	Linear Thru Zero	0.00	0.00	0.999619
Ca-1	43.956	Linear Thru Zero	0.00	0.00	0.999994
Mg-1	23.985	Linear Thru Zero	0.00	0.00	0.999920
Al-1	26.982	Linear Thru Zero	0.00	0.00	0.999980
Ba-1	137.905	Linear Thru Zero	0.04	0.00	0.999988
Cd-1	110.904	Linear Thru Zero	0.01	0.00	0.999998

K-1	38.964	Linear Thru Zero	0.00	0.00	0.999994
Sc-6	44.956	Linear Thru Zero	0.00	0.00	0.000000
V-1	50.944	Linear Thru Zero	0.01	0.00	0.999992
Cr-2	51.941	Weighted Linear	0.02	-0.00	0.999312
Fe-1	56.935	Linear Thru Zero	0.00	0.00	0.999980
Ni-1	59.933	Weighted Linear	0.01	0.00	0.999835
Cu-1	62.930	Linear Thru Zero	0.04	0.00	0.999992
Zn-2	65.926	Linear Thru Zero	0.00	0.00	0.999993
As-3	74.922	Linear Thru Zero	0.00	0.00	0.999993
Rh-2	102.905	Linear Thru Zero	0.00	0.00	0.000000
In-1	114.904	Linear Thru Zero	0.00	0.00	0.000000
Tb-1	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho-1	164.930	Linear Thru Zero	0.00	0.00	0.000000
Pb-1	207.977	Weighted Linear	0.15	0.00	0.999232

Tunes

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\FA_SmartTune Daily.swz

Start Time: 6/9/2020 8:52:34 AM
End Time: 6/9/2020 8:54:54 AM

Lab Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 11152.62
Obtained Intensity (Mg 24): 50193.30
Obtained Intensity (In 115): 97774.08
Obtained Intensity (U 238): 74514.19
Obtained Intensity (Bkgd 220): 0.73
Obtained Formula (CeO 156 / Ce 140): 0.019 (=1554.75 / 80645.55)
Obtained Formula (Ce++ 70 / Ce 140): 0.021 (=1668.96 / 80645.55)
Obtained RSD (Be 9): 0.0119
Obtained RSD (Mg 24): 0.0086
Obtained RSD (In 115): 0.0096
Obtained RSD (U 238): 0.0135

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\FA_SmartTune Daily.swz

Optimization Status

Start Time: 6/9/2020 8:52:34 AM

Lab Performance Check

Optimization Settings:

Method: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\FA_Daily Performance.mth.
Intensity Criterion: Be 9 > 2000
Intensity Criterion: Mg 24 > 15000
Intensity Criterion: In 115 > 40000
Intensity Criterion: U 238 > 30000
Intensity Criterion: Bkgd 220 <= 5
Formula Criterion: CeO 156 / Ce 140 <= 0.03
Formula Criterion: Ce++ 70 / Ce 140 <= 0.05
RSD Criterion: Be 9.0122 < 0.05
RSD Criterion: Mg 23.985 < 0.05
RSD Criterion: In 114.904 < 0.05
RSD Criterion: U 238.05 < 0.05

Optimization Results:

Initial Try

Obtained Intensity (Be 9): 11152.62
Obtained Intensity (Mg 24): 50193.30
Obtained Intensity (In 115): 97774.08
Obtained Intensity (U 238): 74514.19
Obtained Intensity (Bkgd 220): 0.73
Obtained Formula (CeO 156 / Ce 140): 0.019 (=1554.75 / 80645.55)
Obtained Formula (Ce++ 70 / Ce 140): 0.021 (=1668.96 / 80645.55)
Obtained RSD (Be 9): 0.0119
Obtained RSD (Mg 24): 0.0086
Obtained RSD (In 115): 0.0096
Obtained RSD (U 238): 0.0135

[Passed] Optimum value(s): N/A

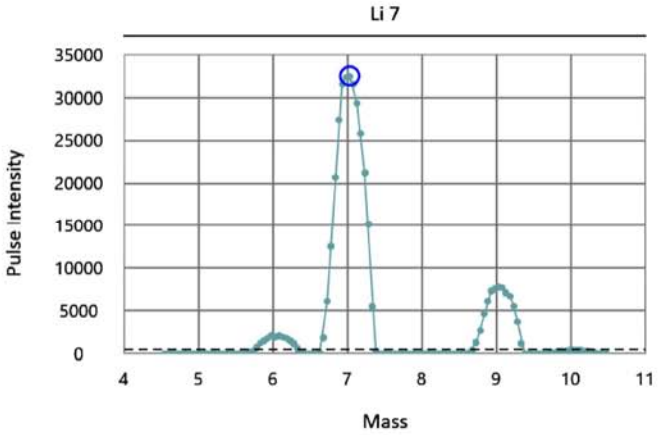
End Time: 6/9/2020 8:54:54 AM

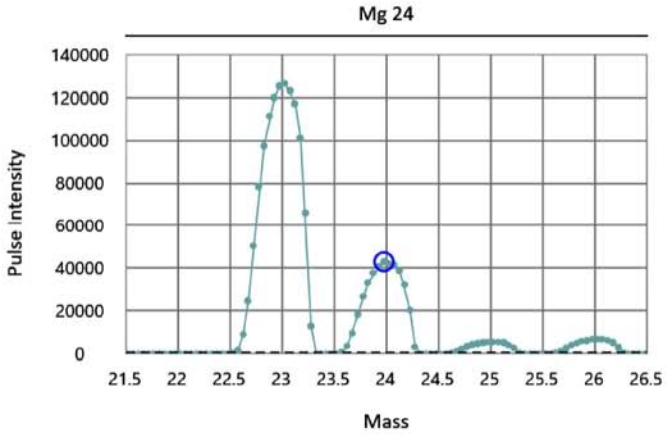
Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.695)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.689)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.703)
Target/Obtained mass (207.977/207.975), Target/Obtained resolution (0.7/0.698)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.716)

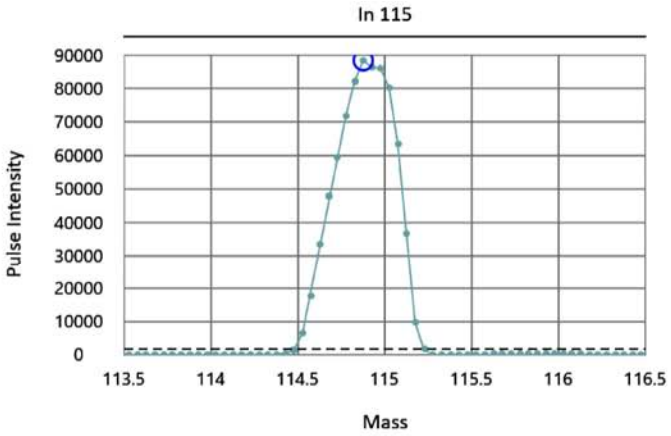
Acq. Date/Time: 6/9/2020 8:40:36 AM

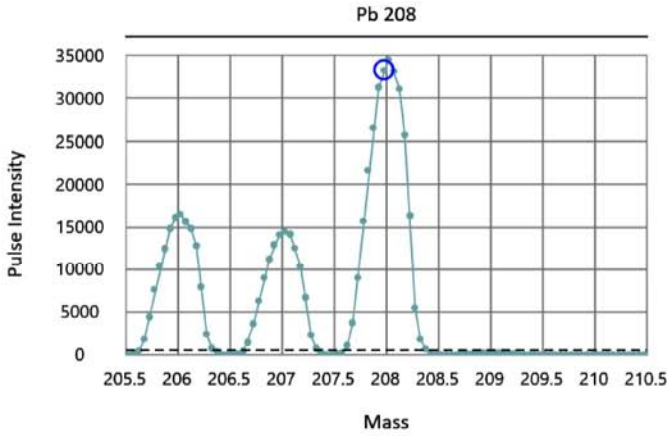
Sent to file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

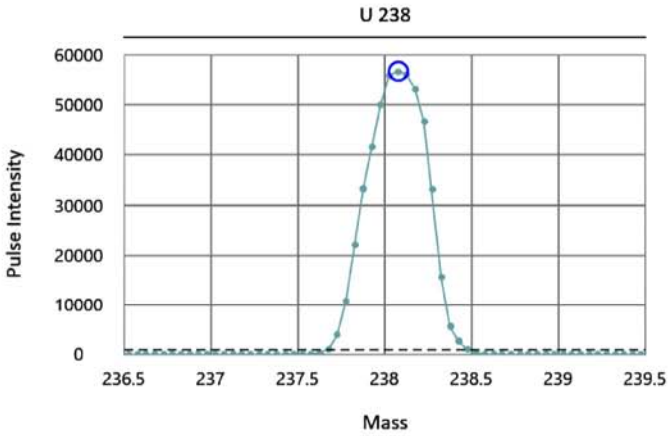
Analyte	Exact Mass	Meas. Mass	Mass DAC	Res DAC	Meas. Peak Width	Custom Res
Li	7.016	7.025	1319	2021	0.695	
Mg	23.985	23.975	4711	2021	0.689	
In	114.904	114.875	22852	2038	0.703	
Pb	207.977	207.975	41419	2060	0.698	
U	238.05	238.075	47424	2068	0.716	











SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\FA_SmartTune Daily.swz

Start Time: 6/10/2020 8:36:23 AM
End Time: 6/10/2020 8:38:42 AM

Lab Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 9664.20
Obtained Intensity (Mg 24): 46962.07
Obtained Intensity (In 115): 96056.29
Obtained Intensity (U 238): 73555.10
Obtained Intensity (Bkgd 220): 0.00
Obtained Formula (CeO 156 / Ce 140): 0.025 (=1997.47 / 79067.82)
Obtained Formula (Ce++ 70 / Ce 140): 0.026 (=2045.35 / 79067.82)
Obtained RSD (Be 9): 0.0157
Obtained RSD (Mg 24): 0.0132
Obtained RSD (In 115): 0.0118
Obtained RSD (U 238): 0.0131

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\FA_SmartTune Daily.swz

Optimization Status

Start Time: 6/10/2020 8:36:23 AM

Lab Performance Check

Optimization Settings:

Method: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\FA_Daily Performance.mth.
Intensity Criterion: Be 9 > 2000
Intensity Criterion: Mg 24 > 15000
Intensity Criterion: In 115 > 40000
Intensity Criterion: U 238 > 30000
Intensity Criterion: Bkgd 220 <= 5
Formula Criterion: CeO 156 / Ce 140 <= 0.03
Formula Criterion: Ce++ 70 / Ce 140 <= 0.05
RSD Criterion: Be 9.0122 < 0.05
RSD Criterion: Mg 23.985 < 0.05
RSD Criterion: In 114.904 < 0.05
RSD Criterion: U 238.05 < 0.05

Optimization Results:

Initial Try

Obtained Intensity (Be 9): 9664.20
Obtained Intensity (Mg 24): 46962.07
Obtained Intensity (In 115): 96056.29
Obtained Intensity (U 238): 73555.10
Obtained Intensity (Bkgd 220): 0.00
Obtained Formula (CeO 156 / Ce 140): 0.025 (=1997.47 / 79067.82)
Obtained Formula (Ce++ 70 / Ce 140): 0.026 (=2045.35 / 79067.82)
Obtained RSD (Be 9): 0.0157
Obtained RSD (Mg 24): 0.0132
Obtained RSD (In 115): 0.0118
Obtained RSD (U 238): 0.0131

[Passed] Optimum value(s): N/A

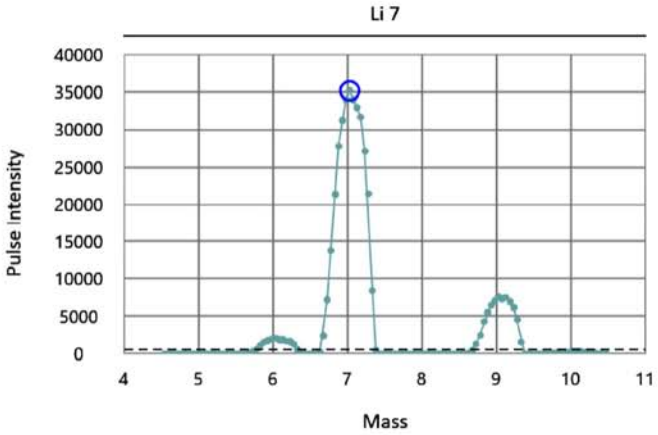
End Time: 6/10/2020 8:38:42 AM

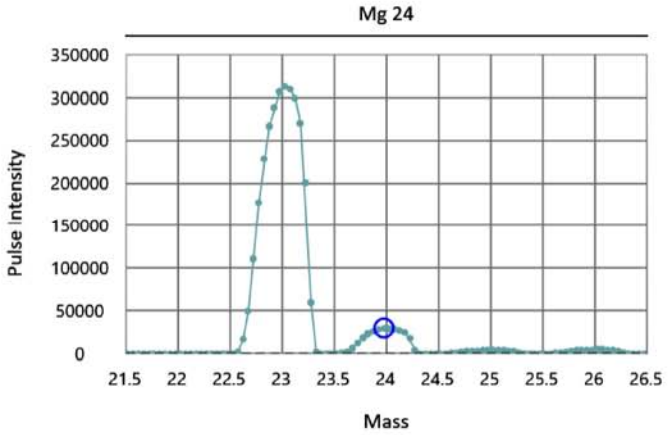
Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.706)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.703)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.702)
Target/Obtained mass (207.977/208.025), Target/Obtained resolution (0.7/0.703)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.695)

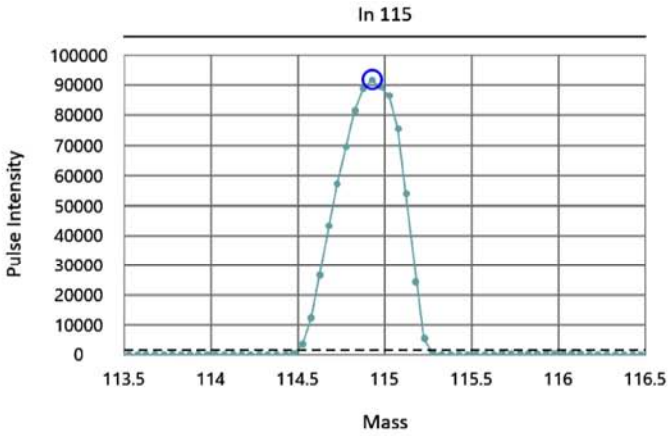
Acq. Date/Time: 6/10/2020 8:28:43 AM

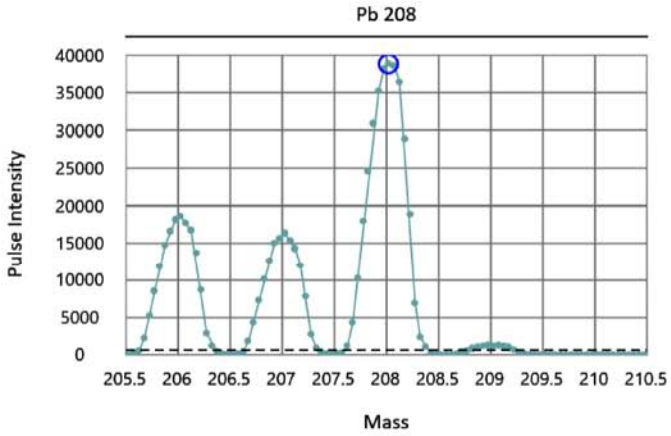
Sent to file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

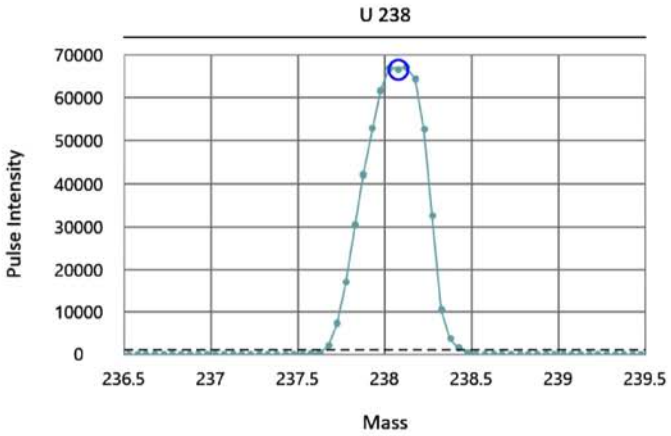
Analyte	Exact Mass	Meas. Mass	Mass DAC	Res DAC	Meas. Peak Width	Custom Res
Li	7.016	7.025	1320	2021	0.706	
Mg	23.985	23.975	4709	2021	0.703	
In	114.904	114.925	22856	2038	0.702	
Pb	207.977	208.025	41428	2060	0.703	
U	238.05	238.075	47428	2068	0.695	











SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\FA_SmartTune Daily.swz

Start Time: 6/15/2020 8:41:49 AM
End Time: 6/15/2020 8:44:09 AM

Lab Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 13228.32
Obtained Intensity (Mg 24): 75689.60
Obtained Intensity (In 115): 129105.74
Obtained Intensity (U 238): 86956.20
Obtained Intensity (Bkgd 220): 0.20
Obtained Formula (CeO 156 / Ce 140): 0.029 (=3067.06 / 103983.44)
Obtained Formula (Ce++ 70 / Ce 140): 0.020 (=2053.08 / 103983.44)
Obtained RSD (Be 9): 0.0139
Obtained RSD (Mg 24): 0.0105
Obtained RSD (In 115): 0.0092
Obtained RSD (U 238): 0.0106

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\FA_SmartTune Daily.swz

Optimization Status

Start Time: 6/15/2020 8:41:49 AM

Lab Performance Check

Optimization Settings:

Method: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\FA_Daily Performance.mth.
Intensity Criterion: Be 9 > 2000
Intensity Criterion: Mg 24 > 15000
Intensity Criterion: In 115 > 40000
Intensity Criterion: U 238 > 30000
Intensity Criterion: Bkgd 220 <= 5
Formula Criterion: CeO 156 / Ce 140 <= 0.03
Formula Criterion: Ce++ 70 / Ce 140 <= 0.05
RSD Criterion: Be 9.0122 < 0.05
RSD Criterion: Mg 23.985 < 0.05
RSD Criterion: In 114.904 < 0.05
RSD Criterion: U 238.05 < 0.05

Optimization Results:

Initial Try

Obtained Intensity (Be 9): 13228.32
Obtained Intensity (Mg 24): 75689.60
Obtained Intensity (In 115): 129105.74
Obtained Intensity (U 238): 86956.20
Obtained Intensity (Bkgd 220): 0.20
Obtained Formula (CeO 156 / Ce 140): 0.029 (=3067.06 / 103983.44)
Obtained Formula (Ce++ 70 / Ce 140): 0.020 (=2053.08 / 103983.44)
Obtained RSD (Be 9): 0.0139
Obtained RSD (Mg 24): 0.0105
Obtained RSD (In 115): 0.0092
Obtained RSD (U 238): 0.0106

[Passed] Optimum value(s): N/A

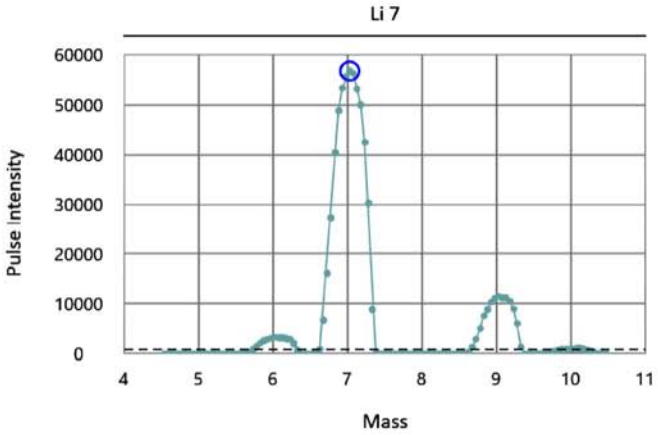
End Time: 6/15/2020 8:44:09 AM

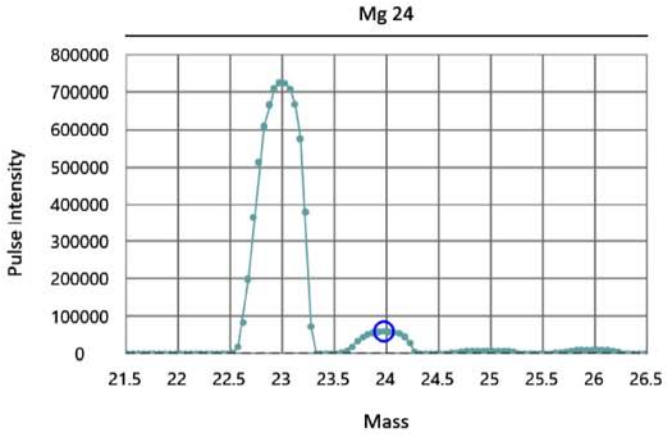
Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.719)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.709)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.709)
Target/Obtained mass (207.977/207.975), Target/Obtained resolution (0.7/0.707)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.698)

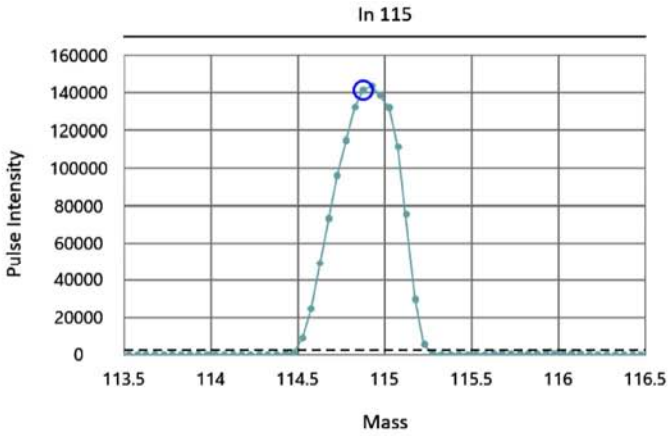
Acq. Date/Time: 6/15/2020 8:32:14 AM

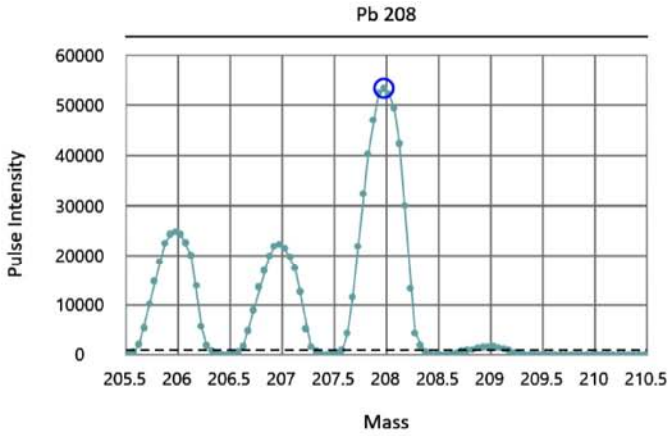
Sent to file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

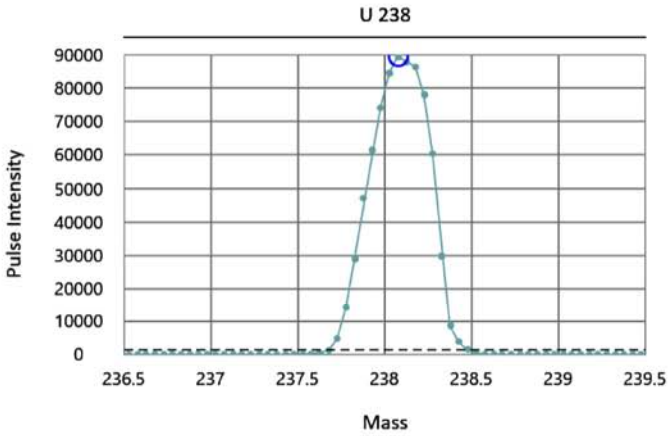
Analyte	Exact Mass	Meas. Mass	Mass DAC	Res DAC	Meas. Peak Width	Custom Res
Li	7.016	7.025	1323	2021	0.719	
Mg	23.985	23.975	4712	2021	0.709	
In	114.904	114.875	22848	2038	0.709	
Pb	207.977	207.975	41425	2060	0.707	
U	238.05	238.075	47422	2068	0.698	











DATA SET for Review -- Deliverable Requirements

Total Organic Carbon Analysis by EPA 9060

Fremont Analytical Work Order No. 2006085

Libby Environmental

Project Name: Hardel Site

Project No. L200603-7

This Data contains the following:

- Analytical Sequence Summary for **Work Order 2006085**
- Calibration Information for **Work Order 2006085**

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA
98103
USA

Date Prepared: 2020/06/18 **By:** TOC

Date Approved: 2020/06/18 **By:** TOC

Sample Results Summary

Spl #	Sample ID	Num Rep	Act Rep	Method	Type	Customer ID	Mode	Avg. Area (cts)	Avg. Mass (mgC)	Avg. %Carbon	Avg. %SOM	Std. Dev	% RSD	Notes
1	CCV-28695A	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	61273	1.057	1.057	1.822	1,369.71	2.24	Pass
2	CCB_MB-28695	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	857	0.000	0.000	0.000	11.15	1.30	Pass
1	LCS-28695	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	62191	1.074	1.074	1.852	1,395.56	2.24	Pass
2	2006085-016A	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	325941	5.963	5.951	10.260	3,753.05	1.15	Pass
3	2006085-016ADUP	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	109371	1.948	1.935	3.336	1,127.43	1.03	Pass
4	2006085-016AMS	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	168167	3.038	3.044	5.249	1,106.85	0.66	Pass
5	2006085-016AMSD	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	185494	3.359	3.356	5.786	1,412.96	0.76	Pass
6	MDL1	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	5999	0.032	0.032	0.056	125.31	2.09	Pass
7	MDL2	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	5341	0.020	0.020	0.035	77.40	1.45	Pass
8	MDL3	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	5415	0.022	0.022	0.037	149.82	2.77	Pass
9	CCV-28695B	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	60963	1.051	1.051	1.812	1,248.17	2.05	Pass
10	CCB-28695B	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	744	0.000	0.000	0.000	32.51	4.37	Pass
1	CCV-28695C	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	59981	1.033	1.033	1.781	1,375.46	2.29	Pass
2	CCB-28695C	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	695	0.000	0.000	0.000	42.47	6.11	Pass
3	2006085-016A	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	98594	1.749	3.363	5.798	1,975.40	2.00	Pass
4	CCV-28695D	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	61609	1.063	1.063	1.833	1,348.57	2.19	Pass
5	CCB-28695D	3	4	TOC-S-9060S - Jul 23, 2019; 10-51-57 AM	Sample	00000000	TC	820	0.000	0.000	0.000	19.37	2.36	Pass

Fremont Analytical
3600 Fremont Ave N.
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98103
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Date Prepared: 2020/06/18 **By:** TOC

Date Approved: 2020/06/18 **By:** TOC

Sample Results

Spl #: 1 **Sample ID :** CCV-28695A **Type :** Sample **Date:** 2020/06/17 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	10:56 am	46,033	0.774	0.774	1.335	-	-	-	-
2	11:00 am	59,743	1.029	1.029	1.773	-	-	-	-
3	11:05 am	61,689	1.065	1.065	1.836	-	-	-	-
4	11:09 am	62,386	1.078	1.078	1.858	-	-	-	-
	Avg.	61,273	1.057	1.057	1.822	-	-	-	-
	Std.Dev.	1,370							
	% RSD.	2.24							

Spl #: 2 **Sample ID :** CCB_MB-28695 **Type :** Sample **Date:** 2020/06/17 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	11:15 am	860	0.000	0.000	0.000	-	-	-	-
2	11:19 am	920	0.000	0.000	0.000	-	-	-	-
3	11:22 am	844	0.000	0.000	0.000	-	-	-	-
4	11:26 am	866	0.000	0.000	0.000	-	-	-	-
	Avg.	857	0.000	0.000	0.000	-	-	-	-
	Std.Dev.	11							
	% RSD.	1.30							

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3600 Fremont Ave N.
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Date Prepared: 2020/06/18 **By:** TOC

Date Approved: 2020/06/18 **By:** TOC

Spl #: 1 **Sample ID :** LCS-28695 **Type :** Sample **Date:** 2020/06/17 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	12:00 pm	45,415	0.763	0.763	1.316	-	-	-	-
2	12:04 pm	60,613	1.045	1.045	1.801	-	-	-	-
3	12:09 pm	62,701	1.083	1.083	1.868	-	-	-	-
4	12:13 pm	63,260	1.094	1.094	1.886	-	-	-	-
	Avg.	62,191	1.074	1.074	1.852	-	-	-	-
	Std.Dev.	1,396							
	% RSD.	2.24							

Spl #: 2 **Sample ID :** 2006085-016A **Type :** Sample **Date:** 2020/06/17 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	12:28 pm	296,380	5.415	5.404	9.317	-	-	-	-
2	12:33 pm	321,640	5.883	5.871	10.123	-	-	-	-
3	12:38 pm	327,628	5.994	5.982	10.314	-	-	-	-
4	12:43 pm	328,554	6.011	5.999	10.343	-	-	-	-
	Avg.	325,941	5.963	5.951	10.260	-	-	-	-
	Std.Dev.	3,753							
	% RSD.	1.15							

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Date Prepared: 2020/06/18 **By:** TOC

Date Approved: 2020/06/18 **By:** TOC

Spl #: 3 **Sample ID :** 2006085-016ADUP **Type :** Sample **Date:** 2020/06/17 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	12:49 pm	95,910	1.699	1.687	2.909	-	-	-	-
2	12:54 pm	108,073	1.924	1.911	3.295	-	-	-	-
3	12:59 pm	109,940	1.959	1.945	3.354	-	-	-	-
4	1:03 pm	110,101	1.962	1.948	3.359	-	-	-	-
	Avg.	109,371	1.948	1.935	3.336	-	-	-	-
	Std.Dev.	1,127							
	% RSD.	1.03							

Spl #: 4 **Sample ID :** 2006085-016AMS **Type :** Sample **Date:** 2020/06/17 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	1:10 pm	153,490	2.766	2.772	4.779	-	-	-	-
2	1:15 pm	166,922	3.015	3.021	5.209	-	-	-	-
3	1:19 pm	168,540	3.045	3.051	5.261	-	-	-	-
4	1:24 pm	169,039	3.054	3.061	5.277	-	-	-	-
	Avg.	168,167	3.038	3.044	5.249	-	-	-	-
	Std.Dev.	1,107							
	% RSD.	0.66							

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Date Prepared: 2020/06/18 **By:** TOC

Date Approved: 2020/06/18 **By:** TOC

Spl #: 5 **Sample ID :** 2006085-016AMSD **Type :** Sample **Date:** 2020/06/17 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	2:31 pm	170,018	3.073	3.069	5.292	-	-	-	-
2	2:36 pm	183,918	3.330	3.327	5.736	-	-	-	-
3	2:40 pm	185,915	3.367	3.364	5.800	-	-	-	-
4	2:45 pm	186,648	3.381	3.377	5.823	-	-	-	-
	Avg.	185,494	3.359	3.356	5.786	-	-	-	-
	Std.Dev.	1,413							
	% RSD.	0.76							

Spl #: 6 **Sample ID :** MDL1 **Type :** Sample **Date:** 2020/06/17 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	2:51 pm	5,018	0.014	0.014	0.025	-	-	-	-
2	2:55 pm	5,960	0.032	0.032	0.055	-	-	-	-
3	2:59 pm	6,139	0.035	0.035	0.060	-	-	-	-
4	3:03 pm	5,897	0.031	0.031	0.053	-	-	-	-
	Avg.	5,999	0.032	0.032	0.056	-	-	-	-
	Std.Dev.	125							
	% RSD.	2.09							

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Date Prepared: 2020/06/18 **By:** TOC

Date Approved: 2020/06/18 **By:** TOC

Spl #: 7 **Sample ID :** MDL2 **Type :** Sample **Date:** 2020/06/17 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	3:10 pm	3,927	0.000	0.000	0.000	-	-	-	-
2	3:13 pm	5,259	0.019	0.019	0.032	-	-	-	-
3	3:17 pm	5,353	0.020	0.020	0.035	-	-	-	-
4	3:21 pm	5,412	0.022	0.022	0.037	-	-	-	-
	Avg.	5,341	0.020	0.020	0.035	-	-	-	-
	Std.Dev.	77							
	% RSD.	1.45							

Spl #: 8 **Sample ID :** MDL3 **Type :** Sample **Date:** 2020/06/17 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	3:28 pm	3,875	0.000	0.000	0.000	-	-	-	-
2	3:32 pm	5,242	0.018	0.018	0.032	-	-	-	-
3	3:35 pm	5,510	0.023	0.023	0.040	-	-	-	-
4	3:39 pm	5,492	0.023	0.023	0.040	-	-	-	-
	Avg.	5,415	0.022	0.022	0.037	-	-	-	-
	Std.Dev.	150							
	% RSD.	2.77							

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Date Prepared: 2020/06/18 **By:** TOC

Date Approved: 2020/06/18 **By:** TOC

Spl #: 9 **Sample ID :** CCV-28695B **Type :** Sample **Date:** 2020/06/17 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	3:47 pm	47,276	0.798	0.798	1.375	-	-	-	-
2	3:51 pm	59,522	1.024	1.024	1.766	-	-	-	-
3	3:56 pm	61,713	1.065	1.065	1.836	-	-	-	-
4	4:00 pm	61,654	1.064	1.064	1.834	-	-	-	-
	Avg.	60,963	1.051	1.051	1.812	-	-	-	-
	Std.Dev.	1,248							
	% RSD.	2.05							

Spl #: 10 **Sample ID :** CCB-28695B **Type :** Sample **Date:** 2020/06/17 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	4:07 pm	738	0.000	0.000	0.000	-	-	-	-
2	4:11 pm	933	0.000	0.000	0.000	-	-	-	-
3	4:14 pm	715	0.000	0.000	0.000	-	-	-	-
4	4:18 pm	779	0.000	0.000	0.000	-	-	-	-
	Avg.	744	0.000	0.000	0.000	-	-	-	-
	Std.Dev.	33							
	% RSD.	4.37							

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Date Prepared: 2020/06/18 **By:** TOC

Date Approved: 2020/06/18 **By:** TOC

Spl #: 1 **Sample ID :** CCV-28695C **Type :** Sample **Date:** 2020/06/18 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	10:44 am	45,354	0.762	0.762	1.314	-	-	-	-
2	10:48 am	58,401	1.004	1.004	1.730	-	-	-	-
3	10:52 am	60,634	1.045	1.045	1.802	-	-	-	-
4	10:57 am	60,908	1.050	1.050	1.811	-	-	-	-
	Avg.	59,981	1.033	1.033	1.781	-	-	-	-
	Std.Dev.	1,375							
	% RSD.	2.29							

Spl #: 2 **Sample ID :** CCB-28695C **Type :** Sample **Date:** 2020/06/18 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	11:03 am	682	0.000	0.000	0.000	-	-	-	-
2	11:07 am	812	0.000	0.000	0.000	-	-	-	-
3	11:10 am	661	0.000	0.000	0.000	-	-	-	-
4	11:15 am	743	0.000	0.000	0.000	-	-	-	-
	Avg.	695	0.000	0.000	0.000	-	-	-	-
	Std.Dev.	42							
	% RSD.	6.11							

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98103
USA

Date Prepared: 2020/06/18 **By:** TOC

Date Approved: 2020/06/18 **By:** TOC

Spl #: 3 **Sample ID :** 2006085-016A **Type :** Sample **Date:** 2020/06/18 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	11:22 am	79,040	1.386	2.666	4.596	-	-	-	-
2	11:27 am	96,322	1.707	3.282	5.658	-	-	-	-
3	11:31 am	99,561	1.767	3.397	5.857	-	-	-	-
4	11:36 am	99,900	1.773	3.409	5.878	-	-	-	-
	Avg.	98,594	1.749	3.363	5.798	-	-	-	-
	Std.Dev.	1,975							
	% RSD.	2.00							

Spl #: 4 **Sample ID :** CCV-28695D **Type :** Sample **Date:** 2020/06/18 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	11:43 am	44,961	0.755	0.755	1.301	-	-	-	-
2	11:47 am	60,077	1.035	1.035	1.784	-	-	-	-
3	11:51 am	62,133	1.073	1.073	1.850	-	-	-	-
4	11:55 am	62,616	1.082	1.082	1.865	-	-	-	-
	Avg.	61,609	1.063	1.063	1.833	-	-	-	-
	Std.Dev.	1,349							
	% RSD.	2.19							

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Date Prepared: 2020/06/18 **By:** TOC

Date Approved: 2020/06/18 **By:** TOC

Spl #: 5 **Sample ID :** CCB-28695D **Type :** Sample **Date:** 2020/06/18 **Status:** Pass

Method : TOC-S-9060S - Jul 23, 2019; 10-51-57 AM **Customer ID:** 00000000

Rep #	Time	TC Area (cts)	TC Mass (mgC)	TC %Carbon	TC %SOM	TOC Area (cts)	TOC Mass (mgC)	TOC %Carbon	TOC %SOM
1	12:02 pm	841	0.000	0.000	0.000	-	-	-	-
2	12:06 pm	803	0.000	0.000	0.000	-	-	-	-
3	12:11 pm	948	0.000	0.000	0.000	-	-	-	-
4	12:14 pm	816	0.000	0.000	0.000	-	-	-	-
	Avg.	820	0.000	0.000	0.000	-	-	-	-
	Std.Dev.	19							
	% RSD.	2.36							

Fremont Analytical
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Date Prepared: 2020/06/18 **By:** TOC

Date Approved: 2020/06/18 **By:** TOC

Method Summary

Method Details

Method Name: TOC-S-9060S - Jul 23, 2019; 10-51-57 AM
Date Created: 2019/07/23
Time Created: 10:51 am
Created By: toc

Analysis Mode: Solids - TC
Sparging Mode: n/a
Pre-Acid Volume (mL): n/a
Sparge Time (mm:ss): n/a

Volumes

Sample Volume (mL): 8.000

Other

SysPressure: 20.00

Times

React Time: 03:00
Detect Time: 07:00

Temp

React Temp: 910

Outlier Removal Criteria

Enabled: Yes
Additional Replicates: 1
Max. % RSD. 2.00
Max. Std. Dev. 100

Calibration Summary

Calibration Mode

Primary Mode: TC
User for ALL Modes: Enabled

Calibration Pass/Fail Criteria

Parameter	Enabled	Low	High	Failure
RF (mgC/K-cts)	Yes	0.1000	0.3000	Continue
R2	Yes	0.950	1.000	Continue
Offset (area) (cts)	No	-	-	-
Offset (mass) (mgC)	No	-	-	-
QC Blank(cts)	No	-	-	-

Checks, QC's and Actions

Type	Target mgC	Tolerance (+/- %)	1st Failure	2nd Failure
CK Std	n/a	10,000.00	Re-run	Continue
QC #1	0.000	10,000.00	Re-run	Continue
QC #2	0.000	10,000.00	Re-run	Continue
QC #3	0.000	10,000.00	Re-run	Continue
QC #4	0.000	10,000.00	Re-run	Continue

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA
98103
USA

Date Prepared: 2020/06/18 **By:** TOC

Date Approved: 2020/06/18 **By:** TOC

Calibration Details

Calibration Mode:	TC
Date Calibrated:	2020/05/21
Time Calibrated:	10:38 am
Calibrated By:	toc
RF (mgC/k-cts):	0.0185
R2:	0.9989
R:	0.9995
QC Blank(cts):	0
Offset (cts):	4250
Offset (mgC):	-0.079

Calibration Settings

EFC Enabled:	No
Total Flowrate w/EFC:	50 ml/min
Check Standards:	Subtract Offset
Samples:	Substract Offset
Regression type:	Unweighted Linear

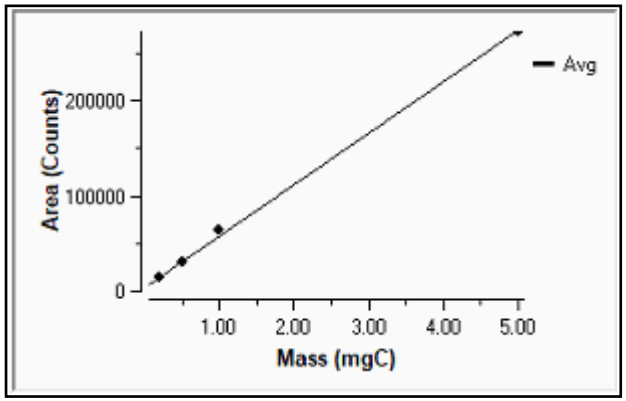
Calculations:

$$Concentration = \frac{\frac{RF}{1000} \times Area}{volume}$$

Samples: $Area = Area_{Peak} - Area_{Offset}$ *or* $Area = Area_{Peak} - Area_{RB}$

CHK Stds: $Area = Area_{Peak} - Area_{Offset}$ *or* $Area = Area_{Peak} - Area_{RW}$

QC Samples: $Area = Area_{Peak} - Area_{QCBlank}$



$$y = m \times x + b$$

$y \Rightarrow Area$ $\quad m \Rightarrow \frac{1000}{RF \times volume}$ $\quad b \Rightarrow 0$

Calibration

OI Analytical - TOC Reporter - P843732823 - Wet-Chemistry

File Edit View Reporting Tools Help

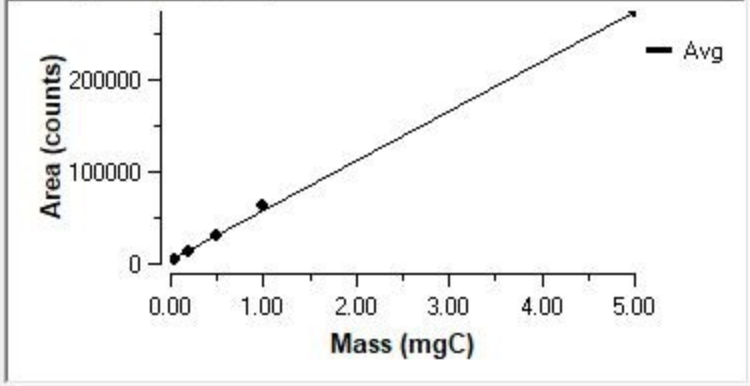
Cust. Info. | Company Info | Instruments | Quick View

Methods (Method Name sorted)

- NPOC LINEAR 20181213 - Dec 13, 2018; 06-55-51 PM
- NPOC LINEAR_20181219 - Dec 19, 2018; 11-42-43 AM
- NPOC LINEAR_ver3 - Mar 06, 2019; 02-51-30 PM
- TOC SOLIDS - Jan 30, 2019; 02-52-02 PM
- TOC SOLIDS (2) - Feb 14, 2019; 01-28-42 PM
- TOC SOLIDS (3) - Feb 27, 2019; 06-13-15 PM
- TOC-S 5mgC Top - Mar 08, 2019; 01-47-34 PM
- TOC-S SUCROSE CAL - Apr 29, 2019; 12-38-00 PM
- TOC-S SUCROSE CAL2 - May 09, 2019; 11-12-36 AM
- TOC-S-9060S - Jul 23, 2019; 10-51-57 AM
  - 07-24-2019 06:15 PM
  - 11-20-2019 02:39 PM
  - 12-10-2019 06:42 PM
  - 03-02-2020 04:24 PM
  - 03-16-2020 02:03 PM
  - 04-22-2020 01:38 PM
  - 04-24-2020 01:38 PM
  - 04-27-2020 01:31 PM
  - 05-20-2020 02:11 PM
    - 05-21-2020 10:36 AM
    - 05-21-2020 10:38 AM

Method Details | TIC | TOC | TC | POC

Calibration Curve



Calibration Details

Revision: 9-2020-05-21; 10:38 AM
Modified By: toc
Date Created: 2019-07-23; 10:51 AM
Last Modified: 2020-05-21; 10:38 AM

Reagent Blank(cts): 0
RF(mgC/k-cnt) 0.0185
R^2 : 0.9989
Offset Area (cts): 4250
Offset(mass) -0.08

Std #	Mass (mgC)	Volume(mL)	# Reps	Area (counts)	Std.Dev	%RSD	Date Analyzed
RW	0.000	0.000	0	0	0	0.00	2019-07-24; 01:45 PM
1	0.050	8.000	4	4881	153	3.13	2020-05-20; 10:10 AM
2	0.200	8.000	4	13627	223	1.63	2020-05-20; 10:31 AM
3	0.500	8.000	4	30108	632	2.10	2020-05-20; 10:54 AM
4	1.000	8.000	4	63711	1283	2.01	2020-05-20; 11:17 AM
5	5.000	8.000	4	273095	4348	1.59	2020-05-20; 11:42 AM
6	10.000	8.000	4	0	0	0.00	2020-05-20; 12:09 PM
7	15.000	8.000	4	0	0	0.00	2020-05-20; 01:23 PM
8	25.000	8.000	4	0	0	0.00	2020-05-20; 01:51 PM

Edit Calibration in Workspace

toc - Sr. User

Libby Environmental, Inc.
3322 South Bay Road NE • Olympia, WA 98506-2957

August 20, 2020

Joel Hecker
Pioneer Technologies Corporation
5205 Corporate Center Ct SE, Suite C
Lacey, WA 98503

Dear Mr. Hecker:

Please find enclosed the analytical data report for the Hardel Site Project located in Olympia, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

www.LibbyEnvironmental.com

Date: 06/07/2020 Page: 1 of 2

Client: Pioneer Technologies
Project Manager: Joel Hecker
Address: 5205 Corporate Center Court SE, Suite C
Project Name: Hardel Site
City: Lacey State: WA Zip: 98503
Location: 1210 West Bay Dr. City, State: Olympia, WA
Phone: 360-828-3739 Fax:
Collector: SH / MK Date of Collection: 6/3
Client Project # Hardel Site
Email: hecker j@uspioneer.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	EPH	TOC	Field Notes
1 GW-B1-0603	10-15	1400	Grab	Multiple	X		X			X			X			X			metals dissolved in field
2 GW-B2-0603	3-8	1300																	
3 GW-B3-0603	3-8	1210																	
4 GW-B4-0603	7-12	1110																	
5 GW-B5-0603	3-8	1000																	
6 GW-B6-0603	3-8	915																	
7 GW-B6-0603-01	3-8	915				X			X			X			X				
8 Trip Blank 0603	—	—			X														
9 S-B1-4-5-0603	4-5	1240			X	X			X			X		X					Sample potentially impacted
10 S-B2-2-4-0603	2-4	1230														⊗			Sample potentially impacted
11 S-B3-2-3-0603	2-3	1130														⊗			
12 S-B4-1-3-0603	1-3	1030																⊗	Std TAT
13 S-B4-1-3-0603-01	1-3	1030																	Added 6-11-2020
14 S-B4-11-12-0603	11-12	1045			X		X			X			X						per Joel via email.
15 S-B5-3-4-0603	3-4	0920			X		X			X				X				⊗	TOC added per Joel
16 S-B6-3-4-0603	3-4	0845			X		X			X				X					email. 8-12-2020
17 S-B7-3-5-0603	3-5	1600			X		X			X				X					STD TAT

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	6/3 1712	[signature]	6/3/20 1710 KE 1540
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	(Y) N
Cooler Temp.	°C
Sample Temp.	°C
Total Number of Containers	

Remarks: need TPH-D, G, + HO

TAT: 24HR 48HR (5-DAY)

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

www.LibbyEnvironmental.com

Date: 6/3 Page: 2 of 2

Client: Pioneer Technologies
Address:
City: State: Zip:
Phone: 360-828-3729 Fax:
Client Project #

Project Manager: Joel Hecker
Project Name: Hardel
Location: City, State:
Collector: Date of Collection: 6/3
Email: heckerj@uspioneer.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	TOC		Field Notes
1 3-B8-4-5-0603	4-5	1620	Grab	multiple	X		X			X					X		⊗		Std TAT
2 5-B9-6-7-0603	6-7	1640	↓	↓	X		X			X					X				Added 6-11-2020 per Joel via email
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	6/3 1710	[signature]	6/3/20 1710 1540
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	(Y) N
Cooler Temp.	°C
Sample Temp.	°C
Total Number of Containers	

Remarks: need TPH-D, G, + HO

TAT: 24HR 48HR (5-DAY)

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

HARDEL SITE PROJECT
Pioneer Technologies
Libby Project # L200603-7
Date Received 6/3/2020
Time Received 5:10 PM

Received By KE

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody complete?	☑ Yes	☐ No	
2. How was the sample delivered?	☑ Hand Delivered	☐ Picked Up	☐ Shipped

Log In

3. Cooler or Shipping Container is present.	☑ Yes	☐ No	☐ N/A
4. Cooler or Shipping Container is in good condition.	☑ Yes	☐ No	☐ N/A
5. Cooler or Shipping Container has Custody Seals present.	☐ Yes	☑ No	☐ N/A
6. Was an attempt made to cool the samples?	☑ Yes	☐ No	☐ N/A
7. Temperature of cooler (0°C to 8°C recommended)	0.9 °C		
8. Temperature of sample(s) (0°C to 8°C recommended)	1.8 °C		
9. Did all containers arrive in good condition (unbroken)?	☑ Yes	☐ No	
10. Is it clear what analyses were requested?	☑ Yes	☐ No	
11. Did container labels match Chain of Custody?	☑ Yes	☐ No	
12. Are matrices correctly identified on Chain of Custody?	☑ Yes	☐ No	
13. Are correct containers used for the analysis indicated?	☑ Yes	☐ No	
14. Is there sufficient sample volume for indicated analysis?	☑ Yes	☐ No	
15. Were all containers properly preserved per each analysis?	☑ Yes	☐ No	
16. Were VOA vials collected correctly (no headspace)?	☑ Yes	☐ No	☐ N/A
17. Were all holding times able to be met?	☑ Yes	☐ No	

Discrepancies/ Notes

18. Was client notified of all discrepancies?	☐ Yes	☐ No	☑ N/A

Person Notified: _____ Date: _____

By Whom: _____ Via: _____

Regarding: _____

19. Comments. _____

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Libby Environmental
Kodey Eley
3322 South Bay Road NE
Olympia, WA 98506

RE: Hardel Site
Work Order Number: 2008171

August 20, 2020

Attention Kodey Eley:

Fremont Analytical, Inc. received 2 sample(s) on 8/13/2020 for the analyses presented in the following report.

Total Organic Carbon by EPA 9060

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *08/20/2020*

CLIENT: Libby Environmental
Project: Hardel Site
Work Order: 2008171

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2008171-001	S-B4-1-3-0603	06/03/2020 10:30 AM	08/13/2020 9:36 AM
2008171-002	S-B5-3-4-0603	06/03/2020 9:20 AM	08/13/2020 9:36 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2008171**
Date: **8/20/2020**

CLIENT: Libby Environmental
Project: Hardel Site

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2008171**
Date Reported: **8/20/2020**

CLIENT: Libby Environmental
Project: Hardel Site

Lab ID: 2008171-001 **Collection Date:** 6/3/2020 10:30:00 AM
Client Sample ID: **S-B4-1-3-0603** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Organic Carbon by EPA 9060				Batch ID: 29386		Analyst: SS
Total Organic Carbon	1.35	0.0750	H	%-dry	1	8/18/2020 11:39:00 AM

Lab ID: 2008171-002 **Collection Date:** 6/3/2020 9:20:00 AM
Client Sample ID: **S-B5-3-4-0603** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Organic Carbon by EPA 9060				Batch ID: 29386		Analyst: SS
Total Organic Carbon	0.0770	0.0750	H	%-dry	1	8/18/2020 12:37:00 PM

Work Order: 2008171
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Organic Carbon by EPA 9060

Sample ID: **MB-29386**	SampType: **MBLK**	Units: **%-dry**	Prep Date: **8/18/2020**	RunNo: **61243**
Client ID: **MBLKS**	Batch ID: **29386**		Analysis Date: **8/18/2020**	SeqNo: **1228555**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.0750									

Sample ID: **LCS-29386**	SampType: **LCS**	Units: **%-dry**	Prep Date: **8/18/2020**	RunNo: **61243**
Client ID: **LCSS**	Batch ID: **29386**		Analysis Date: **8/18/2020**	SeqNo: **1228556**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.03	0.0750	1.000	0	103	80	120				

Sample ID: **2008171-001ADUP**	SampType: **DUP**	Units: **%-dry**	Prep Date: **8/18/2020**	RunNo: **61243**
Client ID: **S-B4-1-3-0603**	Batch ID: **29386**		Analysis Date: **8/18/2020**	SeqNo: **1228558**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.861	0.0750						1.352	44.4	20	RH

NOTES:
R - High RPD due to suspected sample inhomogeneity. The method is in control as indicated by the Laboratory Control Sample (LCS).

Sample ID: **2008171-001AMS**	SampType: **MS**	Units: **%-dry**	Prep Date: **8/18/2020**	RunNo: **61243**
Client ID: **S-B4-1-3-0603**	Batch ID: **29386**		Analysis Date: **8/18/2020**	SeqNo: **1228559**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.91	0.0750	1.000	1.352	56.1	75	125				SH

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **2008171-001AMSD**	SampType: **MSD**	Units: **%-dry**	Prep Date: **8/18/2020**	RunNo: **61243**
Client ID: **S-B4-1-3-0603**	Batch ID: **29386**		Analysis Date: **8/18/2020**	SeqNo: **1228560**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	2.04	0.0750	1.000	1.352	68.4	75	125	1.913	6.23	20	SH

Work Order: 2008171
CLIENT: Libby Environmental
Project: Hardel Site

QC SUMMARY REPORT

Total Organic Carbon by EPA 9060

Sample ID: **2008171-001AMSD** SampType: **MSD** Units: **%-dry** Prep Date: **8/18/2020** RunNo: **61243**
Client ID: **S-B4-1-3-0603** Batch ID: **29386** Analysis Date: **8/18/2020** SeqNo: **1228560**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample Log-In Check List

Client Name:	**LIBBY**	Work Order Number:	**2008171**
Logged by:	**Carissa True**	Date Received:	**8/13/2020 9:36:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes	☑	No	☐	Not Present ☐
2.	How was the sample delivered?	UPS				

Log In

3.	Coolers are present?	Yes	☑	No	☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes	☑	No	☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes	☐	No	☐	Not Present ☑
6.	Was an attempt made to cool the samples?	Yes	☑	No	☐	NA ☐
7.	Were all items received at a temperature of >2°C to 6°C *	Yes	☑	No	☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes	☑	No	☐	
9.	Sufficient sample volume for indicated test(s)?	Yes	☑	No	☐	
10.	Are samples properly preserved?	Yes	☑	No	☐	
11.	Was preservative added to bottles?	Yes	☐	No	☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes	☐	No	☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes	☑	No	☐	
14.	Does paperwork match bottle labels?	Yes	☑	No	☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes	☑	No	☐	
16.	Is it clear what analyses were requested?	Yes	☑	No	☐	
17.	Were all holding times able to be met?	Yes	☐	No	☑	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes	☑	No	☐	NA ☐

Person Notified:	Melissa Harrington	Date:	8/13/2020
By Whom:	Carissa True	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	Hold time		
Client Instructions:	Proceed		

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler 1	2.8
Sample 1	5.1

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

2008171

www.LibbyEnvironmental.com

Date: 8/12/2020 Page: 1 of 1

Client: Libby Environmental
Address: See Above
City: State: Zip:
Phone: Fax:
Client Project # L200603-7B

Project Manager: Kodey Eley
Project Name: Hardel Site
Location: City, State: Olympia, Wa
Collector: JH Date of Collection: 6/3/20
Email: libbyenv@gmail.com

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270 TOC			Field Notes
1	S-B4-1-3-0603	1-3	1030	Soil	4oz												X			
2	S-B5-3-4-0603	3-4	0920	Soil	4oz												X			
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
Kodey Eley	8/12/2020	UPS	8/12/20
UPS			8/13/20 @ 0941

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks:

TAT: 24HR 48HR 5-DAY

Distribution: White - Lab, Yellow - Originator

August 2020
Investigation Activities

Anatek Labs, Inc.

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Client:	Pioneer Technologies Corporation	Work Order:	MAH0632
Address:	5205 Corporate Center Court-Suite A	Project:	Hardel
	Lacey, WA 98503	Reported:	12/9/2020 13:31
Attn:	Joel Hecker		

Case Narrative

The samples listed below were received for analysis at Anatek Labs, Inc. The analytical report is attached. All test results reported below comply with and meet current TNI standards, other applicable regulatory standards, and the Anatek Labs, Inc. Quality Assurance Manual, unless otherwise noted in the report.

The results in this report relate only to the samples analyzed. All soil and solid results are reported on a dryweight basis unless otherwise noted. An estimation of uncertainty is available upon request.

For questions about this report, please contact Justin Doty at 208-883-2839.

Laboratory ID	Sample Name
MAH0632-01	S-B101-0.5-30820
MAH0632-02	S-B102-2-4-0820
MAH0632-03	S-B102-5-7-0820
MAH0632-04	S-B103-1-3-0820
MAH0632-05	S-B104-1-3-0820
MAH0632-06	S-B105-2-4-0820
MAH0632-07	S-B105-2-4-0820-01
MAH0632-08	S-B106-6-8-0820
MAH0632-09	S-B107-2-4-0820
MAH0632-10	S-B2-C-8.5-10-0820
MAH0632-11	S-B2-N-3-5-0820
MAH0632-12	S-B2-E-3-5.5-0820
MAH0632-13	S-B2-S-1-2-0820
MAH0632-14	S-B2-S-8-10-0820
MAH0632-15	S-B2-S-8-10-0820 (Dup)
MAH0632-16	S-B2-W-7-8.5-0820
MAH0632-17	TB-0820

QA/QC Summary

QC Parameter		Yes / No (if No, see Comments below)
1. Sample Holding Time Valid?	Yes	
2. Instrument Tunes Valid?		Yes
3. Method Blank(s) Valid?		Yes
4. Internal Standard Response(s) Valid?		Yes
5. Initial Calibration Curve(s) Valid?		Yes
6. Continuing Calibration(s) Valid?		Yes

Comments:

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Analytical Results Report

Sample Location: S-B101-0.5-30820
Lab/Sample Number: MAH0632-01 Collect Date: 08/20/20 12:50
Date Received: 08/24/20 07:30 Collected By:
Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	91.4	%	0.100	0.100	9/4/20 11:01	JBM	SM 2540 G	
Semivolatiles								
Arochlor 1016 (1)	ND	mg/kg dry	0.00273	0.00547	8/27/20 13:57	SAT	EPA 8082A	
Arochlor 1221 (1)	ND	mg/kg dry	0.00273	0.00547	8/27/20 13:57	SAT	EPA 8082A	
Arochlor 1232 (1)	ND	mg/kg dry	0.00273	0.00547	8/27/20 13:57	SAT	EPA 8082A	
Arochlor 1242 (1)	ND	mg/kg dry	0.00273	0.00547	8/27/20 13:57	SAT	EPA 8082A	
Arochlor 1248 (1)	ND	mg/kg dry	0.00273	0.00547	8/27/20 13:57	SAT	EPA 8082A	
Arochlor 1254 (1)	ND	mg/kg dry	0.00273	0.00547	8/27/20 13:57	SAT	EPA 8082A	
Arochlor 1260 (1)	ND	mg/kg dry	0.00273	0.00547	8/27/20 13:57	SAT	EPA 8082A	
PCB 8082 (total)	ND	mg/kg dry	0.00273	0.00547	8/27/20 13:57	SAT	EPA 8082A	
Surrogate: DCB	*93.8%*		*70-130*		*8/27/20 13:57*	*SAT*	*EPA 8082A*	

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Analytical Results Report

(Continued)

Sample Location: S-B102-2-4-0820

Lab/Sample Number: MAH0632-02 Collect Date: 08/20/20 10:06

Date Received: 08/24/20 07:30 Collected By:

Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	75.1	%	0.100	0.100	9/4/20 11:01	JBM	SM 2540 G	
Semivolatiles								
Diesel	ND	mg/kg dry	51.6	129	8/27/20 21:19	taz	NWTPH-Dx	
Lube Oil	ND	mg/kg dry	258	516	8/27/20 21:19	taz	NWTPH-Dx	
Surrogate: Hexacosane	*139%*		*50-150*		*8/27/20 21:19*	*taz*	*NWTPH-Dx*	
Volatiles								
Gasoline	5.09	mg/kg dry	0.0848	0.170	9/2/20 15:24	TEC	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene	*92.6%*		*70-130*		*9/2/20 15:24*	*TEC*	*NWTPH-Gx*	

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Analytical Results Report

(Continued)

Sample Location: S-B102-5-7-0820

Lab/Sample Number: MAH0632-03 Collect Date: 08/20/20 10:08

Date Received: 08/24/20 07:30 Collected By:

Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	72.8	%	0.100	0.100	9/4/20 11:01	JBM	SM 2540 G	
Semivolatiles								
Arochlor 1016 (1)	ND	mg/kg dry	0.00299	0.00598	8/27/20 14:16	SAT	EPA 8082A	
Arochlor 1221 (1)	ND	mg/kg dry	0.00299	0.00598	8/27/20 14:16	SAT	EPA 8082A	
Arochlor 1232 (1)	ND	mg/kg dry	0.00299	0.00598	8/27/20 14:16	SAT	EPA 8082A	
Arochlor 1242 (1)	ND	mg/kg dry	0.00299	0.00598	8/27/20 14:16	SAT	EPA 8082A	
Arochlor 1248 (1)	ND	mg/kg dry	0.00299	0.00598	8/27/20 14:16	SAT	EPA 8082A	
Arochlor 1254 (1)	ND	mg/kg dry	0.00299	0.00598	8/27/20 14:16	SAT	EPA 8082A	
Arochlor 1260 (1)	ND	mg/kg dry	0.00299	0.00598	8/27/20 14:16	SAT	EPA 8082A	
PCB 8082 (total)	ND	mg/kg dry	0.00299	0.00598	8/27/20 14:16	SAT	EPA 8082A	
Surrogate: DCB	*98.2%*		*70-130*		*8/27/20 14:16*	*SAT*	*EPA 8082A*	
Diesel	ND	mg/kg dry	41.4	104	8/27/20 21:53	taz	NWTPH-Dx	
Lube Oil	553	mg/kg dry	207	414	8/27/20 21:53	taz	NWTPH-Dx	
Surrogate: Hexacosane	*129%*		*50-150*		*8/27/20 21:53*	*taz*	*NWTPH-Dx*	
Volatiles								
Gasoline	9.56	mg/kg dry	0.0910	0.182	9/2/20 15:54	TEC	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene	*96.8%*		*70-130*		*9/2/20 15:54*	*TEC*	*NWTPH-Gx*	

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Analytical Results Report

(Continued)

Sample Location: S-B103-1-3-0820

Lab/Sample Number: MAH0632-04 Collect Date: 08/20/20 09:45

Date Received: 08/24/20 07:30 Collected By:

Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	84.0	%	0.100	0.100	9/4/20 11:01	JBM	SM 2540 G	
Semivolatiles								
Arochlor 1016 (1)	ND	mg/kg dry	0.00149	0.00297	8/27/20 14:34	SAT	EPA 8082A	
Arochlor 1221 (1)	ND	mg/kg dry	0.00149	0.00297	8/27/20 14:34	SAT	EPA 8082A	
Arochlor 1232 (1)	ND	mg/kg dry	0.00149	0.00297	8/27/20 14:34	SAT	EPA 8082A	
Arochlor 1242 (1)	ND	mg/kg dry	0.00149	0.00297	8/27/20 14:34	SAT	EPA 8082A	
Arochlor 1248 (1)	ND	mg/kg dry	0.00149	0.00297	8/27/20 14:34	SAT	EPA 8082A	
Arochlor 1254 (1)	ND	mg/kg dry	0.00149	0.00297	8/27/20 14:34	SAT	EPA 8082A	
Arochlor 1260 (1)	ND	mg/kg dry	0.00149	0.00297	8/27/20 14:34	SAT	EPA 8082A	
PCB 8082 (total)	ND	mg/kg dry	0.00149	0.00297	8/27/20 14:34	SAT	EPA 8082A	
Surrogate: DCB	*93.0%*		*70-130*		*8/27/20 14:34*	*SAT*	*EPA 8082A*	

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Analytical Results Report

(Continued)

Sample Location: S-B104-1-3-0820

Lab/Sample Number: MAH0632-05 Collect Date: 08/20/20 08:45

Date Received: 08/24/20 07:30 Collected By:

Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	93.0	%	0.100	0.100	9/4/20 11:01	JBM	SM 2540 G	
Semivolatiles								
Arochlor 1016 (1)	ND	mg/kg dry	0.00269	0.00537	8/27/20 15:12	SAT	EPA 8082A	
Arochlor 1221 (1)	ND	mg/kg dry	0.00269	0.00537	8/27/20 14:53	SAT	EPA 8082A	
Arochlor 1232 (1)	ND	mg/kg dry	0.00269	0.00537	8/27/20 14:53	SAT	EPA 8082A	
Arochlor 1242 (1)	ND	mg/kg dry	0.00269	0.00537	8/27/20 14:53	SAT	EPA 8082A	
Arochlor 1248 (1)	ND	mg/kg dry	0.00269	0.00537	8/27/20 14:53	SAT	EPA 8082A	
Arochlor 1254 (1)	ND	mg/kg dry	0.00269	0.00537	8/27/20 14:53	SAT	EPA 8082A	
Arochlor 1260 (1)	ND	mg/kg dry	0.00269	0.00537	8/27/20 14:53	SAT	EPA 8082A	
PCB 8082 (total)	ND	mg/kg dry	0.00269	0.00537	8/27/20 14:53	SAT	EPA 8082A	
Surrogate: DCB	*85.0%*		*70-130*		*8/27/20 14:53*	*SAT*	*EPA 8082A*	

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Analytical Results Report

(Continued)

Sample Location: S-B105-2-4-0820

Lab/Sample Number: MAH0632-06 Collect Date: 08/20/20 08:20

Date Received: 08/24/20 07:30 Collected By:

Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	76.5	%	0.100	0.100	9/4/20 11:01	JBM	SM 2540 G	
Semivolatiles								
Arochlor 1016 (1)	ND	mg/kg dry	0.00272	0.00545	8/27/20 15:12	SAT	EPA 8082A	
Arochlor 1221 (1)	ND	mg/kg dry	0.00272	0.00545	8/27/20 15:12	SAT	EPA 8082A	
Arochlor 1232 (1)	ND	mg/kg dry	0.00272	0.00545	8/27/20 15:12	SAT	EPA 8082A	
Arochlor 1242 (1)	ND	mg/kg dry	0.00272	0.00545	8/27/20 15:12	SAT	EPA 8082A	
Arochlor 1248 (1)	ND	mg/kg dry	0.00272	0.00545	8/27/20 15:12	SAT	EPA 8082A	
Arochlor 1254 (1)	ND	mg/kg dry	0.00272	0.00545	8/27/20 15:12	SAT	EPA 8082A	
Arochlor 1260 (1)	ND	mg/kg dry	0.00272	0.00545	8/27/20 15:12	SAT	EPA 8082A	
PCB 8082 (total)	ND	mg/kg dry	0.00272	0.00545	8/27/20 15:12	SAT	EPA 8082A	
Surrogate: DCB	*85.7%*		*70-130*		*8/27/20 15:12*	*SAT*	*EPA 8082A*	

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Analytical Results Report

(Continued)

Sample Location: S-B105-2-4-0820-01
Lab/Sample Number: MAH0632-07 Collect Date: 08/20/20 08:20
Date Received: 08/24/20 07:30 Collected By:
Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	80.5	%	0.100	0.100	9/4/20 11:01	JBM	SM 2540 G	
Semivolatiles								
Arochlor 1016 (1)	ND	mg/kg dry	0.00222	0.00444	8/27/20 15:49	SAT	EPA 8082A	
Arochlor 1221 (1)	ND	mg/kg dry	0.00222	0.00444	8/27/20 15:31	SAT	EPA 8082A	
Arochlor 1232 (1)	ND	mg/kg dry	0.00222	0.00444	8/27/20 15:31	SAT	EPA 8082A	
Arochlor 1242 (1)	ND	mg/kg dry	0.00222	0.00444	8/27/20 15:31	SAT	EPA 8082A	
Arochlor 1248 (1)	ND	mg/kg dry	0.00222	0.00444	8/27/20 15:31	SAT	EPA 8082A	
Arochlor 1254 (1)	ND	mg/kg dry	0.00222	0.00444	8/27/20 15:31	SAT	EPA 8082A	
Arochlor 1260 (1)	ND	mg/kg dry	0.00222	0.00444	8/27/20 15:31	SAT	EPA 8082A	
PCB 8082 (total)	ND	mg/kg dry	0.00222	0.00444	8/27/20 15:31	SAT	EPA 8082A	
Surrogate: DCB	*97.1%*		*70-130*		*8/27/20 15:31*	*SAT*	*EPA 8082A*	

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Analytical Results Report

(Continued)

Sample Location: S-B106-6-8-0820

Lab/Sample Number: MAH0632-08 Collect Date: 08/20/20 08:00

Date Received: 08/24/20 07:30 Collected By:

Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	49.8	%	0.100	0.100	9/4/20 11:01	JBM	SM 2540 G	
Semivolatiles								
Arochlor 1016 (1)	ND	mg/kg dry	0.0251	0.0502	8/27/20 15:49	SAT	EPA 8082A	
Arochlor 1221 (1)	ND	mg/kg dry	0.0251	0.0502	8/27/20 15:49	SAT	EPA 8082A	
Arochlor 1232 (1)	ND	mg/kg dry	0.0251	0.0502	8/27/20 15:49	SAT	EPA 8082A	
Arochlor 1242 (1)	ND	mg/kg dry	0.0251	0.0502	8/27/20 15:49	SAT	EPA 8082A	
Arochlor 1248 (1)	ND	mg/kg dry	0.0251	0.0502	8/27/20 15:49	SAT	EPA 8082A	
Arochlor 1254 (1)	ND	mg/kg dry	0.0251	0.0502	8/27/20 15:49	SAT	EPA 8082A	
Arochlor 1260 (1)	ND	mg/kg dry	0.0251	0.0502	8/27/20 15:49	SAT	EPA 8082A	
PCB 8082 (total)	ND	mg/kg dry	0.0251	0.0502	8/27/20 15:49	SAT	EPA 8082A	
Surrogate: DCB	*91.1%*		*70-130*		*8/27/20 15:49*	*SAT*	*EPA 8082A*	

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Analytical Results Report

(Continued)

Sample Location: S-B107-2-4-0820

Lab/Sample Number: MAH0632-09 Collect Date: 08/20/20 07:50

Date Received: 08/24/20 07:30 Collected By:

Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	78.4	%	0.100	0.100	9/4/20 11:01	JBM	SM 2540 G	
Semivolatiles								
Arochlor 1016 (1)	ND	mg/kg dry	0.00213	0.00425	8/27/20 16:08	SAT	EPA 8082A	
Arochlor 1221 (1)	ND	mg/kg dry	0.00213	0.00425	8/27/20 16:08	SAT	EPA 8082A	
Arochlor 1232 (1)	ND	mg/kg dry	0.00213	0.00425	8/27/20 16:08	SAT	EPA 8082A	
Arochlor 1242 (1)	ND	mg/kg dry	0.00213	0.00425	8/27/20 16:08	SAT	EPA 8082A	
Arochlor 1248 (1)	ND	mg/kg dry	0.00213	0.00425	8/27/20 16:08	SAT	EPA 8082A	
Arochlor 1254 (1)	ND	mg/kg dry	0.00213	0.00425	8/27/20 16:08	SAT	EPA 8082A	
Arochlor 1260 (1)	ND	mg/kg dry	0.00213	0.00425	8/27/20 16:08	SAT	EPA 8082A	
PCB 8082 (total)	ND	mg/kg dry	0.00213	0.00425	8/27/20 16:08	SAT	EPA 8082A	
Surrogate: DCB	*92.6%*		*70-130*		*8/27/20 16:08*	*SAT*	*EPA 8082A*	

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Analytical Results Report

(Continued)

Sample Location: S-B2-C-8.5-10-0820
Lab/Sample Number: MAH0632-10 Collect Date: 08/20/20 10:50
Date Received: 08/24/20 07:30 Collected By:
Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	36.3	%	0.100	0.100	8/27/20 12:45	BMM	SM 2540 G	
Semivolatiles								
1-Methylnaphthalene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
2-Methylnaphthalene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Acenaphthene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Acenaphthylene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Anthracene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Benzo(g,h,i)perylene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Benzo[a]anthracene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Benzo[a]pyrene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Benzo[b]fluoranthene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Benzo[k]fluoranthene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Chrysene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Dibenz(a,h)anthracene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Fluoranthene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Fluorene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Indeno(1,2,3-cd)pyrene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Naphthalene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Phenanthrene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	
Pyrene	ND	mg/kg dry	0.0444	0.0888	9/3/20 17:59	BMM	EPA 8270D	L2
Surrogate: Terphenyl-d14	*72.5%*		*60-130*		*9/3/20 17:59*	*BMM*	*EPA 8270D*	
Diesel	ND	mg/kg dry	142	355	8/27/20 22:28	taz	NWTPH-Dx	
Lube Oil	4130	mg/kg dry	709	1420	8/27/20 22:28	taz	NWTPH-Dx	
Surrogate: Hexacosane	*126%*		*50-150*		*8/27/20 22:28*	*taz*	*NWTPH-Dx*	
Volatiles								
Gasoline	ND	mg/kg dry	0.174	0.348	9/2/20 16:24	TEC	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene	*94.7%*		*70-130*		*9/2/20 16:24*	*TEC*	*NWTPH-Gx*	
1,2-Dichloroethane	ND	mg/kg dry	0.00348	0.00871	9/2/20 1:52	TEC	EPA 8260C	
Benzene	ND	mg/kg dry	0.00348	0.00871	9/2/20 1:52	TEC	EPA 8260C	
EDB	ND	mg/kg dry	0.00348	0.00871	9/2/20 1:52	TEC	EPA 8260C	
Ethylbenzene	ND	mg/kg dry	0.00348	0.00871	9/2/20 1:52	TEC	EPA 8260C	
m/p Xylenes (MCL for total)	ND	mg/kg dry	0.00348	0.00871	9/2/20 1:52	TEC	EPA 8260C	
methyl-t-butyl ether (MTBE)	ND	mg/kg dry	0.00348	0.00871	9/2/20 1:52	TEC	EPA 8260C	
Naphthalene	ND	mg/kg dry	0.00348	0.00871	9/2/20 1:52	TEC	EPA 8260C	
o-Xylene (MCL for total)	ND	mg/kg dry	0.00348	0.00871	9/2/20 1:52	TEC	EPA 8260C	
Toluene	ND	mg/kg dry	0.00348	0.00871	9/2/20 1:52	TEC	EPA 8260C	
n-Hexane	ND	mg/kg dry	8.71	43.5	9/2/20 16:24	TEC	EPA 8260C	

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Analytical Results Report

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Sample Location: S-B2-N-3-5-0820
Lab/Sample Number: MAH0632-11 Collect Date: 08/20/20 11:40
Date Received: 08/24/20 07:30 Collected By:
Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	70.4	%	0.100	0.100	8/27/20 12:45	BMM	SM 2540 G	
Semivolatiles								
1-Methylnaphthalene	ND	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
2-Methylnaphthalene	0.0251	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Acenaphthene	ND	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Acenaphthylene	ND	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Anthracene	ND	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Benzo(g,h,i)perylene	0.0188	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Benzo[a]anthracene	ND	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Benzo[a]pyrene	ND	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Benzo[b]fluoranthene	ND	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Benzo[k]fluoranthene	ND	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Chrysene	ND	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Dibenz(a,h)anthracene	ND	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Fluoranthene	0.0262	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Fluorene	ND	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Indeno(1,2,3-cd)pyrene	ND	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Naphthalene	0.0293	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Phenanthrene	0.0438	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	
Pyrene	0.0237	mg/kg dry	0.00714	0.0143	9/3/20 21:08	BMM	EPA 8270D	L2
Surrogate: Terphenyl-d14	*73.0%*		*60-130*		*9/3/20 21:08*	*BMM*	*EPA 8270D*	
Diesel	ND	mg/kg dry	51.5	129	8/27/20 23:03	taz	NWTPH-Dx	
Lube Oil	792	mg/kg dry	258	515	8/27/20 23:03	taz	NWTPH-Dx	
Surrogate: Hexacosane	*123%*		*50-150*		*8/27/20 23:03*	*taz*	*NWTPH-Dx*	
Volatiles								
Gasoline	ND	mg/kg dry	0.0905	0.181	9/2/20 16:53	TEC	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene	*92.0%*		*70-130*		*9/2/20 16:53*	*TEC*	*NWTPH-Gx*	
1,2-Dichloroethane	ND	mg/kg dry	0.00181	0.00453	9/2/20 2:21	TEC	EPA 8260C	
Benzene	ND	mg/kg dry	0.00181	0.00453	9/2/20 2:21	TEC	EPA 8260C	
EDB	ND	mg/kg dry	0.00181	0.00453	9/2/20 2:21	TEC	EPA 8260C	
Ethylbenzene	ND	mg/kg dry	0.00181	0.00453	9/2/20 2:21	TEC	EPA 8260C	
m/p Xylenes (MCL for total)	ND	mg/kg dry	0.00181	0.00453	9/2/20 2:21	TEC	EPA 8260C	
methyl-t-butyl ether (MTBE)	ND	mg/kg dry	0.00181	0.00453	9/2/20 2:21	TEC	EPA 8260C	
Naphthalene	ND	mg/kg dry	0.00181	0.00453	9/2/20 2:21	TEC	EPA 8260C	
o-Xylene (MCL for total)	ND	mg/kg dry	0.00181	0.00453	9/2/20 2:21	TEC	EPA 8260C	
Toluene	ND	mg/kg dry	0.00181	0.00453	9/2/20 2:21	TEC	EPA 8260C	
n-Hexane	ND	mg/kg dry	4.53	22.6	9/2/20 16:53	TEC	EPA 8260C	

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Analytical Results Report

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Sample Location: S-B2-E-3-5.5-0820
Lab/Sample Number: MAH0632-12 Collect Date: 08/20/20 11:40
Date Received: 08/24/20 07:30 Collected By:
Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	82.4	%	0.100	0.100	8/27/20 12:45	BMM	SM 2540 G	
Semivolatiles								
1-Methylnaphthalene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
2-Methylnaphthalene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Acenaphthene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Acenaphthylene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Anthracene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Benzo(g,h,i)perylene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Benzo[a]anthracene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Benzo[a]pyrene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Benzo[b]fluoranthene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Benzo[k]fluoranthene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Chrysene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Dibenz(a,h)anthracene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Fluoranthene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Fluorene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Indeno(1,2,3-cd)pyrene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Naphthalene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Phenanthrene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	
Pyrene	ND	mg/kg dry	0.00603	0.0121	9/3/20 16:48	BMM	EPA 8270D	L2
Surrogate: Terphenyl-d14	*89.7%*		*60-130*		*9/3/20 16:48*	*BMM*	*EPA 8270D*	
Diesel	ND	mg/kg dry	12.5	31.3	8/27/20 23:39	taz	NWTPH-Dx	
Lube Oil	ND	mg/kg dry	62.6	125	8/27/20 23:39	taz	NWTPH-Dx	
Surrogate: Hexacosane	*126%*		*50-150*		*8/27/20 23:39*	*taz*	*NWTPH-Dx*	
Volatiles								
Gasoline	ND	mg/kg dry	0.0788	0.158	9/2/20 17:23	TEC	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene	*91.7%*		*70-130*		*9/2/20 17:23*	*TEC*	*NWTPH-Gx*	
1,2-Dichloroethane	ND	mg/kg dry	0.000315	0.000788	9/1/20 23:55	TEC	EPA 8260C	
Benzene	ND	mg/kg dry	0.000315	0.000788	9/1/20 23:55	TEC	EPA 8260C	
EDB	ND	mg/kg dry	0.000315	0.000788	9/1/20 23:55	TEC	EPA 8260C	
Ethylbenzene	ND	mg/kg dry	0.000315	0.000788	9/1/20 23:55	TEC	EPA 8260C	
m/p Xylenes (MCL for total)	ND	mg/kg dry	0.000315	0.000788	9/1/20 23:55	TEC	EPA 8260C	
methyl-t-butyl ether (MTBE)	ND	mg/kg dry	0.000315	0.000788	9/1/20 23:55	TEC	EPA 8260C	
Naphthalene	ND	mg/kg dry	0.000315	0.000788	9/1/20 23:55	TEC	EPA 8260C	
o-Xylene (MCL for total)	ND	mg/kg dry	0.000315	0.000788	9/1/20 23:55	TEC	EPA 8260C	
Toluene	ND	mg/kg dry	0.000315	0.000788	9/1/20 23:55	TEC	EPA 8260C	
n-Hexane	ND	mg/kg dry	3.94	19.7	9/2/20 17:23	TEC	EPA 8260C	

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Analytical Results Report

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Sample Location: S-B2-S-8-10-0820
Lab/Sample Number: MAH0632-14 Collect Date: 08/20/20 12:10
Date Received: 08/24/20 07:30 Collected By:
Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	65.5	%	0.100	0.100	8/27/20 12:45	BMM	SM 2540 G	
Semivolatiles								
1-Methylnaphthalene	ND	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
2-Methylnaphthalene	ND	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Acenaphthene	0.163	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Acenaphthylene	ND	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Anthracene	ND	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Benzo(g,h,i)perylene	0.0827	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Benzo[a]anthracene	0.0307	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Benzo[a]pyrene	0.0235	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Benzo[b]fluoranthene	0.0646	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Benzo[k]fluoranthene	0.0276	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Chrysene	0.0288	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Dibenz(a,h)anthracene	ND	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Fluoranthene	0.0423	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Fluorene	0.0284	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Indeno(1,2,3-cd)pyrene	0.0524	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Naphthalene	0.0247	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Phenanthrene	0.0413	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	
Pyrene	0.0254	mg/kg dry	0.00762	0.0152	9/3/20 17:36	BMM	EPA 8270D	L2
Surrogate: Terphenyl-d14	*77.8%*		*60-130*		*9/3/20 17:36*	*BMM*	*EPA 8270D*	
Diesel	ND	mg/kg dry	25.4	63.4	8/28/20 0:14	taz	NWTPH-Dx	
Lube Oil	ND	mg/kg dry	127	254	8/28/20 0:14	taz	NWTPH-Dx	
Surrogate: Hexacosane	*108%*		*50-150*		*8/28/20 0:14*	*taz*	*NWTPH-Dx*	
Volatiles								
Gasoline	ND	mg/kg dry	0.0992	0.198	9/2/20 17:53	TEC	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene	*88.9%*		*70-130*		*9/2/20 17:53*	*TEC*	*NWTPH-Gx*	
1,2-Dichloroethane	ND	mg/kg dry	0.000397	0.000992	9/2/20 0:24	TEC	EPA 8260C	
Benzene	ND	mg/kg dry	0.000397	0.000992	9/2/20 0:24	TEC	EPA 8260C	
EDB	ND	mg/kg dry	0.000397	0.000992	9/2/20 0:24	TEC	EPA 8260C	
Ethylbenzene	ND	mg/kg dry	0.000397	0.000992	9/2/20 0:24	TEC	EPA 8260C	
m/p Xylenes (MCL for total)	ND	mg/kg dry	0.000397	0.000992	9/2/20 0:24	TEC	EPA 8260C	
methyl-t-butyl ether (MTBE)	ND	mg/kg dry	0.000397	0.000992	9/2/20 0:24	TEC	EPA 8260C	
Naphthalene	ND	mg/kg dry	0.000397	0.000992	9/2/20 0:24	TEC	EPA 8260C	
o-Xylene (MCL for total)	ND	mg/kg dry	0.000397	0.000992	9/2/20 0:24	TEC	EPA 8260C	
Toluene	ND	mg/kg dry	0.000397	0.000992	9/2/20 0:24	TEC	EPA 8260C	
n-Hexane	ND	mg/kg dry	4.96	24.8	9/2/20 17:53	TEC	EPA 8260C	

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Analytical Results Report

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Sample Location: S-B2-S-8-10-0820 (Dup)
Lab/Sample Number: MAH0632-15 Collect Date: 08/20/20 12:10
Date Received: 08/24/20 07:30 Collected By:
Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	52.7	%	0.100	0.100	8/27/20 12:45	BMM	SM 2540 G	
Semivolatiles								
1-Methylnaphthalene	ND	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
2-Methylnaphthalene	ND	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Acenaphthene	ND	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Acenaphthylene	ND	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Anthracene	ND	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Benzo(g,h,i)perylene	0.0366	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Benzo[a]anthracene	0.0241	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Benzo[a]pyrene	ND	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Benzo[b]fluoranthene	0.0191	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Benzo[k]fluoranthene	ND	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Chrysene	ND	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Dibenz(a,h)anthracene	ND	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Fluoranthene	ND	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Fluorene	ND	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Indeno(1,2,3-cd)pyrene	0.0250	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Naphthalene	0.0196	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Phenanthrene	ND	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	
Pyrene	ND	mg/kg dry	0.00944	0.0189	9/3/20 18:23	BMM	EPA 8270D	L2
Surrogate: Terphenyl-d14	*69.6%*		*60-130*		*9/3/20 18:23*	*BMM*	*EPA 8270D*	
Diesel	ND	mg/kg dry	93.9	235	8/28/20 0:50	taz	NWTPH-Dx	
Lube Oil	ND	mg/kg dry	469	939	8/28/20 0:50	taz	NWTPH-Dx	
Surrogate: Hexacosane	*131%*		*50-150*		*8/28/20 0:50*	*taz*	*NWTPH-Dx*	
Volatiles								
Gasoline	ND	mg/kg dry	0.126	0.251	9/2/20 18:23	TEC	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene	*91.0%*		*70-130*		*9/2/20 18:23*	*TEC*	*NWTPH-Gx*	
1,2-Dichloroethane	ND	mg/kg dry	0.000502	0.00126	9/2/20 0:53	TEC	EPA 8260C	
Benzene	ND	mg/kg dry	0.000502	0.00126	9/2/20 0:53	TEC	EPA 8260C	
EDB	ND	mg/kg dry	0.000502	0.00126	9/2/20 0:53	TEC	EPA 8260C	
Ethylbenzene	ND	mg/kg dry	0.000502	0.00126	9/2/20 0:53	TEC	EPA 8260C	
m/p Xylenes (MCL for total)	ND	mg/kg dry	0.000502	0.00126	9/2/20 0:53	TEC	EPA 8260C	
methyl-t-butyl ether (MTBE)	ND	mg/kg dry	0.000502	0.00126	9/2/20 0:53	TEC	EPA 8260C	
Naphthalene	ND	mg/kg dry	0.000502	0.00126	9/2/20 0:53	TEC	EPA 8260C	
o-Xylene (MCL for total)	ND	mg/kg dry	0.000502	0.00126	9/2/20 0:53	TEC	EPA 8260C	
Toluene	ND	mg/kg dry	0.000502	0.00126	9/2/20 0:53	TEC	EPA 8260C	
n-Hexane	ND	mg/kg dry	6.28	31.4	9/2/20 18:23	TEC	EPA 8260C	

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Analytical Results Report

(Continued)

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Analytical Results Report

(Continued)

Sample Location: S-B2-W-7-8.5-0820
Lab/Sample Number: MAH0632-16 Collect Date: 08/20/20 12:10
Date Received: 08/24/20 07:30 Collected By:
Matrix: Solid

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
% Solids	63.1	%	0.100	0.100	8/27/20 12:45	BMM	SM 2540 G	
Semivolatiles								
1-Methylnaphthalene	0.0337	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
2-Methylnaphthalene	0.0336	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Acenaphthene	0.0861	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Acenaphthylene	ND	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Anthracene	0.0158	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Benzo(g,h,i)perylene	0.192	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Benzo[a]anthracene	0.167	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Benzo[a]pyrene	0.182	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Benzo[b]fluoranthene	0.239	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Benzo[k]fluoranthene	0.0909	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Chrysene	0.149	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Dibenz(a,h)anthracene	0.0253	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Fluoranthene	0.193	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Fluorene	0.0320	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Indeno(1,2,3-cd)pyrene	0.135	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Naphthalene	0.0339	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Phenanthrene	0.116	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	
Pyrene	0.188	mg/kg dry	0.00781	0.0156	9/3/20 21:32	BMM	EPA 8270D	L2
Surrogate: Terphenyl-d14	*96.6%*		*60-130*		*9/3/20 21:32*	*BMM*	*EPA 8270D*	
Diesel	ND	mg/kg dry	155	388	8/28/20 1:25	taz	NWTPH-Dx	
Lube Oil	ND	mg/kg dry	777	1550	8/28/20 1:25	taz	NWTPH-Dx	
Surrogate: Hexacosane	*127%*		*50-150*		*8/28/20 1:25*	*taz*	*NWTPH-Dx*	
Volatiles								
Gasoline	5.62	mg/kg dry	0.102	0.204	9/2/20 18:52	TEC	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene	*92.6%*		*70-130*		*9/2/20 18:52*	*TEC*	*NWTPH-Gx*	
1,2-Dichloroethane	ND	mg/kg dry	0.000409	0.00102	9/2/20 1:23	TEC	EPA 8260C	
Benzene	ND	mg/kg dry	0.000409	0.00102	9/2/20 1:23	TEC	EPA 8260C	
EDB	ND	mg/kg dry	0.000409	0.00102	9/2/20 1:23	TEC	EPA 8260C	
Ethylbenzene	ND	mg/kg dry	0.000409	0.00102	9/2/20 1:23	TEC	EPA 8260C	
m/p Xylenes (MCL for total)	ND	mg/kg dry	0.000409	0.00102	9/2/20 1:23	TEC	EPA 8260C	
methyl-t-butyl ether (MTBE)	ND	mg/kg dry	0.000409	0.00102	9/2/20 1:23	TEC	EPA 8260C	
Naphthalene	ND	mg/kg dry	0.000409	0.00102	9/2/20 1:23	TEC	EPA 8260C	
o-Xylene (MCL for total)	ND	mg/kg dry	0.000409	0.00102	9/2/20 1:23	TEC	EPA 8260C	
Toluene	ND	mg/kg dry	0.000409	0.00102	9/2/20 1:23	TEC	EPA 8260C	
n-Hexane	ND	mg/kg dry	5.11	25.6	9/2/20 18:52	TEC	EPA 8260C	

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Analytical Results Report

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Analytical Results Report

(Continued)

Sample Location: TB-0820
Lab/Sample Number: MAH0632-17 Collect Date: 08/20/20 00:00
Date Received: 08/24/20 07:30 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles								
1,1,1,2-Tetrachloroethane	ND	ug/L	0.110	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,1,1-Trichloroethane	ND	ug/L	0.140	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.110	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,1,2-Trichlorethane	ND	ug/L	0.0800	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,1-Dichloroethane	ND	ug/L	0.140	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,1-Dichloroethylene	ND	ug/L	0.130	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,1-Dichloropropene	ND	ug/L	0.140	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,2,3-Trichlorobenzene	ND	ug/L	0.120	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,2,3-Trichloropropane	ND	ug/L	0.220	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,2,4-Trichlorobenzene	ND	ug/L	0.110	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,2,4-Trimethylbenzene	ND	ug/L	0.160	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	ND	ug/L	0.290	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,2-Dichloroethane	ND	ug/L	0.110	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,2-Dichloropropane	ND	ug/L	0.110	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,3,5-Trimethylbenzene	ND	ug/L	0.180	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,3-Dichloropropane	ND	ug/L	0.0600	0.500	9/1/20 21:57	TEC	EPA 624.1	
1,4-Dichlorobenzene (para-Dichlorobenzene)	ND	ug/L	0.110	0.500	9/1/20 21:57	TEC	EPA 624.1	
2,2-Dichloropropane	ND	ug/L	0.110	0.500	9/1/20 21:57	TEC	EPA 624.1	
2-Chloroethyl vinyl ether	ND	ug/L	2.50	2.50	9/1/20 21:57	TEC	EPA 624.1	
2-hexanone	ND	ug/L	0.440	2.50	9/1/20 21:57	TEC	EPA 624.1	
Acetone	ND	ug/L	2.50	2.50	9/1/20 21:57	TEC	EPA 624.1	
Acrolein	ND	ug/L	0.150	2.50	9/1/20 21:57	TEC	EPA 624.1	
Acrylonitrile	ND	ug/L	0.130	2.50	9/1/20 21:57	TEC	EPA 624.1	
Benzene	ND	ug/L	0.100	0.200	9/1/20 21:57	TEC	EPA 624.1	
Bromobenzene	ND	ug/L	0.0700	0.500	9/1/20 21:57	TEC	EPA 624.1	
Bromochloromethane	ND	ug/L	0.120	0.500	9/1/20 21:57	TEC	EPA 624.1	
Bromodichloromethane	ND	ug/L	0.0400	0.200	9/1/20 21:57	TEC	EPA 624.1	
Bromoform	ND	ug/L	0.120	0.500	9/1/20 21:57	TEC	EPA 624.1	
Bromomethane	ND	ug/L	0.470	0.500	9/1/20 21:57	TEC	EPA 624.1	
Carbon disulfide	ND	ug/L	0.180	2.50	9/1/20 21:57	TEC	EPA 624.1	
Carbon Tetrachloride	ND	ug/L	0.0300	0.200	9/1/20 21:57	TEC	EPA 624.1	
Chlorobenzene (Monochlorobenzene)	ND	ug/L	0.0800	0.500	9/1/20 21:57	TEC	EPA 624.1	
Chloroethane	ND	ug/L	0.270	0.500	9/1/20 21:57	TEC	EPA 624.1	
Chloroform	ND	ug/L	0.0400	0.200	9/1/20 21:57	TEC	EPA 624.1	
Chloromethane	ND	ug/L	0.350	0.500	9/1/20 21:57	TEC	EPA 624.1	
cis-1,2-Dichloroethylene	ND	ug/L	0.110	0.500	9/1/20 21:57	TEC	EPA 624.1	
cis-1,3-Dichloropropene	ND	ug/L	0.0700	0.200	9/1/20 21:57	TEC	EPA 624.1	
DBCP	ND	ug/L	0.290	0.500	9/1/20 21:57	TEC	EPA 624.1	
Dibromochloromethane	ND	ug/L	0.110	0.500	9/1/20 21:57	TEC	EPA 624.1	
Dibromomethane	ND	ug/L	0.0800	0.500	9/1/20 21:57	TEC	EPA 624.1	
Dichlorodifluoromethane	ND	ug/L	0.140	0.500	9/1/20 21:57	TEC	EPA 624.1	

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Analytical Results Report

(Continued)

Sample Location: TB-0820
Lab/Sample Number: MAH0632-17 Collect Date: 08/20/20 00:00
Date Received: 08/24/20 07:30 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)								
EDB	ND	ug/L	0.0400	0.200	9/1/20 21:57	TEC	EPA 624.1	
Ethylbenzene	ND	ug/L	0.120	0.500	9/1/20 21:57	TEC	EPA 624.1	
Hexachlorobutadiene	ND	ug/L	0.160	0.500	9/1/20 21:57	TEC	EPA 624.1	
Iodomethane	ND	ug/L	0.460	0.500	9/1/20 21:57	TEC	EPA 624.1	
Isopropylbenzene	ND	ug/L	0.140	0.500	9/1/20 21:57	TEC	EPA 624.1	
m/p Xylenes (MCL for total)	ND	ug/L	0.300	1.00	9/1/20 21:57	TEC	EPA 624.1	
m-Dichlorobenzene	ND	ug/L	0.100	0.500	9/1/20 21:57	TEC	EPA 624.1	
Methyl ethyl ketone (MEK)	ND	ug/L	0.570	2.50	9/1/20 21:57	TEC	EPA 624.1	
Methyl isobutyl ketone (MIBK)	ND	ug/L	0.490	2.50	9/1/20 21:57	TEC	EPA 624.1	
Methylene Chloride (Dichloromethane)	ND	ug/L	0.440	0.500	9/1/20 21:57	TEC	EPA 624.1	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.0600	0.500	9/1/20 21:57	TEC	EPA 624.1	
Naphthalene	ND	ug/L	0.110	0.500	9/1/20 21:57	TEC	EPA 624.1	
n-Butylbenzene	ND	ug/L	0.160	0.500	9/1/20 21:57	TEC	EPA 624.1	
n-Propylbenzene	ND	ug/L	0.140	0.500	9/1/20 21:57	TEC	EPA 624.1	
o-Chlorotoluene	ND	ug/L	0.160	0.500	9/1/20 21:57	TEC	EPA 624.1	
o-Xylene (MCL for total)	ND	ug/L	0.150	0.500	9/1/20 21:57	TEC	EPA 624.1	
p-Chlorotoluene	ND	ug/L	0.130	0.500	9/1/20 21:57	TEC	EPA 624.1	
p-isopropyltoluene	ND	ug/L	0.110	0.500	9/1/20 21:57	TEC	EPA 624.1	
sec-Butylbenzene	ND	ug/L	0.160	0.500	9/1/20 21:57	TEC	EPA 624.1	
Styrene	ND	ug/L	0.100	0.500	9/1/20 21:57	TEC	EPA 624.1	
tert-Butylbenzene	ND	ug/L	0.140	0.500	9/1/20 21:57	TEC	EPA 624.1	
Tetrachloroethylene	ND	ug/L	0.300	0.500	9/1/20 21:57	TEC	EPA 624.1	
Toluene	ND	ug/L	0.0600	0.500	9/1/20 21:57	TEC	EPA 624.1	
Total Xylenes	ND	ug/L	0.100	0.500	9/1/20 21:57	TEC	EPA 624.1	
trans-1,2 Dichloroethylene	ND	ug/L	0.120	0.500	9/1/20 21:57	TEC	EPA 624.1	
trans-1,3-Dichloropropene	ND	ug/L	0.0700	0.200	9/1/20 21:57	TEC	EPA 624.1	
trans-1-4-Dichloro-2-butene	ND	ug/L	0.340	0.500	9/1/20 21:57	TEC	EPA 624.1	
Trichloroethene	ND	ug/L	0.0800	0.500	9/1/20 21:57	TEC	EPA 624.1	
Trichloroflouromethane	ND	ug/L	0.130	0.500	9/1/20 21:57	TEC	EPA 624.1	
Vinyl acetate	ND	ug/L	0.140	0.500	9/1/20 21:57	TEC	EPA 624.1	
Vinyl Chloride	ND	ug/L	0.150	0.200	9/1/20 21:57	TEC	EPA 624.1	
Surrogate: 1,2-Dichlorobenzene-d4	*108%*		*70-130*		*9/1/20 21:57*	*TEC*	*EPA 624.1*	
Surrogate: 4-Bromofluorobenzene	*91.5%*		*70-130*		*9/1/20 21:57*	*TEC*	*EPA 624.1*	
Surrogate: Toluene-d8	*103%*		*70-130*		*9/1/20 21:57*	*TEC*	*EPA 624.1*	

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Authorized Signature,

Justin Doty For Todd Taruscio, Laboratory Manager

L2	The associated blank spike recovery was below laboratory acceptance limits
PQL	Practical Quantitation Limit
ND	Not Detected
MDL	Method Detection Limit
Dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was spiked or duplicated.

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Quality Control Data

Semivolatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAH0685 - PCBs										
Blank (BAH0685-BLK1)				Prepared: 8/25/2020 Analyzed: 8/27/2020						
Aroclor 1260 (PCB-1260)	ND		0.00500	mg/kg wet						
Aroclor 1254 (PCB-1254)	ND		0.00500	mg/kg wet						
Aroclor 1248 (PCB-1248)	ND		0.00500	mg/kg wet						
Aroclor 1242 (PCB-1242)	ND		0.00500	mg/kg wet						
Aroclor 1232 (PCB-1232)	ND		0.00500	mg/kg wet						
Aroclor 1221 (PCB-1221)	ND		0.00500	mg/kg wet						
Aroclor 1016 (PCB-1016)	ND		0.00500	mg/kg wet						
PCB 8082 (total)	ND		0.00500	mg/kg wet						
Surrogate: DCB			*0.0453*	*mg/kg wet*	*0.0500*		*90.6*	*70-130*		
LCS (BAH0685-BS1)				Prepared: 8/25/2020 Analyzed: 8/27/2020						
Aroclor 1016 (PCB-1016)	0.173		0.00500	mg/kg wet	0.200		86.6	70-130		
Aroclor 1260 (PCB-1260)	0.174		0.00500	mg/kg wet	0.200		87.2	70-130		
Surrogate: DCB			*0.0461*	*mg/kg wet*	*0.0500*		*92.1*	*70-130*		
Matrix Spike (BAH0685-MS1)		**Source: MAH0617-03**		Prepared: 8/25/2020 Analyzed: 8/27/2020						
Aroclor 1016 (PCB-1016)	0.196		0.00513	mg/kg dry	0.205	ND	95.6	60-130		
Aroclor 1260 (PCB-1260)	0.208		0.00513	mg/kg dry	0.205	ND	101	60-130		
Surrogate: DCB			*0.0520*	*mg/kg dry*	*0.0513*		*101*	*70-130*		
Matrix Spike Dup (BAH0685-MSD1)		**Source: MAH0617-03**		Prepared: 8/25/2020 Analyzed: 8/27/2020						
Aroclor 1016 (PCB-1016)	0.211		0.00513	mg/kg dry	0.205	ND	103	60-130	7.02	25
Aroclor 1260 (PCB-1260)	0.190		0.00513	mg/kg dry	0.205	ND	92.4	60-130	9.03	25
Surrogate: DCB			*0.0494*	*mg/kg dry*	*0.0513*		*96.3*	*70-130*		
Batch: BAH0775 - TPH-Dx										
Blank (BAH0775-BLK1)				Prepared: 8/26/2020 Analyzed: 8/27/2020						
Diesel	ND		25.0	mg/kg wet						
Lube Oil	ND		100	mg/kg wet						
Surrogate: Hexacosane			*8.83*	*mg/kg wet*	*10.0*		*88.3*	*50-150*		

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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: BAH0775 - TPH-Dx (Continued)										
LCS (BAH0775-BS1)				Prepared: 8/26/2020 Analyzed: 8/27/2020						
Diesel	85.3		25.0	mg/kg wet	100		85.3	70-130		
Surrogate: Hexacosane			*14.6*	*mg/kg wet*	*10.0*		*146*	*50-150*		
Batch: BAH0783 - ASE Ext										
Blank (BAH0783-BLK1)				Prepared: 8/26/2020 Analyzed: 9/3/2020						
Naphthalene	ND		0.0100	mg/kg wet						
2-Methylnaphthalene	ND		0.0100	mg/kg wet						
1-Methylnaphthalene	ND		0.0100	mg/kg wet						
Acenaphthylene	ND		0.0100	mg/kg wet						
Acenaphthene	ND		0.0100	mg/kg wet						
Fluorene	ND		0.0100	mg/kg wet						
Phenanthrene	ND		0.0100	mg/kg wet						
Anthracene	ND		0.0100	mg/kg wet						
Fluoranthene	ND		0.0100	mg/kg wet						
Pyrene	ND		0.0100	mg/kg wet						
Benzo[a]anthracene	ND		0.0100	mg/kg wet						
Chrysene	ND		0.0100	mg/kg wet						
Benzo[b]fluoranthene	ND		0.0100	mg/kg wet						
Benzo[k]fluoranthene	ND		0.0100	mg/kg wet						
Benzo[a]pyrene	ND		0.0100	mg/kg wet						
Indeno[1,2,3-cd]pyrene	ND		0.0100	mg/kg wet						
Dibenz[a,h]anthracene	ND		0.0100	mg/kg wet						
Benzo[ghi]perylene	ND		0.0100	mg/kg wet						
Surrogate: Terphenyl-d14			*4.42*	*mg/kg wet*	*5.15*		*85.9*	*60-130*		
LCS (BAH0783-BS1)				Prepared: 8/26/2020 Analyzed: 9/3/2020						
Naphthalene	0.578		0.0100	mg/kg wet	1.00		57.8	32-133		
2-Methylnaphthalene	0.662		0.0100	mg/kg wet	1.00		66.2	45-138		
1-Methylnaphthalene	0.645		0.0100	mg/kg wet	1.00		64.5	47-135		
Acenaphthylene	0.656		0.0100	mg/kg wet	1.00		65.6	48-136		
Acenaphthene	0.773		0.0100	mg/kg wet	1.00		77.3	52-127		
Fluorene	0.771		0.0100	mg/kg wet	1.00		77.1	56-126		
Phenanthrene	0.872		0.0100	mg/kg wet	1.00		87.2	69-127		
Anthracene	0.787		0.0100	mg/kg wet	1.00		78.7	32-141		
Fluoranthene	1.00		0.0100	mg/kg wet	1.00		100	45-130		
Pyrene	0.666	L2	0.0100	mg/kg wet	1.00		66.6	71-141		
Benzo[a]anthracene	0.833		0.0100	mg/kg wet	1.00		83.3	47-139		
Chrysene	0.779		0.0100	mg/kg wet	1.00		77.9	36-133		
Benzo[b]fluoranthene	0.851		0.0100	mg/kg wet	1.00		85.1	48-177		
Benzo[k]fluoranthene	0.882		0.0100	mg/kg wet	1.00		88.2	47-169		
Benzo[a]pyrene	0.796		0.0100	mg/kg wet	1.00		79.6	51-155		
Indeno[1,2,3-cd]pyrene	0.816		0.0100	mg/kg wet	1.00		81.6	66-166		
Dibenz[a,h]anthracene	0.818		0.0100	mg/kg wet	1.00		81.8	57-155		
Benzo[ghi]perylene	0.801		0.0100	mg/kg wet	1.00		80.1	49-165		
Surrogate: Terphenyl-d14			*3.52*	*mg/kg wet*	*5.15*		*68.4*	*60-130*		

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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: BAH0783 - ASE Ext (Continued)										
LCS Dup (BAH0783-BSD1)					Prepared: 8/26/2020 Analyzed: 9/3/2020					
Naphthalene	0.637		0.0100	mg/kg wet	1.00		63.7	32-133	9.67	50
2-Methylnaphthalene	0.724		0.0100	mg/kg wet	1.00		72.4	45-138	8.91	50
1-Methylnaphthalene	0.707		0.0100	mg/kg wet	1.00		70.7	47-135	9.19	50
Acenaphthylene	0.716		0.0100	mg/kg wet	1.00		71.6	48-136	8.73	50
Acenaphthene	0.831		0.0100	mg/kg wet	1.00		83.1	52-127	7.13	50
Fluorene	0.827		0.0100	mg/kg wet	1.00		82.7	56-126	6.97	50
Phenanthrene	0.879		0.0100	mg/kg wet	1.00		87.9	69-127	0.800	50
Anthracene	0.837		0.0100	mg/kg wet	1.00		83.7	32-141	6.06	50
Fluoranthene	1.04		0.0100	mg/kg wet	1.00		104	45-130	3.66	50
Pyrene	0.648	L2	0.0100	mg/kg wet	1.00		64.8	71-141	2.82	50
Benzo[a]anthracene	0.874		0.0100	mg/kg wet	1.00		87.4	47-139	4.86	50
Chrysene	0.807		0.0100	mg/kg wet	1.00		80.7	36-133	3.57	50
Benzo[b]fluoranthene	0.850		0.0100	mg/kg wet	1.00		85.0	48-177	0.0407	50
Benzo[k]fluoranthene	0.858		0.0100	mg/kg wet	1.00		85.8	47-169	2.80	50
Benzo[a]pyrene	0.816		0.0100	mg/kg wet	1.00		81.6	51-155	2.54	50
Indeno[1,2,3-cd]pyrene	0.811		0.0100	mg/kg wet	1.00		81.1	66-166	0.549	50
Dibenz[a,h]anthracene	0.806		0.0100	mg/kg wet	1.00		80.6	57-155	1.44	50
Benzo[ghi]perylene	0.791		0.0100	mg/kg wet	1.00		79.1	49-165	1.21	50
Surrogate: Terphenyl-d14			*3.53*	*mg/kg wet*	*5.15*		*68.6*	*60-130*		
Matrix Spike (BAH0783-MS1)		**Source: MAH0554-04**			Prepared: 8/26/2020 Analyzed: 9/3/2020					
Naphthalene	0.656		0.00999	mg/kg dry	0.999	ND	65.7	30-140		
2-Methylnaphthalene	0.729		0.00999	mg/kg dry	0.999	ND	73.0	30-140		
1-Methylnaphthalene	0.723		0.00999	mg/kg dry	0.999	ND	72.4	30-140		
Acenaphthylene	0.696		0.00999	mg/kg dry	0.999	ND	69.6	30-140		
Acenaphthene	0.834		0.00999	mg/kg dry	0.999	ND	83.5	30-140		
Fluorene	0.809		0.00999	mg/kg dry	0.999	ND	81.0	30-140		
Phenanthrene	0.898		0.00999	mg/kg dry	0.999	0.0129	88.7	30-140		
Anthracene	0.807		0.00999	mg/kg dry	0.999	0.0102	79.8	30-140		
Fluoranthene	0.963		0.00999	mg/kg dry	0.999	0.00834	95.6	30-140		
Pyrene	0.808		0.00999	mg/kg dry	0.999	0.0174	79.2	30-140		
Benzo[a]anthracene	0.853		0.00999	mg/kg dry	0.999	0.0312	82.3	30-140		
Chrysene	0.780		0.00999	mg/kg dry	0.999	0.0302	75.0	30-140		
Benzo[b]fluoranthene	0.770		0.00999	mg/kg dry	0.999	0.0196	75.2	30-140		
Benzo[k]fluoranthene	0.981		0.00999	mg/kg dry	0.999	0.0267	95.6	30-140		
Benzo[a]pyrene	0.827		0.00999	mg/kg dry	0.999	0.0127	81.6	30-140		
Indeno[1,2,3-cd]pyrene	0.820		0.00999	mg/kg dry	0.999	0.00676	81.4	30-140		
Dibenz[a,h]anthracene	0.835		0.00999	mg/kg dry	0.999	ND	83.6	30-140		
Benzo[ghi]perylene	0.795		0.00999	mg/kg dry	0.999	0.0146	78.2	30-140		
Surrogate: Terphenyl-d14			*4.37*	*mg/kg dry*	*5.14*		*84.9*	*60-130*		

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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: BAH0783 - ASE Ext (Continued)										
Matrix Spike Dup (BAH0783-MSD1)		**Source: MAH0554-04**			Prepared: 8/26/2020 Analyzed: 9/3/2020					
Naphthalene	0.674		0.00999	mg/kg dry	0.999	ND	67.5	30-140	2.75	50
2-Methylnaphthalene	0.719		0.00999	mg/kg dry	0.999	ND	72.0	30-140	1.41	50
1-Methylnaphthalene	0.740		0.00999	mg/kg dry	0.999	ND	74.1	30-140	2.39	50
Acenaphthylene	0.701		0.00999	mg/kg dry	0.999	ND	70.2	30-140	0.803	50
Acenaphthene	0.843		0.00999	mg/kg dry	0.999	ND	84.4	30-140	1.08	50
Fluorene	0.817		0.00999	mg/kg dry	0.999	ND	81.8	30-140	1.04	50
Phenanthrene	0.904		0.00999	mg/kg dry	0.999	0.0129	89.2	30-140	0.624	50
Anthracene	0.827		0.00999	mg/kg dry	0.999	0.0102	81.8	30-140	2.47	50
Fluoranthene	0.959		0.00999	mg/kg dry	0.999	0.00834	95.2	30-140	0.483	50
Pyrene	0.901		0.00999	mg/kg dry	0.999	0.0174	88.4	30-140	10.8	50
Benzo[a]anthracene	0.867		0.00999	mg/kg dry	0.999	0.0312	83.7	30-140	1.66	50
Chrysene	0.801		0.00999	mg/kg dry	0.999	0.0302	77.1	30-140	2.66	50
Benzo[b]fluoranthene	0.837		0.00999	mg/kg dry	0.999	0.0196	81.9	30-140	8.34	50
Benzo[k]fluoranthene	0.974		0.00999	mg/kg dry	0.999	0.0267	94.8	30-140	0.751	50
Benzo[a]pyrene	0.848		0.00999	mg/kg dry	0.999	0.0127	83.6	30-140	2.48	50
Indeno[1,2,3-cd]pyrene	0.844		0.00999	mg/kg dry	0.999	0.00676	83.9	30-140	2.92	50
Dibenz[a,h]anthracene	0.867		0.00999	mg/kg dry	0.999	ND	86.9	30-140	3.85	50
Benzo[ghi]perylene	0.817		0.00999	mg/kg dry	0.999	0.0146	80.4	30-140	2.70	50
Surrogate: Terphenyl-d14			*4.78*	*mg/kg dry*	*5.14*		*93.0*	*60-130*		

Quality Control Data
(Continued)

Volatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAH0908 - VOC										
Blank (BAH0908-BLK1)					Prepared & Analyzed: 9/2/2020					
Gasoline	ND		0.0400	mg/kg wet						
Surrogate: 4-Bromofluorobenzene			*0.0224*	*mg/kg*	*0.0250*		*89.5*	*70-130*		
LCS (BAH0908-BS1)					Prepared & Analyzed: 9/2/2020					
Gasoline	8.80		0.0400	mg/kg wet	10.0		88.0	80-120		
Surrogate: 4-Bromofluorobenzene			*0.0237*	*mg/kg*	*0.0250*		*94.8*	*70-130*		
Matrix Spike (BAH0908-MS1)		**Source: MAH0632-12**			Prepared: 9/2/2020 Analyzed: 9/3/2020					
Gasoline	10.1		0.0485	mg/kg dry	12.1	ND	83.0	50-150		
Surrogate: 4-Bromofluorobenzene			*0.0237*	*mg/kg*	*0.0250*		*94.6*	*70-130*		
Matrix Spike Dup (BAH0908-MSD1)		**Source: MAH0632-12**			Prepared: 9/2/2020 Analyzed: 9/3/2020					
Gasoline	11.0		0.0485	mg/kg dry	12.1	ND	91.0	50-150	9.20	25
Surrogate: 4-Bromofluorobenzene			*0.0237*	*mg/kg*	*0.0250*		*94.7*	*70-130*		
Batch: BAH0928 - VOC										
Blank (BAH0928-BLK1)					Prepared: 8/31/2020 Analyzed: 9/2/2020					
n-Hexane	ND		25.0	mg/kg wet						

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAH0933 - VOC										
Blank (BAH0933-BLK1)					Prepared & Analyzed: 9/1/2020					
Acetone	ND		2.50	ug/L						
Acrolein	ND		2.50	ug/L						
Acrylonitrile	ND		2.50	ug/L						
Benzene	ND		0.200	ug/L						
Bromochloromethane	ND		0.500	ug/L						
Bromodichloromethane	ND		0.200	ug/L						
Bromoform	ND		0.500	ug/L						
Bromomethane	ND		0.500	ug/L						
Methyl ethyl ketone (MEK)	ND		2.50	ug/L						
Carbon disulfide	ND		2.50	ug/L						
Carbon Tetrachloride	ND		0.200	ug/L						
Chlorobenzene	ND		0.500	ug/L						
Chloroethane	ND		0.500	ug/L						
2-Chloroethyl vinyl ether	ND		2.50	ug/L						
Chloroform	ND		0.200	ug/L						
Chloromethane	ND		0.500	ug/L						
cis-1,2-dichloroethene	ND		0.500	ug/L						
cis-1,3-Dichloropropene	ND		0.200	ug/L						
1,2-Dibromo-3-chloropropane(DBCP)	ND		0.500	ug/L						
1,2-Dibromoethane (EDB)	ND		0.200	ug/L						
1,2-Dichlorobenzene	ND		0.500	ug/L						
1,3-Dichlorobenzene	ND		0.500	ug/L						
1,4-Dichlorobenzene	ND		0.500	ug/L						
trans-1-4-Dichloro-2-butene	ND		0.500	ug/L						
Dichlorodifluoromethane	ND		0.500	ug/L						
1,1-Dichloroethane	ND		0.500	ug/L						
1,2-Dichloroethane	ND		0.500	ug/L						
1,1-Dichloroethene	ND		0.500	ug/L						
trans-1,2-Dichloroethene	ND		0.500	ug/L						
1,2-Dichloropropane	ND		0.500	ug/L						
trans-1,3-Dichloropropene	ND		0.200	ug/L						
Ethylbenzene	ND		0.500	ug/L						
Hexachlorobutadiene	ND		0.500	ug/L						
2-hexanone	ND		2.50	ug/L						
Iodomethane	ND		0.500	ug/L						
Isopropylbenzene	ND		0.500	ug/L						
Methylene chloride	ND		0.500	ug/L						
Methyl isobutyl ketone (MIBK)	ND		2.50	ug/L						
Naphthalene	ND		0.500	ug/L						
Styrene	ND		0.500	ug/L						
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L						
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L						
Tetrachloroethene	ND		0.500	ug/L						
Toluene	ND		0.500	ug/L						
1,2,4-Trichlorobenzene	ND		0.500	ug/L						
1,1,1-Trichloroethane	ND		0.500	ug/L						
1,1,2-Trichloroethane	ND		0.500	ug/L						
Trichloroethene	ND		0.500	ug/L						
1,2,3-Trichloropropane	ND		0.500	ug/L						
Vinyl acetate	ND		0.500	ug/L						
Vinyl Chloride	ND		0.200	ug/L						
m+p-Xylene	ND		1.00	ug/L						
o-Xylene	ND		0.500	ug/L						

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAH0933 - VOC (Continued)										
Blank (BAH0933-BLK1)					Prepared & Analyzed: 9/1/2020					
Total Xylene	ND		0.500	ug/L						
1,1-dichloropropene	ND		0.500	ug/L						
1,2,3-Trichlorobenzene	ND		0.500	ug/L						
1,2,4-Trimethylbenzene	ND		0.500	ug/L						
1,3,5-Trimethylbenzene	ND		0.500	ug/L						
1,3-Dichloropropane	ND		0.500	ug/L						
2,2-Dichloropropane	ND		0.500	ug/L						
2-Chlorotoluene	ND		0.500	ug/L						
4-Chlorotoluene	ND		0.500	ug/L						
Bromobenzene	ND		0.500	ug/L						
Dibromochloromethane	ND		0.500	ug/L						
Dibromomethane	ND		0.500	ug/L						
methyl-t-butyl ether (MTBE)	ND		0.500	ug/L						
n-Butylbenzene	ND		0.500	ug/L						
n-Propylbenzene	ND		0.500	ug/L						
p-isopropyltoluene	ND		0.500	ug/L						
sec-Butylbenzene	ND		0.500	ug/L						
tert-Butylbenzene	ND		0.500	ug/L						
Trichlorofluoromethane	ND		0.500	ug/L						
Surrogate: Toluene-d8			*24.6*	*ug/L*	*25.0*		*98.4*	*70-130*		
Surrogate: 4-Bromofluorobenzene			*23.1*	*ug/L*	*25.0*		*92.4*	*70-130*		
Surrogate: 1,2-Dichlorobenzene-d4			*20.8*	*ug/L*	*19.0*		*110*	*70-130*		
Batch: BAI0125 - VOC										
Blank (BAI0125-BLK1)					Prepared & Analyzed: 9/1/2020					
methyl-t-butyl ether (MTBE)	ND		0.000100	mg/kg wet						
Toluene	ND		0.000100	mg/kg wet						
o-Xylene	ND		0.000100	mg/kg wet						
Naphthalene	ND		0.000100	mg/kg wet						
m+p-Xylene	ND		0.000100	mg/kg wet						
Ethylbenzene	ND		0.000100	mg/kg wet						
Benzene	ND		0.000100	mg/kg wet						
1,2-Dibromoethane (EDB)	ND		0.000100	mg/kg wet						
1,2-Dichloroethane	ND		0.000100	mg/kg wet						

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAI0125 - VOC (Continued)										
LCS (BAI0125-BS1)					Prepared & Analyzed: 9/1/2020					
1,2-Dibromoethane (EDB)	0.00986		0.000100	mg/kg wet	0.0100		98.6	70-130		
1,2-Dichloroethane	0.0102		0.000100	mg/kg wet	0.0100		102	80-120		
Benzene	0.0101		0.000100	mg/kg wet	0.0100		101	80-120		
Ethylbenzene	0.0105		0.000100	mg/kg wet	0.0100		105	80-120		
m+p-Xylene	0.0208		0.000100	mg/kg wet	0.0200		104	80-120		
methyl-t-butyl ether (MTBE)	0.00906		0.000100	mg/kg wet	0.0100		90.6	80-120		
Naphthalene	0.0103		0.000100	mg/kg wet	0.0100		103	80-120		
o-Xylene	0.0103		0.000100	mg/kg wet	0.0100		103	80-120		
Toluene	0.0106		0.000100	mg/kg wet	0.0100		106	80-120		

MAH0632

Due: 09/08/20

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Chain of Custody Record

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Anatek Log-In #

Company Name:	PIONEER Technolologies (PTC)	Project Manager:	Joel Hecker
Address:	5205 Corporate Center Ct SE	Project Name & # :	Hardel
City:	Lacey State: WA Zip: 98503	Email Address :	Heckerj@uspioneer.com
Phone:	(360) 828-3739	Purchase Order #:	
Fax:		Sampler Name & phone:	Joel Hecker

Turn Around

Please refer to our normal turn around times at:
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 — Soil Sampling

List Analyses Requested

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative:	TPH-G	Select VOCs **	TPH-D / HO	PAHs	Dioxins/Furans	PCBs				
	S-B101-0.5-30820	08/20/20 12:50	Soil	2							x	x				
	S-B102-2-4-0820	08/20/20 10:06	Soil	1			x		x							
	S-B102-5-7-0820	08/20/20 10:08	Soil	2			x		x		x	x				
	S-B103-1-3-0820	08/20/20 9:45	Soil	2							x	x				
	S-B104-1-3-0820	08/20/20 8:45	Soil	2							x	x				
	S-B105-2-4-0820	08/20/20 8:20	Soil	2	+ 1802 4oz						x	x				
	S-B105-2-4-0820-01	08/20/20 8:20	Soil	2	+ 8oz 4oz						x	x				
	S-B106-6-8-0820	08/20/20 8:00	Soil	2							x	x				
	S-B107-2-4-0820	08/20/20 7:50	Soil	2							x	x				
	S-B2-C-8.5-10-0820	08/20/20 10:50	Soil	1			x	x	x	x						
	S-B2-N-3-5-0820	08/20/20 11:40	Soil	1			x	x	x	x						
	S-B2-E-3-5.5-0820	08/20/20 12:00	Soil	1			x	x	x	x						
	S-B2-S-1-2-0820	08/20/20 12:15	HOLD SAMPLE	1												

Note Special Instructions/Comments

**Select VOCs include BTEX, n-hexane, 1,2-DBA, 1,2-DCA, MTBE, naphthalene

No silica gel cleanup on TPH analyses

	Printed Name	Signature	Company	Date	Time
Relinquished by	Joel Hecker		PTC	8/20/20	14:00
Received by					
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

Temperature (°C):_____
Preservative:_____
Date & Time:_____
Inspected By:_____

Form COC01.00 - Eff 1 Mar 2015

MAH0632

Due: 09/08/20

Anatek Labs, Inc.

Chain of Custody Record

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Anatek Log-In #

Company Name:	PIONEER Technolologies (PTC)	Project Manager:	Joel Hecker
Address:	5205 Corporate Center Ct SE	Project Name & # :	Hardel
City:	Lacey State: WA Zip: 98503	Email Address :	Heckerj@uspioneer.com
Phone:	(360) 828-3739	Purchase Order #:	
Fax:		Sampler Name & phone:	Joel Hecker

Turn Around T

Please refer to our normal turn around times at:
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 — Soil Sampling

List Analyses Requested

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	TPH-G	Select VOCs **	TPH-D / HO	PAHs	Dioxins	PCBs
	S-B2-S-8-10-0820	08/20/20 12:10	Soil	1		x	x	x	x		
	S-B2-S-8-10-0820	08/20/20 12:10	Soil	1		x	x	x	x		
	S-B2-W-7-8.5-0820	08/20/20 11:20	Soil	1		x	x	x	x		
	TB-0820	08/20/20	Water	2			x				

Note Special Instructions/Comments

**Select VOCs include BTEX, n-hexane, 1,2-DBA, 1,2-DCA, MTBE, naphthalene

No silica gel cleanup on TPH analyses

Inspection Checklist

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

Temperature (°C):_____
Preservative:_____
Date & Time:_____
Inspected By:_____

	Printed Name	Signature	Company	Date	Time
Relinquished by	Joel Hecker		PTC	8/20/20	14:00
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by					

Form COC01.00 - Eff 1 Mar 2015

Page 1 of 1

Samples submitted to Anatek Labs may be subcontracted to other accredited labs if necessary. This message serves as notice of this possibility. Sub-contracted analyses will be clearly noted on the analytical report.

MAH0632

Due: 09/08/20

Anatek Labs, Inc.

Chain of Custody Record

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

Anatek Log-In #

Company Name: Pioneer Technologies (PTC)	Project Manager: Joel Hecker
Address: 5205 Corporate Center Ct. SE	Project Name & #: Hardel
City: Lacey State: WA Zip: 98503	Email Address: Heckerj@usplonaer.com
Phone: 360-828-3739	Purchase Order #:
Fax:	Sampler Name & phone: Joel Hecker 360-828-3739

Turn Around

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

X Normal
__Next Day*
__2nd Day*
__Other*_____

*All rush order requests must be prior approved.

__Phone
__Mail
__Fax
__Email

Provide Sample Description

Soil samples from supplemental investigation

List Analyses Requested

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Preservative: Sample Volume	TPH-G	* Select VOCs	TPH-D/HO	PAHs	Dioxins	PCBs				
	S-B101-0.5-3-	0820 8/20	1250 Soil	2						X	X				
	S-B102-2-4-	0820 8/20	1006	1		X		X							
	S-B102-5-7-	0820	1033	2		X		X		X	X				
	S-B103-1-3-0820		945							X	X				
	S-B104-1-3-0820		845							X	X				
	S-B105-2-4-0820		820							X	X				
	S-B105-2-4-0820-01		820							X	X				
	S-B106-6-8-0820		800							X	X				
	S-B107-2-4-0820		750							X	X				
	S-B2-C-8.5-10-0820		1050			X	X	X	X						
	S-B2-N-3-5-0820		1140			X	X	X	X						
	S-B2-E-7-5.5-0820		1200			X	X	X	X						
	S-B2-S-1-2-	1215			HOLD										

Note Special Instructions/Comments

* VOCs include BTEX, n-hexane, 1,2-DBA, 1,2-DCA, MtBE, naphthalene

Inspection Checklist

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

Temperature (°C): 1.0 8/22/20 IR-S

Preservative:

Date & Time:

Inspected By:

	Printed Name	Signature	Company	Date	Time
Relinquished by	Joel Hecker	Joel Hecker	PTC	8/20	1400
Received by	Todd T		Anatek	8/22	
Relinquished by					
Received by	Joshua Daly		Anatek	8/24/20	0730
Relinquished by					
Received by					

MAH0632

Due: 09/08/20

Anatek Labs, Inc.

Chain of Custody Record

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

Anatek Log-In #

Company Name: Pioneer Technologies (PTC)	Project Manager:
Address:	Project Name & #: Hardel
City: State: Zip:	Email Address :
Phone: 360-828-3739	Purchase Order #:
Fax:	Sampler Name & phone: Joel Hecker 360-828-3739

Turn Around

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

X Normal
__Next Day*
__2nd Day*
__Other*_____

*All rush order requests must be prior approved.

__Phone
__Mail
__Fax
__Email

Provide Sample Description

Soil samples from supplemental investigation

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative	TPH-G	Select * VOCs	TPH-D/HO	PAHs						
	S-B2-S-8-10-0820	8/20 1210	Soil	1			X	X	X	X						
	S-B2-S-8-10-0820-D2	1210		1			X	X	X	X						
	S-B2-W-7-8.5-0820	1120		1			X	X	X	X						
	TB-0820			1				X								

List Analyses Requested

Note Special Instructions/Comments

*See Page 1 For VOC list

Inspection Checklist

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

Temperature (°C): 1.0 8/22/20 IGS

Preservative:

Date & Time:

Inspected By:

	Printed Name	Signature	Company	Date	Time
Relinquished by	Joel Hecker		PTC	8/20	1400
Received by	Todd T		Anatek	8/22	
Relinquished by					
Received by	Joshua Solis		Anatek	8/24/20	0730
Relinquished by					
Received by					

MAH0632

Due: 09/08/20

Anatek Labs, Inc.

Sample Receipt and Preservation Form

Client Name: Pioneer Technologies 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: (1) 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): 1.8 Cooler Temp Corrected (°C): — Thermometer Used: IR-5

				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: 26				

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:

HCl -> VOC TB -> 544.1 x2

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

8260 x22

524.2 x2

Received/Inspected By: (initials) Date/Time: 08/24/2020 0805

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Todd Taruscio
Anatek Labs, Inc.
1282 Alturas Drive
Moscow ID 83843

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

Pace Project #: 10530197
Sample Receipt Date: 08/28/2020
Client Project #: MAH0632
Client Sub PO #: N/A
State Cert #: C486

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Joanne Richardson, your Pace Project Manager.

This report has been reviewed by:

Joanne Richardson

September 21, 2020

Joanne Richardson,
(612) 607-6453
(612) 607-6444 (fax)

Report Prepared Date:
September 21, 2020

Report of Laboratory Analysis

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on eight samples submitted by a representative of Anatek Labs, Inc. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The estimated detection limits (EDLs) were based on signal-to-noise measurements. Estimated maximum possible concentration (EMPC) values were treated as positives in the toxic equivalence calculations.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 27-92%. Except for five low values, which were flagged "R" on the results tables, the labeled internal standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained.

Values were flagged "I" where incorrect isotope ratios were obtained or "P" where polychlorinated diphenyl ethers were present. Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of selected congeners. These levels were below the calibration range of the method. Sample levels similar to the corresponding blank levels were flagged "B" on the results tables and may be, at least partially, attributed to the background. It should be noted that levels less than ten times the background are not generally considered to be statistically different from the background.

A laboratory spike sample was also prepared with the sample batch using clean reference matrix that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 96-117%. These results were within the target range for the method. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from these analyses will be provided upon request.

The response obtained for the labeled 1,2,3,4,7,8,9-HpCDF in calibration standard analysis U200917A_19 was outside the target range. As specified in our procedures for this method, the average of the daily response factors for this compound was used in the calculations for the samples from this runshift. The affected values were flagged "Y" on the results tables. It should be noted that the accuracy of the native congener determinations was not impacted by this deviation.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
		Mississippi	MN00064
A2LA	2926.01	Missouri	10100
Alabama	40770	Montana	CERT0092
Alaska-DW	MN00064	Nebraska	NE-OS-18-06
Alaska-UST	17-009	Nevada	MN00064
Arizona	AZ0014	New Hampshire	2081
Arkansas - WW	88-0680	New Jersey	MN002
Arkansas-DW	MN00064	New York	11647
California	2929	North Carolina-	27700
Colorado	MN00064	North Carolina-	530
Connecticut	PH-0256	North Dakota	R-036
Florida	E87605	Ohio - VAP	CL101
Georgia	959	Ohio-DW	41244
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon- rimary	MN300001
Illinois	200011	Oregon-Second	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky-DW	90062	Tennessee	TN02818
Kentucky-WW	90062	Texas	T104704192
Louisiana-DEQ	AI-84596	Utah	MN00064
Louisiana-DW	MN00064	Vermont	VT-027053137
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Massachusetts-	via MN 027-053	West Virginia-D	382
Michigan	9909	West Virginia-D	9952C
Minnesota	027-053-137	Wisconsin	999407970
Minnesota-Ag	via MN 027-053	Wyoming-UST	via A2LA 2926.
Minnesota-Petr	1240		

REPORT OF LABORATORY ANALYSIS

Appendix A

Sample Management

SUBCONTRACT ORDER

Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 8832839 - Fax (208) 8829246 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - fax (509) 838-4433 - email spokane@anateklabs.com

Sending Laboratory:

Anatek Labs Inc, Moscow ID
1282 Alturas Drive
Moscow, ID 83843
Phone: 208-883-2839
Fax: 208-882-9246

Project Manager: Todd Taruscio
toddt@anateklabs.com

Subcontracted Laboratory:

Pace Analytical - MN
1800 Elm Street SE
Minneaplis, MN 55414
Phone: (612) 607-6400
Fax:

WO# : 10530197

10530197

Work Order: MAH0632

Analysis	Due	Expires	Comments
Lab Sample ID: MAH0632-01 ***Solid*** ***Sampled: 08/20/2020 12:50***			
Client Sample Name: S-B101-0.5-30820			w1
Dioxin/Furans	09/03/2020	09/03/2020 12:50	
Containers Supplied:			
Lab Sample ID: MAH0632-03 ***Solid*** ***Sampled: 08/20/2020 10:08***			
Client Sample Name: S-B102-5-7-0820			w2
Dioxin/Furans	09/03/2020	09/03/2020 10:08	
Containers Supplied:			
Lab Sample ID: MAH0632-04 ***Solid*** ***Sampled: 08/20/2020 09:45***			
Client Sample Name: S-B103-1-3-0820			w3
Dioxin/Furans	09/03/2020	09/03/2020 09:45	
Containers Supplied:			
Lab Sample ID: MAH0632-05 ***Solid*** ***Sampled: 08/20/2020 08:45***			
Client Sample Name: S-B104-1-3-0820			w4
Dioxin/Furans	09/03/2020	09/03/2020 08:45	
Containers Supplied:			
Lab Sample ID: MAH0632-06 ***Solid*** ***Sampled: 08/20/2020 08:20***			
Client Sample Name: S-B105-2-4-0820			w5
xin/Furans	09/03/2020	09/03/2020 08:20	
ners Supplied:			

Sandison — 08/26/2020 (Date) — Received By — 8/28/20 0915 (Date)

Anatek Labs, Inc.
1282 Alturas Drive - Moscow, ID 83843 - (208) 8832839 - Fax (208) 8829246 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - fax (509) 838-4433 - email spokane@anateklabs.com

Work Order: MAH0632 (Continued)

Analysis	Due	Expires	Comments
Lab Sample ID: MAH0632-07 ***Solid*** ***Sampled: 08/20/2020 08:20***			
Client Sample Name: S-B105-2-4-0820-01			ω 6
Dioxin/Furans	09/03/2020	09/03/2020 08:20	
Containers Supplied:			
Lab Sample ID: MAH0632-08 ***Solid*** ***Sampled: 08/20/2020 08:00***			
Client Sample Name: S-B106-6-8-0820			ω 7
Dioxin/Furans	09/03/2020	09/03/2020 08:00	
Containers Supplied:			
Lab Sample ID: MAH0632-09 ***Solid*** ***Sampled: 08/20/2020 07:50***			
Client Sample Name: S-B107-2-4-0820			ω 8
Dioxin/Furans	09/03/2020	09/03/2020 07:50	
Containers Supplied:			

Released By Chris Sanders — Date 08/26/2020

Received By — Date 8/28/20 0915

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) - MN**	Document Revised: 12Aug2020 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0150 Rev.01**	Pace Analytical Services - **Minneapolis**

Sample Condition Upon Receipt

Client Name: Anatek Labs, Inc. **Project #:**

WO#: 10530197

PM: JMR Due Date: 09/21/20

CLIENT: Anatek

Courier: ☐ Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial

Tracking Number: 1Z 981 176 01 4002 1048 See Exceptions ☐ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No **Seals Intact?** ☐ Yes ☒ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☒ Other: Styrofoam **Temp Blank?** ☐ Yes ☒ No

Thermometer: ☒ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☐ Wet ☒ Blue ☐ None ☐ Dry ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ No **Were All Container Temps Taken?** ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** _____ °C **Average Corrected Temp (no temp blank only):** _____ °C ☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

Correction Factor: +0.1 **Cooler Temp Corrected w/temp blank:** _____ °C

USDA Regulated Soil: (☒ N/A, water sample/Other: _____) **Date/Initials of Person Examining Contents:** MH2 8-28-20

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☐ Yes	☐ No	☒ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other _____
Rush Turn Around Time Requested?	☒ Yes	☐ No		6. 9/03/20
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used?	☒ Yes	☐ No		8.
-Pace Containers Used?	☐ Yes	☒ No		
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** ☐ See Exception ENV-FRM-MIN4-0142
Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other _____				
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes	☐ No	☒ N/A	☐ NaOH ☐ HNO3 ☐ H2SO4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☒ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** ☐ See Exception ENV-FRM-MIN4-0142
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☒ N/A	13. ☐ See Exception ENV-FRM-MIN4-0140
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☒ N/A	
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: [signature] **Date:** 8-28-20

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp).

Labeled by: CH 8/28/20

SCUR Exceptions:

Workorder #: 10530197

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☐Yes ☐No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.

Multiple Cooler Project? ☐Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank

Read Temp	Corrected Temp	Average Temp
1.3	1.4	4.5
5.7	5.8	
4.5	5.6	
4.9	5.0	

Tracking Number/Temperature	

Issue Type: Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interferencepresent

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDEInterference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = SeeDiscussion

REPORT OF LABORATORY ANALYSIS

Appendix B

Sample Analysis Summary

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Anatek Labs, Inc.

Client's Sample ID	MAH0632-01		
Lab Sample ID	10530197001		
Filename	U200920B_07		
Injected By	BAL		
Total Amount Extracted	11.1 g	Matrix	Solid
% Moisture	6.2	Dilution	NA
Dry Weight Extracted	10.4 g	Collected	08/20/2020 12:50
ICAL ID	U200729	Received	08/28/2020 09:15
CCal Filename(s)	U200920B_01 & U200920B_19	Extracted	09/14/2020 15:38
Method Blank ID	BLANK-82418	Analyzed	09/20/2020 15:17

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.65		2,3,7,8-TCDF-13C	2.00	46
Total TCDF	ND	-----	0.65		2,3,7,8-TCDD-13C	2.00	50
					1,2,3,7,8-PeCDF-13C	2.00	49
2,3,7,8-TCDD	ND	-----	1.0		2,3,4,7,8-PeCDF-13C	2.00	50
Total TCDD	ND	-----	1.0		1,2,3,7,8-PeCDD-13C	2.00	57
					1,2,3,4,7,8-HxCDF-13C	2.00	59
1,2,3,7,8-PeCDF	ND	-----	1.4		1,2,3,6,7,8-HxCDF-13C	2.00	56
2,3,4,7,8-PeCDF	ND	-----	0.68		2,3,4,6,7,8-HxCDF-13C	2.00	56
Total PeCDF	8.3	-----	0.68		1,2,3,7,8,9-HxCDF-13C	2.00	54
					1,2,3,4,7,8-HxCDD-13C	2.00	63
1,2,3,7,8-PeCDD	ND	-----	0.84		1,2,3,6,7,8-HxCDD-13C	2.00	51
Total PeCDD	3.6	-----	0.84	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	51
					1,2,3,4,7,8,9-HpCDF-13C	2.00	49
1,2,3,4,7,8-HxCDF	ND	-----	0.68		1,2,3,4,6,7,8-HpCDD-13C	2.00	64
1,2,3,6,7,8-HxCDF	1.2	-----	0.54	J	OCDD-13C	4.00	41
2,3,4,6,7,8-HxCDF	-----	1.2	0.54	IJ			
1,2,3,7,8,9-HxCDF	ND	-----	0.54		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	21	-----	0.54		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.70		2,3,7,8-TCDD-37Cl4	0.20	46
1,2,3,6,7,8-HxCDD	2.1	-----	0.68	J			
1,2,3,7,8,9-HxCDD	-----	0.64	0.54	IJ			
Total HxCDD	20	-----	0.54				
1,2,3,4,6,7,8-HpCDF	11	-----	0.63		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.64		Equivalence: 1.6 ng/Kg		
Total HpCDF	41	-----	0.63		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	44	-----	0.59				
Total HpCDD	92	-----	0.59				
OCDF	21	-----	0.94				
OCDD	480	-----	1.7				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Anatek Labs, Inc.

Client's Sample ID	MAH0632-03		
Lab Sample ID	10530197002		
Filename	U200920B_08		
Injected By	BAL		
Total Amount Extracted	21.3 g	Matrix	Solid
% Moisture	36.5	Dilution	NA
Dry Weight Extracted	13.5 g	Collected	08/20/2020 10:08
ICAL ID	U200729	Received	08/28/2020 09:15
CCal Filename(s)	U200920B_01 & U200920B_19	Extracted	09/14/2020 15:38
Method Blank ID	BLANK-82418	Analyzed	09/20/2020 15:58

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.60		2,3,7,8-TCDF-13C	2.00	57
Total TCDF	ND	-----	0.60		2,3,7,8-TCDD-13C	2.00	59
					1,2,3,7,8-PeCDF-13C	2.00	47
2,3,7,8-TCDD	ND	-----	0.87		2,3,4,7,8-PeCDF-13C	2.00	46
Total TCDD	ND	-----	0.87		1,2,3,7,8-PeCDD-13C	2.00	52
					1,2,3,4,7,8-HxCDF-13C	2.00	79
1,2,3,7,8-PeCDF	ND	-----	1.4		1,2,3,6,7,8-HxCDF-13C	2.00	70
2,3,4,7,8-PeCDF	ND	-----	0.63		2,3,4,6,7,8-HxCDF-13C	2.00	66
Total PeCDF	ND	-----	0.63		1,2,3,7,8,9-HxCDF-13C	2.00	66
					1,2,3,4,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDD	ND	-----	0.77		1,2,3,6,7,8-HxCDD-13C	2.00	61
Total PeCDD	ND	-----	0.77		1,2,3,4,6,7,8-HpCDF-13C	2.00	53
					1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	ND	-----	0.85		1,2,3,4,6,7,8-HpCDD-13C	2.00	65
1,2,3,6,7,8-HxCDF	ND	-----	0.72		OCDD-13C	4.00	42
2,3,4,6,7,8-HxCDF	ND	-----	0.77				
1,2,3,7,8,9-HxCDF	ND	-----	0.80		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	4.3	-----	0.72		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.82		2,3,7,8-TCDD-37Cl4	0.20	58
1,2,3,6,7,8-HxCDD	-----	1.5	0.86	IJ			
1,2,3,7,8,9-HxCDD	0.90	-----	0.55	J			
Total HxCDD	5.0	-----	0.55				
1,2,3,4,6,7,8-HpCDF	-----	3.9	1.2	P	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.83		Equivalence: 1.1 ng/Kg		
Total HpCDF	ND	-----	0.83		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	38	-----	0.86				
Total HpCDD	71	-----	0.86				
OCDF	11	-----	1.6				
OCDD	440	-----	1.2				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

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NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
P = PCDE Interference
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 8290 Sample Analysis Results

Client - Anatek Labs, Inc.

Client's Sample ID	MAH0632-04		
Lab Sample ID	10530197003		
Filename	U200920B_09		
Injected By	BAL		
Total Amount Extracted	17.9 g	Matrix	Solid
% Moisture	12.6	Dilution	NA
Dry Weight Extracted	15.7 g	Collected	08/20/2020 09:45
ICAL ID	U200729	Received	08/28/2020 09:15
CCal Filename(s)	U200920B_01 & U200920B_19	Extracted	09/14/2020 15:38
Method Blank ID	BLANK-82418	Analyzed	09/20/2020 16:40

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.58		2,3,7,8-TCDF-13C	2.00	51
Total TCDF	ND	-----	0.58		2,3,7,8-TCDD-13C	2.00	56
					1,2,3,7,8-PeCDF-13C	2.00	50
2,3,7,8-TCDD	ND	-----	0.64		2,3,4,7,8-PeCDF-13C	2.00	51
Total TCDD	ND	-----	0.64		1,2,3,7,8-PeCDD-13C	2.00	58
					1,2,3,4,7,8-HxCDF-13C	2.00	65
1,2,3,7,8-PeCDF	ND	-----	0.77		1,2,3,6,7,8-HxCDF-13C	2.00	59
2,3,4,7,8-PeCDF	ND	-----	0.41		2,3,4,6,7,8-HxCDF-13C	2.00	58
Total PeCDF	ND	-----	0.41		1,2,3,7,8,9-HxCDF-13C	2.00	59
					1,2,3,4,7,8-HxCDD-13C	2.00	64
1,2,3,7,8-PeCDD	ND	-----	0.55		1,2,3,6,7,8-HxCDD-13C	2.00	52
Total PeCDD	ND	-----	0.55		1,2,3,4,6,7,8-HpCDF-13C	2.00	53
					1,2,3,4,7,8,9-HpCDF-13C	2.00	51
1,2,3,4,7,8-HxCDF	ND	-----	0.44		1,2,3,4,6,7,8-HpCDD-13C	2.00	66
1,2,3,6,7,8-HxCDF	ND	-----	0.47		OCDD-13C	4.00	40
2,3,4,6,7,8-HxCDF	ND	-----	0.35				
1,2,3,7,8,9-HxCDF	ND	-----	0.46		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	1.5	-----	0.35	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.49		2,3,7,8-TCDD-37Cl4	0.20	50
1,2,3,6,7,8-HxCDD	ND	-----	0.72				
1,2,3,7,8,9-HxCDD	ND	-----	0.47				
Total HxCDD	0.95	-----	0.47	J			
1,2,3,4,6,7,8-HpCDF	1.5	-----	0.53	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.55		Equivalence: 0.13 ng/Kg		
Total HpCDF	3.8	-----	0.53		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	5.1	-----	0.65				
Total HpCDD	9.8	-----	0.65				
OCDF	-----	2.0	1.4	IJ			
OCDD	60	-----	1.7				

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I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Method 8290 Sample Analysis Results

Client - Anatek Labs, Inc.

Client's Sample ID	MAH0632-05		
Lab Sample ID	10530197004		
Filename	U200920B_10		
Injected By	BAL		
Total Amount Extracted	11.0 g	Matrix	Solid
% Moisture	4.3	Dilution	NA
Dry Weight Extracted	10.5 g	Collected	08/20/2020 08:45
ICAL ID	U200729	Received	08/28/2020 09:15
CCal Filename(s)	U200920B_01 & U200920B_19	Extracted	09/14/2020 15:38
Method Blank ID	BLANK-82418	Analyzed	09/20/2020 17:22

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.49		2,3,7,8-TCDF-13C	2.00	55
Total TCDF	ND	-----	0.49		2,3,7,8-TCDD-13C	2.00	56
					1,2,3,7,8-PeCDF-13C	2.00	57
2,3,7,8-TCDD	ND	-----	0.83		2,3,4,7,8-PeCDF-13C	2.00	60
Total TCDD	ND	-----	0.83		1,2,3,7,8-PeCDD-13C	2.00	67
					1,2,3,4,7,8-HxCDF-13C	2.00	70
1,2,3,7,8-PeCDF	ND	-----	0.56		1,2,3,6,7,8-HxCDF-13C	2.00	65
2,3,4,7,8-PeCDF	ND	-----	0.43		2,3,4,6,7,8-HxCDF-13C	2.00	65
Total PeCDF	ND	-----	0.43		1,2,3,7,8,9-HxCDF-13C	2.00	60
					1,2,3,4,7,8-HxCDD-13C	2.00	72
1,2,3,7,8-PeCDD	ND	-----	0.56		1,2,3,6,7,8-HxCDD-13C	2.00	60
Total PeCDD	ND	-----	0.56		1,2,3,4,6,7,8-HpCDF-13C	2.00	57
					1,2,3,4,7,8,9-HpCDF-13C	2.00	57
1,2,3,4,7,8-HxCDF	ND	-----	0.37		1,2,3,4,6,7,8-HpCDD-13C	2.00	71
1,2,3,6,7,8-HxCDF	ND	-----	0.31		OCDD-13C	4.00	42
2,3,4,6,7,8-HxCDF	ND	-----	0.31				
1,2,3,7,8,9-HxCDF	ND	-----	0.34		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.31		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.47		2,3,7,8-TCDD-37Cl4	0.20	50
1,2,3,6,7,8-HxCDD	ND	-----	0.42				
1,2,3,7,8,9-HxCDD	ND	-----	0.39				
Total HxCDD	ND	-----	0.39				
1,2,3,4,6,7,8-HpCDF	-----	0.76	0.46	IJ	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.52		Equivalence: 0.10 ng/Kg		
Total HpCDF	ND	-----	0.46		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	4.9	-----	0.69				
Total HpCDD	10	-----	0.69				
OCDF	-----	1.9	1.2	IJ			
OCDD	43	-----	1.6				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
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Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

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Method 8290 Sample Analysis Results

Client - Anatek Labs, Inc.

Client's Sample ID	MAH0632-06		
Lab Sample ID	10530197005		
Filename	U200920B_11		
Injected By	BAL		
Total Amount Extracted	14.4 g	Matrix	Solid
% Moisture	24.4	Dilution	NA
Dry Weight Extracted	10.9 g	Collected	08/20/2020 08:20
ICAL ID	U200729	Received	08/28/2020 09:15
CCal Filename(s)	U200920B_01 & U200920B_19	Extracted	09/14/2020 15:38
Method Blank ID	BLANK-82418	Analyzed	09/20/2020 18:04

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.59		2,3,7,8-TCDF-13C	2.00	46
Total TCDF	ND	-----	0.59		2,3,7,8-TCDD-13C	2.00	53
					1,2,3,7,8-PeCDF-13C	2.00	49
2,3,7,8-TCDD	ND	-----	1.2		2,3,4,7,8-PeCDF-13C	2.00	50
Total TCDD	ND	-----	1.2		1,2,3,7,8-PeCDD-13C	2.00	58
					1,2,3,4,7,8-HxCDF-13C	2.00	60
1,2,3,7,8-PeCDF	ND	-----	0.95		1,2,3,6,7,8-HxCDF-13C	2.00	56
2,3,4,7,8-PeCDF	ND	-----	0.55		2,3,4,6,7,8-HxCDF-13C	2.00	56
Total PeCDF	3.0	-----	0.55	J	1,2,3,7,8,9-HxCDF-13C	2.00	57
					1,2,3,4,7,8-HxCDD-13C	2.00	63
1,2,3,7,8-PeCDD	ND	-----	0.65		1,2,3,6,7,8-HxCDD-13C	2.00	52
Total PeCDD	1.3	-----	0.65	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	50
					1,2,3,4,7,8,9-HpCDF-13C	2.00	52
1,2,3,4,7,8-HxCDF	ND	-----	0.60		1,2,3,4,6,7,8-HpCDD-13C	2.00	63
1,2,3,6,7,8-HxCDF	ND	-----	0.65		OCDD-13C	4.00	39 R
2,3,4,6,7,8-HxCDF	ND	-----	0.57				
1,2,3,7,8,9-HxCDF	ND	-----	0.56		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	4.2	-----	0.56	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	-----	0.95	0.78	IJ	2,3,7,8-TCDD-37Cl4	0.20	54
1,2,3,6,7,8-HxCDD	3.1	-----	0.74	J			
1,2,3,7,8,9-HxCDD	-----	1.7	0.66	IJ			
Total HxCDD	23	-----	0.66				
1,2,3,4,6,7,8-HpCDF	-----	5.5	0.54	I	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.44		Equivalence: 2.0 ng/Kg		
Total HpCDF	19	-----	0.44		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	76	-----	0.51				
Total HpCDD	160	-----	0.51				
OCDF	32	-----	1.4				
OCDD	620	-----	1.6				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
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NC = Not Calculated

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J = Estimated value
R = Recovery outside target range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

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Method 8290 Sample Analysis Results

Client - Anatek Labs, Inc.

Client's Sample ID	MAH0632-07		
Lab Sample ID	10530197006		
Filename	U200920B_12		
Injected By	BAL		
Total Amount Extracted	14.1 g	Matrix	Solid
% Moisture	33.4	Dilution	NA
Dry Weight Extracted	9.36 g	Collected	08/20/2020 08:20
ICAL ID	U200729	Received	08/28/2020 09:15
CCal Filename(s)	U200920B_01 & U200920B_19	Extracted	09/14/2020 15:38
Method Blank ID	BLANK-82418	Analyzed	09/20/2020 18:45

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery	
2,3,7,8-TCDF	ND	-----	0.95		2,3,7,8-TCDF-13C	2.00	39	R
Total TCDF	ND	-----	0.95		2,3,7,8-TCDD-13C	2.00	42	
					1,2,3,7,8-PeCDF-13C	2.00	40	
2,3,7,8-TCDD	ND	-----	1.1		2,3,4,7,8-PeCDF-13C	2.00	44	
Total TCDD	ND	-----	1.1		1,2,3,7,8-PeCDD-13C	2.00	48	
					1,2,3,4,7,8-HxCDF-13C	2.00	51	
1,2,3,7,8-PeCDF	ND	-----	1.6		1,2,3,6,7,8-HxCDF-13C	2.00	51	
2,3,4,7,8-PeCDF	ND	-----	0.60		2,3,4,6,7,8-HxCDF-13C	2.00	49	
Total PeCDF	ND	-----	0.60		1,2,3,7,8,9-HxCDF-13C	2.00	44	
					1,2,3,4,7,8-HxCDD-13C	2.00	55	
1,2,3,7,8-PeCDD	ND	-----	0.99		1,2,3,6,7,8-HxCDD-13C	2.00	43	
Total PeCDD	3.9	-----	0.99	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	38	R
					1,2,3,4,7,8,9-HpCDF-13C	2.00	37	R
1,2,3,4,7,8-HxCDF	ND	-----	0.70		1,2,3,4,6,7,8-HpCDD-13C	2.00	48	
1,2,3,6,7,8-HxCDF	ND	-----	0.81		OCDD-13C	4.00	27	R
2,3,4,6,7,8-HxCDF	ND	-----	0.97					
1,2,3,7,8,9-HxCDF	ND	-----	0.97		1,2,3,4-TCDD-13C	2.00	NA	
Total HxCDF	8.5	-----	0.70		1,2,3,7,8,9-HxCDD-13C	2.00	NA	
1,2,3,4,7,8-HxCDD	5.7	-----	1.4		2,3,7,8-TCDD-37Cl4	0.20	45	
1,2,3,6,7,8-HxCDD	9.2	-----	1.2					
1,2,3,7,8,9-HxCDD	-----	5.4	1.3	I				
Total HxCDD	140	-----	1.2					
1,2,3,4,6,7,8-HpCDF	9.8	-----	1.0		Total 2,3,7,8-TCDD			
1,2,3,4,7,8,9-HpCDF	ND	-----	0.83		Equivalence: 7.1 ng/Kg			
Total HpCDF	48	-----	0.83		(Lower-bound - Using ITE Factors)			
1,2,3,4,6,7,8-HpCDD	300	-----	0.58					
Total HpCDD	720	-----	0.58					
OCDF	64	-----	1.4					
OCDD	1900	-----	2.0					

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
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R = Recovery outside target range
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REPORT OF LABORATORY ANALYSIS

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Method 8290 Sample Analysis Results

Client - Anatek Labs, Inc.

Client's Sample ID	MAH0632-08		
Lab Sample ID	10530197007		
Filename	U200920B_13		
Injected By	BAL		
Total Amount Extracted	11.3 g	Matrix	Solid
% Moisture	35.0	Dilution	NA
Dry Weight Extracted	7.36 g	Collected	08/20/2020 08:00
ICAL ID	U200729	Received	08/28/2020 09:15
CCal Filename(s)	U200920B_01 & U200920B_19	Extracted	09/14/2020 15:38
Method Blank ID	BLANK-82418	Analyzed	09/20/2020 19:27

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.54		2,3,7,8-TCDF-13C	2.00	65
Total TCDF	ND	-----	0.54		2,3,7,8-TCDD-13C	2.00	72
					1,2,3,7,8-PeCDF-13C	2.00	71
2,3,7,8-TCDD	ND	-----	0.71		2,3,4,7,8-PeCDF-13C	2.00	76
Total TCDD	ND	-----	0.71		1,2,3,7,8-PeCDD-13C	2.00	85
					1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	ND	-----	0.76		1,2,3,6,7,8-HxCDF-13C	2.00	77
2,3,4,7,8-PeCDF	ND	-----	0.43		2,3,4,6,7,8-HxCDF-13C	2.00	79
Total PeCDF	ND	-----	0.43		1,2,3,7,8,9-HxCDF-13C	2.00	77
					1,2,3,4,7,8-HxCDD-13C	2.00	89
1,2,3,7,8-PeCDD	ND	-----	0.51		1,2,3,6,7,8-HxCDD-13C	2.00	70
Total PeCDD	ND	-----	0.51		1,2,3,4,6,7,8-HpCDF-13C	2.00	69
					1,2,3,4,7,8,9-HpCDF-13C	2.00	75
1,2,3,4,7,8-HxCDF	ND	-----	0.40		1,2,3,4,6,7,8-HpCDD-13C	2.00	92
1,2,3,6,7,8-HxCDF	ND	-----	0.33		OCDD-13C	4.00	58
2,3,4,6,7,8-HxCDF	ND	-----	0.34				
1,2,3,7,8,9-HxCDF	ND	-----	0.39		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.33		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.41		2,3,7,8-TCDD-37Cl4	0.20	63
1,2,3,6,7,8-HxCDD	ND	-----	0.39				
1,2,3,7,8,9-HxCDD	ND	-----	0.41				
Total HxCDD	ND	-----	0.39				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.32		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.50		Equivalence: 0.015 ng/Kg		
Total HpCDF	ND	-----	0.32		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	0.79	-----	0.31	J			
Total HpCDD	1.8	-----	0.31	J			
OCDF	ND	-----	0.78				
OCDD	6.9	-----	1.3	BJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
B = Less than 10x higher than method blank level

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - Anatek Labs, Inc.

Client's Sample ID	MAH0632-09		
Lab Sample ID	10530197008		
Filename	U200920B_14		
Injected By	BAL		
Total Amount Extracted	15.7 g	Matrix	Solid
% Moisture	23.8	Dilution	NA
Dry Weight Extracted	12.0 g	Collected	08/20/2020 07:50
ICAL ID	U200729	Received	08/28/2020 09:15
CCal Filename(s)	U200920B_01 & U200920B_19	Extracted	09/14/2020 15:38
Method Blank ID	BLANK-82418	Analyzed	09/20/2020 20:09

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.27		2,3,7,8-TCDF-13C	2.00	64
Total TCDF	ND	-----	0.27		2,3,7,8-TCDD-13C	2.00	62
					1,2,3,7,8-PeCDF-13C	2.00	63
2,3,7,8-TCDD	ND	-----	0.37		2,3,4,7,8-PeCDF-13C	2.00	72
Total TCDD	ND	-----	0.37		1,2,3,7,8-PeCDD-13C	2.00	78
					1,2,3,4,7,8-HxCDF-13C	2.00	85
1,2,3,7,8-PeCDF	ND	-----	0.37		1,2,3,6,7,8-HxCDF-13C	2.00	76
2,3,4,7,8-PeCDF	ND	-----	0.21		2,3,4,6,7,8-HxCDF-13C	2.00	78
Total PeCDF	ND	-----	0.21		1,2,3,7,8,9-HxCDF-13C	2.00	76
					1,2,3,4,7,8-HxCDD-13C	2.00	85
1,2,3,7,8-PeCDD	ND	-----	0.29		1,2,3,6,7,8-HxCDD-13C	2.00	72
Total PeCDD	ND	-----	0.29		1,2,3,4,6,7,8-HpCDF-13C	2.00	69
					1,2,3,4,7,8,9-HpCDF-13C	2.00	70
1,2,3,4,7,8-HxCDF	ND	-----	0.20		1,2,3,4,6,7,8-HpCDD-13C	2.00	91
1,2,3,6,7,8-HxCDF	ND	-----	0.23		OCDD-13C	4.00	53
2,3,4,6,7,8-HxCDF	ND	-----	0.26				
1,2,3,7,8,9-HxCDF	ND	-----	0.23		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.20		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.24		2,3,7,8-TCDD-37Cl4	0.20	57
1,2,3,6,7,8-HxCDD	ND	-----	0.19				
1,2,3,7,8,9-HxCDD	ND	-----	0.22				
Total HxCDD	0.33	-----	0.19	J			
1,2,3,4,6,7,8-HpCDF	-----	0.64	0.34	IJ	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.41		Equivalence: 0.093 ng/Kg		
Total HpCDF	2.2	-----	0.34	J	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	4.5	-----	0.30				
Total HpCDD	4.5	-----	0.30				
OCDF	2.7	-----	0.49	BJ			
OCDD	40	-----	0.75				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Estimated value
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample Name	DFBLKMD		
Lab Sample ID	BLANK-82418	Matrix	Solid
Filename	U200917A_04	Dilution	NA
Total Amount Extracted	10.6 g	Extracted	09/14/2020 15:38
ICAL ID	U200729	Analyzed	09/17/2020 09:04
CCal Filename(s)	U200917A_01 & U200917A_19	Injected By	SMT

Native Isomers	Conc ng/Kg	EMPC ng/Kg	EDL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.080		2,3,7,8-TCDF-13C	2.00	75
Total TCDF	ND	-----	0.080		2,3,7,8-TCDD-13C	2.00	63
					1,2,3,7,8-PeCDF-13C	2.00	85
2,3,7,8-TCDD	ND	-----	0.14		2,3,4,7,8-PeCDF-13C	2.00	84
Total TCDD	ND	-----	0.14		1,2,3,7,8-PeCDD-13C	2.00	94
					1,2,3,4,7,8-HxCDF-13C	2.00	81
1,2,3,7,8-PeCDF	ND	-----	0.14		1,2,3,6,7,8-HxCDF-13C	2.00	78
2,3,4,7,8-PeCDF	ND	-----	0.081		2,3,4,6,7,8-HxCDF-13C	2.00	81
Total PeCDF	ND	-----	0.081		1,2,3,7,8,9-HxCDF-13C	2.00	78
					1,2,3,4,7,8-HxCDD-13C	2.00	84
1,2,3,7,8-PeCDD	-----	0.11	0.092	IJ	1,2,3,6,7,8-HxCDD-13C	2.00	70
Total PeCDD	ND	-----	0.092		1,2,3,4,6,7,8-HpCDF-13C	2.00	67
					1,2,3,4,7,8,9-HpCDF-13C	2.00	93 Y
1,2,3,4,7,8-HxCDF	ND	-----	0.082		1,2,3,4,6,7,8-HpCDD-13C	2.00	81
1,2,3,6,7,8-HxCDF	ND	-----	0.076		OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	-----	0.075	0.064	IJ			
1,2,3,7,8,9-HxCDF	-----	0.086	0.074	IJ	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	0.064		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.10		2,3,7,8-TCDD-37Cl4	0.20	57
1,2,3,6,7,8-HxCDD	ND	-----	0.12				
1,2,3,7,8,9-HxCDD	ND	-----	0.12				
Total HxCDD	ND	-----	0.10				
1,2,3,4,6,7,8-HpCDF	ND	-----	0.16		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.20		Equivalence: 0.073 ng/Kg		
Total HpCDF	ND	-----	0.16		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	-----	0.19	0.081	IJ			
Total HpCDD	ND	-----	0.081				
OCDF	0.28	-----	0.15	J			
OCDD	0.74	-----	0.19	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.
J = Estimated value
I = Interference present
Y = Calculated using average of daily RFs

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-82419		
Filename	U200917A_02	Matrix	Solid
Total Amount Extracted	10.5 g	Dilution	NA
ICAL ID	U200729	Extracted	09/14/2020 15:38
CCal Filename(s)	U200917A_01 & U200917A_19	Analyzed	09/17/2020 07:43
Method Blank ID	BLANK-82418	Injected By	SMT

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.21	107	2,3,7,8-TCDF-13C	2.0	73
Total TCDF				2,3,7,8-TCDD-13C	2.0	73
				1,2,3,7,8-PeCDF-13C	2.0	86
2,3,7,8-TCDD	0.20	0.21	107	2,3,4,7,8-PeCDF-13C	2.0	82
Total TCDD				1,2,3,7,8-PeCDD-13C	2.0	93
				1,2,3,4,7,8-HxCDF-13C	2.0	76
1,2,3,7,8-PeCDF	1.0	1.1	105	1,2,3,6,7,8-HxCDF-13C	2.0	72
2,3,4,7,8-PeCDF	1.0	1.0	105	2,3,4,6,7,8-HxCDF-13C	2.0	76
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.0	75
				1,2,3,4,7,8-HxCDD-13C	2.0	79
1,2,3,7,8-PeCDD	1.0	1.0	101	1,2,3,6,7,8-HxCDD-13C	2.0	67
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.0	63
				1,2,3,4,7,8,9-HpCDF-13C	2.0	88 Y
1,2,3,4,7,8-HxCDF	1.0	1.1	113	1,2,3,4,6,7,8-HpCDD-13C	2.0	78
1,2,3,6,7,8-HxCDF	1.0	1.1	105	OCDD-13C	4.0	63
2,3,4,6,7,8-HxCDF	1.0	1.1	108			
1,2,3,7,8,9-HxCDF	1.0	1.1	107	1,2,3,4-TCDD-13C	2.0	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.0	NA
1,2,3,4,7,8-HxCDD	1.0	1.2	117	2,3,7,8-TCDD-37Cl4	0.20	76
1,2,3,6,7,8-HxCDD	1.0	1.1	108			
1,2,3,7,8,9-HxCDD	1.0	1.1	109			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.0	1.1	108			
1,2,3,4,7,8,9-HpCDF	1.0	1.1	107			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.0	0.96	96			
Total HpCDD						
OCDF	2.0	2.2	112			
OCDD	2.0	2.3	115			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

August 2020 GWM

Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - Fax (208) 8829246 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - fax (509) 838-4433 - email spokane@anateklabs.com

Client:	Pioneer Technologies Corporation	Work Order:	MAI0068
Address:	5205 Corporate Center Court-Suite A	Project:	Milestone Hardel
	Lacey, WA 98503	Reported:	12/9/2020 13:29
Attn:	Joel Hecker		

Case Narrative

The samples listed below were received for analysis at Anatek Labs, Inc. The analytical report is attached. All test results reported below comply with and meet current TNI standards, other applicable regulatory standards, and the Anatek Labs, Inc. Quality Assurance Manual, unless otherwise noted in the report.

The results in this report relate only to the samples analyzed. All soil and solid results are reported on a dryweight basis unless otherwise noted. An estimation of uncertainty is available upon request.

For questions about this report, please contact Justin Doty at 208-883-2839.

Laboratory ID	Sample Name
MAI0068-01	GW-MW101-0831
MAI0068-02	GW-MW102-0831
MAI0068-03	GW-MW102-0831-01
MAI0068-04	GW-MW103-0831
MAI0068-05	GW-MW104-0831
MAI0068-06	TB-083120

QA/QC Summary

QC Parameter	Yes / No (if No, see Comments below)
1. Sample Holding Time Valid?	No
2. Instrument Tunes Valid?	Yes
3. Method Blank(s) Valid?	Yes
4. Internal Standard Response(s) Valid?	Yes
5. Initial Calibration Curve(s) Valid?	Yes
6. Continuing Calibration(s) Valid?	Yes

Comments:

Pioneer Technologies Corporation project name "Hardel" was received at Anatek Labs on 9/2/2020 and logged into the laboratory information management system as work order MAI0068. The water samples were extracted and analyzed following EPA 8015 / NWTPH-Dx for NWTPH-HCID, and NWTPH-Gx as well as other petroleum screening methods (PAH's, EPH, Dioxins, PCBs and metals).

Upon reporting, Pioneer Technologies realized that the reporting limit for the NWTPH-Dx test was elevated in relation to the screening levels needed for the scope of this project. After investigation by the lab, it was determined that the petroleum chemist made a judgement decision when performing the extraction, due to perceived sample odor, and took a sub-sample instead of using the entire 1 liter. Pioneer Technologies requested that NWTPH-Dx extraction and analysis be repoeated using the remainder of the sample (approximately 750 milliliters) and reported with a holding time qualifier. The results for the samples from this repeat extraction/analysis was reported with a lower reporting limit and the results were in good agreement with the original extraction/analysis results for the samples.

Anatek Labs, Inc.

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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - fax (509) 838-4433 - email spokane@anateklabs.com

Analytical Results Report

Sample Location: GW-MW101-0831
Lab/Sample Number: MAI0068-01 Collect Date: 08/31/20 11:45
Date Received: 09/01/20 12:35 Collected By: Joel Hecker
Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
Chloride	111	mg/L	3.55	5.00	9/3/20 21:25	BKP	EPA 300.0	
Metals by ICP-MS								
Dissolved Arsenic	0.0128	mg/L	0.0000850	0.00100	9/28/20 15:48	MYM	EPA 200.8	
Semivolatiles								
1-Methylnaphthalene	0.131	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	
2-Methylnaphthalene	0.0318	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	
Acenaphthene	ND	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	U
Acenaphthylene	ND	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	U
Anthracene	ND	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	U
Benzo(g,h,i)perylene	ND	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	U
Benzo[a]anthracene	ND	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	U
Benzo[a]pyrene	ND	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	U
Benzo[b]fluoranthene	ND	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	U
Benzo[k]fluoranthene	ND	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	U
Chrysene	ND	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	U
Dibenz(a,h)anthracene	ND	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	U
Fluoranthene	ND	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	U
Fluorene	0.0201	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	U
Naphthalene	0.0111	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	
Phenanthrene	0.0181	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	
Pyrene	ND	ug/L	0.00500	0.0100	9/17/20 19:05	TGT	EPA 8270D	U
Surrogate: Terphenyl-d14	*83.9%*		*65-135*		*9/17/20 19:05*	*TGT*	*EPA 8270D*	
Arochlor 1016 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:29	GPB	EPA 8082A	U
Arochlor 1221 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:29	GPB	EPA 8082A	U
Arochlor 1232 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:29	GPB	EPA 8082A	U
Arochlor 1242 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:29	GPB	EPA 8082A	U
Arochlor 1248 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:29	GPB	EPA 8082A	U
Arochlor 1254 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:29	GPB	EPA 8082A	U
Arochlor 1260 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:29	GPB	EPA 8082A	U
PCB (total)	ND	ug/L	0.0500	0.200	9/3/20 17:29	GPB	EPA 8082A	U
Surrogate: DCB	*101%*		*70-130*		*9/3/20 17:29*	*GPB*	*EPA 8082A*	
Diesel	0.322	mg/L	0.0785	0.157	10/8/20 19:59	taz	NWTPH-HCID	
Gasoline	ND	mg/L	0.0785	0.157	10/8/20 19:59	taz	NWTPH-HCID	
Lube Oil	ND	mg/L	0.392	0.785	10/8/20 19:59	taz	NWTPH-HCID	
Surrogate: Hexacosane	*89.1%*		*50-150*		*10/8/20 19:59*	*taz*	*NWTPH-HCID*	

Anatek Labs, Inc.

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Analytical Results Report

(Continued)

Sample Location: GW-MW101-0831

Lab/Sample Number: MAI0068-01 Collect Date: 08/31/20 11:45

Date Received: 09/01/20 12:35 Collected By: Joel Hecker

Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles								
Gasoline	ND	mg/L	0.100	0.200	9/8/20 13:49	TEC	NWTPH-Gx	U
Surrogate: 4-Bromofluorobenzene	*83.6%*		*70-130*		*9/8/20 13:49*	*TEC*	*NWTPH-Gx*	
1,2-Dichloroethane	ND	ug/L	0.100	0.500	9/8/20 13:49	TEC	EPA 8260C	U
Benzene	ND	ug/L	0.100	0.500	9/8/20 13:49	TEC	EPA 8260C	U
EDB	ND	ug/L	0.100	0.500	9/8/20 13:49	TEC	EPA 8260C	U
Ethylbenzene	ND	ug/L	0.100	0.500	9/8/20 13:49	TEC	EPA 8260C	U
m/p Xylenes (MCL for total)	ND	ug/L	0.100	0.500	9/8/20 13:49	TEC	EPA 8260C	U
methyl-t-butyl ether (MTBE)	ND	ug/L	0.100	0.500	9/8/20 13:49	TEC	EPA 8260C	U
Naphthalene	ND	ug/L	0.100	0.500	9/8/20 13:49	TEC	EPA 8260C	U
o-Xylene (MCL for total)	ND	ug/L	0.100	0.500	9/8/20 13:49	TEC	EPA 8260C	U
Toluene	ND	ug/L	0.100	0.500	9/8/20 13:49	TEC	EPA 8260C	U
n-Hexane	ND	ug/L	0.100	0.500	9/8/20 13:49	TEC	EPA 8260C	U

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Analytical Results Report

(Continued)

Sample Location: GW-MW101-0831

Lab/Sample Number: MAI0068-01 Collect Date: 08/31/20 11:45

Date Received: 09/01/20 12:35 Collected By: Joel Hecker

Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Diesel	0.322	mg/L	0.0785	0.157	10/8/20 19:59	taz	NWTPH-Dx	H4
Lube Oil	ND	mg/L	0.314	0.471	10/8/20 19:59	taz	NWTPH-Dx	H4, U
Surrogate: Hexacosane	*89.1%*		*50-150*		*10/8/20 19:59*	*taz*	*NWTPH-Dx*	

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Analytical Results Report

(Continued)

Sample Location: GW-MW102-0831
Lab/Sample Number: MAI0068-02 Collect Date: 08/31/20 09:30
Date Received: 09/01/20 12:35 Collected By: Joel Hecker
Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
Chloride	12.1	mg/L	0.0710	0.100	9/3/20 16:24	BKP	EPA 300.0	
Metals by ICP-MS								
Dissolved Arsenic	ND	mg/L	0.0000850	0.00100	9/28/20 15:55	MYM	EPA 200.8	
Semivolatiles								
1-Methylnaphthalene	0.582	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	
2-Methylnaphthalene	0.380	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	
Acenaphthene	0.883	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	
Acenaphthylene	0.0226	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	
Anthracene	0.0323	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	
Benzo(g,h,i)perylene	ND	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	U
Benzo[a]anthracene	ND	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	U
Benzo[a]pyrene	ND	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	U
Benzo[b]fluoranthene	ND	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	U
Benzo[k]fluoranthene	ND	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	U
Chrysene	ND	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	U
Dibenz(a,h)anthracene	ND	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	U
Fluoranthene	0.0404	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	
Fluorene	0.323	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	U
Naphthalene	0.655	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	
Phenanthrene	0.283	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	
Pyrene	0.0771	ug/L	0.00500	0.0100	9/17/20 19:29	TGT	EPA 8270D	
Surrogate: Terphenyl-d14	*79.8%*		*65-135*		*9/17/20 19:29*	*TGT*	*EPA 8270D*	
Arochlor 1016 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:47	GPB	EPA 8082A	U
Arochlor 1221 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:47	GPB	EPA 8082A	U
Arochlor 1232 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:47	GPB	EPA 8082A	U
Arochlor 1242 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:47	GPB	EPA 8082A	U
Arochlor 1248 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:47	GPB	EPA 8082A	U
Arochlor 1254 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:47	GPB	EPA 8082A	U
Arochlor 1260 (1)	ND	ug/L	0.0500	0.200	9/3/20 17:47	GPB	EPA 8082A	U
PCB (total)	ND	ug/L	0.0500	0.200	9/3/20 17:47	GPB	EPA 8082A	U
Surrogate: DCB	*100%*		*70-130*		*9/3/20 17:47*	*GPB*	*EPA 8082A*	
Diesel	ND	mg/L	0.0663	0.133	10/8/20 20:34	taz	NWTPH-HCID	
Gasoline	ND	mg/L	0.0663	0.133	10/8/20 20:34	taz	NWTPH-HCID	
Lube Oil	ND	mg/L	0.332	0.663	10/8/20 20:34	taz	NWTPH-HCID	
Surrogate: Hexacosane	*71.2%*		*50-150*		*10/8/20 20:34*	*taz*	*NWTPH-HCID*	

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Analytical Results Report

(Continued)

Sample Location: GW-MW102-0831

Lab/Sample Number: MAI0068-02 Collect Date: 08/31/20 09:30

Date Received: 09/01/20 12:35 Collected By: Joel Hecker

Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles								
Gasoline	ND	mg/L	0.100	0.200	9/8/20 12:50	TEC	NWTPH-Gx	U
Surrogate: 4-Bromofluorobenzene	*82.6%*		*70-130*		*9/8/20 12:50*	*TEC*	*NWTPH-Gx*	
1,2-Dichloroethane	ND	ug/L	0.100	0.500	9/8/20 12:50	TEC	EPA 8260C	U
Benzene	ND	ug/L	0.100	0.500	9/8/20 12:50	TEC	EPA 8260C	U
EDB	ND	ug/L	0.100	0.500	9/8/20 12:50	TEC	EPA 8260C	U
Ethylbenzene	ND	ug/L	0.100	0.500	9/8/20 12:50	TEC	EPA 8260C	U
m/p Xylenes (MCL for total)	ND	ug/L	0.100	0.500	9/8/20 12:50	TEC	EPA 8260C	U
methyl-t-butyl ether (MTBE)	ND	ug/L	0.100	0.500	9/8/20 12:50	TEC	EPA 8260C	U
Naphthalene	1.06	ug/L	0.100	0.500	9/8/20 12:50	TEC	EPA 8260C	
o-Xylene (MCL for total)	ND	ug/L	0.100	0.500	9/8/20 12:50	TEC	EPA 8260C	U
Toluene	ND	ug/L	0.100	0.500	9/8/20 12:50	TEC	EPA 8260C	U
n-Hexane	ND	ug/L	0.100	0.500	9/8/20 12:50	TEC	EPA 8260C	U

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Analytical Results Report

(Continued)

Sample Location: GW-MW102-0831

Lab/Sample Number: MAI0068-02 Collect Date: 08/31/20 09:30

Date Received: 09/01/20 12:35 Collected By: Joel Hecker

Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Diesel	0.105	mg/L	0.0663	0.133	10/8/20 20:34	taz	NWTPH-Dx	H4, J
Lube Oil	ND	mg/L	0.265	0.398	10/8/20 20:34	taz	NWTPH-Dx	H4, U
Surrogate: Hexacosane	*71.2%*		*50-150*		*10/8/20 20:34*	*taz*	*NWTPH-Dx*	

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Analytical Results Report

(Continued)

Sample Location: GW-MW102-0831-01
Lab/Sample Number: MAI0068-03 Collect Date: 08/31/20 09:30
Date Received: 09/01/20 12:35 Collected By: Joel Hecker
Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
Chloride	12.8	mg/L	0.0710	0.100	9/8/20 21:53	BKP	EPA 300.0	
Metals by ICP-MS								
Dissolved Arsenic	ND	mg/L	0.0000850	0.00100	9/28/20 16:01	MYM	EPA 200.8	
Semivolatiles								
1-Methylnaphthalene	0.442	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	
2-Methylnaphthalene	0.289	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	
Acenaphthene	0.634	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	
Acenaphthylene	0.0204	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	
Anthracene	0.0323	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	
Benzo(g,h,i)perylene	ND	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	U
Benzo[a]anthracene	0.00981	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	J
Benzo[a]pyrene	ND	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	U
Benzo[b]fluoranthene	ND	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	U
Benzo[k]fluoranthene	ND	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	U
Chrysene	0.00901	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	J
Dibenz(a,h)anthracene	ND	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	U
Fluoranthene	0.0276	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	
Fluorene	0.277	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	U
Naphthalene	0.553	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	
Phenanthrene	0.243	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	
Pyrene	0.0720	ug/L	0.00500	0.0100	9/17/20 19:52	TGT	EPA 8270D	
Surrogate: Terphenyl-d14	*89.4%*		*65-135*		*9/17/20 19:52*	*TGT*	*EPA 8270D*	
Arochlor 1016 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:06	GPB	EPA 8082A	U
Arochlor 1221 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:06	GPB	EPA 8082A	U
Arochlor 1232 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:06	GPB	EPA 8082A	U
Arochlor 1242 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:06	GPB	EPA 8082A	U
Arochlor 1248 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:06	GPB	EPA 8082A	U
Arochlor 1254 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:06	GPB	EPA 8082A	U
Arochlor 1260 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:06	GPB	EPA 8082A	U
PCB (total)	ND	ug/L	0.0500	0.200	9/3/20 18:06	GPB	EPA 8082A	U
Surrogate: DCB	*98.0%*		*70-130*		*9/3/20 18:06*	*GPB*	*EPA 8082A*	
Volatiles								
Gasoline	ND	mg/L	0.100	0.200	9/8/20 14:19	TEC	NWTPH-Gx	U
Surrogate: 4-Bromofluorobenzene	*82.8%*		*70-130*		*9/8/20 14:19*	*TEC*	*NWTPH-Gx*	
1,2-Dichloroethane	ND	ug/L	0.100	0.500	9/8/20 14:19	TEC	EPA 8260C	U

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Analytical Results Report

(Continued)

Sample Location: GW-MW102-0831-01
Lab/Sample Number: MAI0068-03 Collect Date: 08/31/20 09:30
Date Received: 09/01/20 12:35 Collected By: Joel Hecker
Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)								
Benzene	ND	ug/L	0.100	0.500	9/8/20 14:19	TEC	EPA 8260C	U
EDB	ND	ug/L	0.100	0.500	9/8/20 14:19	TEC	EPA 8260C	U
Ethylbenzene	ND	ug/L	0.100	0.500	9/8/20 14:19	TEC	EPA 8260C	U
m/p Xylenes (MCL for total)	ND	ug/L	0.100	0.500	9/8/20 14:19	TEC	EPA 8260C	U
methyl-t-butyl ether (MTBE)	ND	ug/L	0.100	0.500	9/8/20 14:19	TEC	EPA 8260C	U
Naphthalene	ND	ug/L	0.100	0.500	9/8/20 14:19	TEC	EPA 8260C	U
o-Xylene (MCL for total)	ND	ug/L	0.100	0.500	9/8/20 14:19	TEC	EPA 8260C	U
Toluene	ND	ug/L	0.100	0.500	9/8/20 14:19	TEC	EPA 8260C	U
Surrogate: 1,2-Dichlorobenzene-d4	*109%*		*70-130*		*9/8/20 14:19*	*TEC*	*EPA 8260C*	
Surrogate: 4-Bromofluorobenzene	*93.4%*		*70-130*		*9/8/20 14:19*	*TEC*	*EPA 8260C*	
Surrogate: Toluene-d8	*95.7%*		*70-130*		*9/8/20 14:19*	*TEC*	*EPA 8260C*	
n-Hexane	ND	ug/L	0.100	0.500	9/8/20 14:19	TEC	EPA 8260C	U
Surrogate: 1,2-Dichlorobenzene-d4	*86.5%*		*70-130*		*9/8/20 14:19*	*TEC*	*EPA 8260C*	
Surrogate: 4-Bromofluorobenzene	*92.5%*		*70-130*		*9/8/20 14:19*	*TEC*	*EPA 8260C*	
Surrogate: Toluene-d8	*93.9%*		*70-130*		*9/8/20 14:19*	*TEC*	*EPA 8260C*	

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Analytical Results Report

(Continued)

Sample Location: GW-MW102-0831-01

Lab/Sample Number: MAI0068-03 Collect Date: 08/31/20 09:30

Date Received: 09/01/20 12:35 Collected By: Joel Hecker

Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Diesel	0.105	mg/L	0.0696	0.139	10/8/20 21:08	taz	NWTPH-Dx	H4, J
Lube Oil	0.282	mg/L	0.279	0.418	10/8/20 21:08	taz	NWTPH-Dx	H4, J
Surrogate: Hexacosane	*89.0%*		*50-150*		*10/8/20 21:08*	*taz*	*NWTPH-Dx*	

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Analytical Results Report

(Continued)

Sample Location: GW-MW103-0831
Lab/Sample Number: MAI0068-04 Collect Date: 08/31/20 10:45
Date Received: 09/01/20 12:35 Collected By: Joel Hecker
Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
Chloride	5.03	mg/L	0.0710	0.100	9/8/20 22:14	BKP	EPA 300.0	
Metals by ICP-MS								
Dissolved Arsenic	ND	mg/L	0.0000850	0.00100	9/28/20 16:21	MYM	EPA 200.8	
Semivolatiles								
1-Methylnaphthalene	0.0270	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	
2-Methylnaphthalene	0.0240	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	
Acenaphthene	0.356	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	
Acenaphthylene	ND	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	U
Anthracene	0.0132	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	
Benzo(g,h,i)perylene	ND	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	U
Benzo[a]anthracene	ND	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	U
Benzo[a]pyrene	ND	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	U
Benzo[b]fluoranthene	ND	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	U
Benzo[k]fluoranthene	ND	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	U
Chrysene	ND	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	U
Dibenz(a,h)anthracene	ND	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	U
Fluoranthene	0.0268	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	
Fluorene	0.0385	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	U
Naphthalene	0.0412	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	
Phenanthrene	0.0556	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	
Pyrene	0.0210	ug/L	0.00500	0.0100	9/17/20 20:16	TGT	EPA 8270D	
Surrogate: Terphenyl-d14	*82.6%*		*65-135*		*9/17/20 20:16*	*TGT*	*EPA 8270D*	
Arochlor 1016 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:25	GPB	EPA 8082A	U
Arochlor 1221 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:25	GPB	EPA 8082A	U
Arochlor 1232 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:25	GPB	EPA 8082A	U
Arochlor 1242 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:25	GPB	EPA 8082A	U
Arochlor 1248 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:25	GPB	EPA 8082A	U
Arochlor 1254 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:25	GPB	EPA 8082A	U
Arochlor 1260 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:25	GPB	EPA 8082A	U
PCB (total)	ND	ug/L	0.0500	0.200	9/3/20 18:25	GPB	EPA 8082A	U
Surrogate: DCB	*96.9%*		*70-130*		*9/3/20 18:25*	*GPB*	*EPA 8082A*	
Diesel	0.196	mg/L	0.0693	0.139	10/8/20 21:43	taz	NWTPH-HCID	
Gasoline	ND	mg/L	0.0693	0.139	10/8/20 21:43	taz	NWTPH-HCID	
Lube Oil	ND	mg/L	0.346	0.693	10/8/20 21:43	taz	NWTPH-HCID	
Surrogate: Hexacosane	*95.0%*		*50-150*		*10/8/20 21:43*	*taz*	*NWTPH-HCID*	

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Analytical Results Report

(Continued)

Sample Location: GW-MW103-0831

Lab/Sample Number: MAI0068-04 Collect Date: 08/31/20 10:45

Date Received: 09/01/20 12:35 Collected By: Joel Hecker

Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles								
Gasoline	ND	mg/L	0.100	0.200	9/8/20 14:48	TEC	NWTPH-Gx	U
Surrogate: 4-Bromofluorobenzene	*84.0%*		*70-130*		*9/8/20 14:48*	*TEC*	*NWTPH-Gx*	
1,2-Dichloroethane	ND	ug/L	0.100	0.500	9/8/20 14:48	TEC	EPA 8260C	U
Benzene	ND	ug/L	0.100	0.500	9/8/20 14:48	TEC	EPA 8260C	U
EDB	ND	ug/L	0.100	0.500	9/8/20 14:48	TEC	EPA 8260C	U
Ethylbenzene	ND	ug/L	0.100	0.500	9/8/20 14:48	TEC	EPA 8260C	U
m/p Xylenes (MCL for total)	ND	ug/L	0.100	0.500	9/8/20 14:48	TEC	EPA 8260C	U
methyl-t-butyl ether (MTBE)	ND	ug/L	0.100	0.500	9/8/20 14:48	TEC	EPA 8260C	U
Naphthalene	ND	ug/L	0.100	0.500	9/8/20 14:48	TEC	EPA 8260C	U
o-Xylene (MCL for total)	ND	ug/L	0.100	0.500	9/8/20 14:48	TEC	EPA 8260C	U
Toluene	ND	ug/L	0.100	0.500	9/8/20 14:48	TEC	EPA 8260C	U
n-Hexane	ND	ug/L	0.100	0.500	9/8/20 14:48	TEC	EPA 8260C	U

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Analytical Results Report

(Continued)

Sample Location: GW-MW103-0831

Lab/Sample Number: MAI0068-04 Collect Date: 08/31/20 10:45

Date Received: 09/01/20 12:35 Collected By: Joel Hecker

Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles								
Diesel	0.196	mg/L	0.0693	0.139	10/8/20 21:43	taz	NWTPH-Dx	H4
Lube Oil	0.289	mg/L	0.277	0.416	10/8/20 21:43	taz	NWTPH-Dx	H4, J
Surrogate: Hexacosane	*95.0%*		*50-150*		*10/8/20 21:43*	*taz*	*NWTPH-Dx*	

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Analytical Results Report

(Continued)

Sample Location: GW-MW104-0831
Lab/Sample Number: MAI0068-05 Collect Date: 08/31/20 08:10
Date Received: 09/01/20 12:35 Collected By: Joel Hecker
Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Inorganics								
Chloride	2340	mg/L	7.10	10.0	9/9/20 20:03	BKP	EPA 300.0	
Metals by ICP-MS								
Dissolved Arsenic	0.00547	mg/L	0.0000850	0.00100	9/28/20 16:55	MYM	EPA 200.8	
Semivolatiles								
1-Methylnaphthalene	175	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
2-Methylnaphthalene	188	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
Acenaphthene	199	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
Acenaphthylene	2.53	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
Anthracene	16.3	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
Benzo(g,h,i)perylene	ND	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	U
Benzo[a]anthracene	0.910	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
Benzo[a]pyrene	0.156	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
Benzo[b]fluoranthene	0.242	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
Benzo[k]fluoranthene	0.0626	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	J
Chrysene	0.894	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
Dibenz(a,h)anthracene	ND	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	U
Fluoranthene	12.1	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
Fluorene	67.0	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	U
Naphthalene	239	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
Phenanthrene	117	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
Pyrene	12.6	ug/L	0.0500	0.100	9/17/20 20:40	TGT	EPA 8270D	
Surrogate: Terphenyl-d14	*81.7%*		*65-135*		*9/17/20 20:40*	*TGT*	*EPA 8270D*	
Arochlor 1016 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:43	GPB	EPA 8082A	U
Arochlor 1221 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:43	GPB	EPA 8082A	U
Arochlor 1232 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:43	GPB	EPA 8082A	U
Arochlor 1242 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:43	GPB	EPA 8082A	U
Arochlor 1248 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:43	GPB	EPA 8082A	U
Arochlor 1254 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:43	GPB	EPA 8082A	U
Arochlor 1260 (1)	ND	ug/L	0.0500	0.200	9/3/20 18:43	GPB	EPA 8082A	U
PCB (total)	ND	ug/L	0.0500	0.200	9/3/20 18:43	GPB	EPA 8082A	U
Surrogate: DCB	*87.6%*		*70-130*		*9/3/20 18:43*	*GPB*	*EPA 8082A*	
Diesel	1.69	mg/L	0.118	0.236	9/14/20 16:22	taz	NWTPH-Dx	
Lube Oil	2.20	mg/L	0.472	1.18	9/14/20 16:22	taz	NWTPH-Dx	
Surrogate: Hexacosane	*143%*		*50-150*		*9/14/20 16:22*	*taz*	*NWTPH-Dx*	
Diesel	1.69	mg/L	0.236	0.472	9/14/20 16:22	taz	NWTPH-HCID	
Gasoline	ND	mg/L	0.236	0.472	9/14/20 16:22	taz	NWTPH-HCID	

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Analytical Results Report

(Continued)

Sample Location: GW-MW104-0831
Lab/Sample Number: MAI0068-05 Collect Date: 08/31/20 08:10
Date Received: 09/01/20 12:35 Collected By: Joel Hecker
Matrix: Groundwater

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles (Continued)								
Lube Oil	ND	mg/L	1.18	2.36	9/14/20 16:22	taz	NWTPH-HCID	
Surrogate: Hexacosane	*143%*		*50-150*		*9/14/20 16:22*	*taz*	*NWTPH-HCID*	
Volatiles								
Gasoline	ND	mg/L	0.500	1.00	9/8/20 15:18	TEC	NWTPH-Gx	U
Surrogate: 4-Bromofluorobenzene	*80.5%*		*70-130*		*9/8/20 15:18*	*TEC*	*NWTPH-Gx*	
1,2-Dichloroethane	ND	ug/L	1.00	5.00	9/8/20 15:18	TEC	EPA 8260C	U
Benzene	ND	ug/L	0.500	2.50	9/8/20 15:18	TEC	EPA 8260C	U
EDB	ND	ug/L	1.00	5.00	9/8/20 15:18	TEC	EPA 8260C	U
Ethylbenzene	ND	ug/L	0.500	2.50	9/8/20 15:18	TEC	EPA 8260C	U
m/p Xylenes (MCL for total)	ND	ug/L	0.500	2.50	9/8/20 15:18	TEC	EPA 8260C	U
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	2.50	9/8/20 15:18	TEC	EPA 8260C	U
Naphthalene	386	ug/L	2.50	12.5	9/10/20 19:00	TEC	EPA 8260C	
o-Xylene (MCL for total)	ND	ug/L	0.500	2.50	9/8/20 15:18	TEC	EPA 8260C	U
Toluene	ND	ug/L	0.500	2.50	9/8/20 15:18	TEC	EPA 8260C	U
n-Hexane	ND	ug/L	1.00	5.00	9/8/20 15:18	TEC	EPA 8260C	U

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Analytical Results Report

(Continued)

Sample Location: TB-083120
Lab/Sample Number: MAI0068-06 Collect Date: 08/31/20 00:00
Date Received: 09/01/20 12:35 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles								
1,1,1,2-Tetrachloroethane	ND	ug/L	0.110	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,1,1-Trichloroethane	ND	ug/L	0.140	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.110	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,1,2-Trichlorethane	ND	ug/L	0.0800	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,1-Dichloroethane	ND	ug/L	0.140	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,1-Dichloroethylene	ND	ug/L	0.130	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,1-Dichloropropene	ND	ug/L	0.140	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,2,3-Trichlorobenzene	ND	ug/L	0.120	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,2,3-Trichloropropane	ND	ug/L	0.220	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,2,4-Trichlorobenzene	ND	ug/L	0.110	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,2,4-Trimethylbenzene	ND	ug/L	0.160	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	ND	ug/L	0.290	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,2-Dichloroethane	ND	ug/L	0.110	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,2-Dichloropropane	ND	ug/L	0.110	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,3,5-Trimethylbenzene	ND	ug/L	0.180	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,3-Dichloropropane	ND	ug/L	0.0600	0.500	9/8/20 13:19	TEC	EPA 8260C	
1,4-Dichlorobenzene (para-Dichlorobenzene)	ND	ug/L	0.110	0.500	9/8/20 13:19	TEC	EPA 8260C	
2,2-Dichloropropane	ND	ug/L	0.110	0.500	9/8/20 13:19	TEC	EPA 8260C	
2-Chloroethyl vinyl ether	ND	ug/L	2.50	2.50	9/8/20 13:19	TEC	EPA 8260C	
2-hexanone	ND	ug/L	0.440	2.50	9/8/20 13:19	TEC	EPA 8260C	
Acetone	ND	ug/L	2.50	2.50	9/8/20 13:19	TEC	EPA 8260C	
Acrolein	ND	ug/L	0.150	2.50	9/8/20 13:19	TEC	EPA 8260C	
Acrylonitrile	ND	ug/L	0.130	2.50	9/8/20 13:19	TEC	EPA 8260C	
Benzene	ND	ug/L	0.100	0.200	9/8/20 13:19	TEC	EPA 8260C	
Bromobenzene	ND	ug/L	0.0700	0.500	9/8/20 13:19	TEC	EPA 8260C	
Bromochloromethane	ND	ug/L	0.120	0.500	9/8/20 13:19	TEC	EPA 8260C	
Bromodichloromethane	ND	ug/L	0.0400	0.200	9/8/20 13:19	TEC	EPA 8260C	
Bromoform	ND	ug/L	0.120	0.500	9/8/20 13:19	TEC	EPA 8260C	
Bromomethane	ND	ug/L	0.470	0.500	9/8/20 13:19	TEC	EPA 8260C	
Carbon disulfide	ND	ug/L	0.180	2.50	9/8/20 13:19	TEC	EPA 8260C	
Carbon Tetrachloride	ND	ug/L	0.0300	0.200	9/8/20 13:19	TEC	EPA 8260C	
Chlorobenzene (Monochlorobenzene)	ND	ug/L	0.0800	0.500	9/8/20 13:19	TEC	EPA 8260C	
Chloroethane	ND	ug/L	0.270	0.500	9/8/20 13:19	TEC	EPA 8260C	
Chloroform	ND	ug/L	0.0400	0.200	9/8/20 13:19	TEC	EPA 8260C	
Chloromethane	ND	ug/L	0.350	0.500	9/8/20 13:19	TEC	EPA 8260C	
cis-1,2-Dichloroethylene	ND	ug/L	0.110	0.500	9/8/20 13:19	TEC	EPA 8260C	
cis-1,3-Dichloropropene	ND	ug/L	0.0700	0.200	9/8/20 13:19	TEC	EPA 8260C	
DBCP	ND	ug/L	0.290	0.500	9/8/20 13:19	TEC	EPA 8260C	
Dibromochloromethane	ND	ug/L	0.110	0.500	9/8/20 13:19	TEC	EPA 8260C	
Dibromomethane	ND	ug/L	0.0800	0.500	9/8/20 13:19	TEC	EPA 8260C	
Dichlorodifluoromethane	ND	ug/L	0.140	0.500	9/8/20 13:19	TEC	EPA 8260C	

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Analytical Results Report

(Continued)

Sample Location: TB-083120
Lab/Sample Number: MAI0068-06 Collect Date: 08/31/20 00:00
Date Received: 09/01/20 12:35 Collected By:
Matrix: Water

Analyte	Result	Units	MDL	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)								
EDB	ND	ug/L	0.0400	0.200	9/8/20 13:19	TEC	EPA 8260C	
Ethylbenzene	ND	ug/L	0.120	0.500	9/8/20 13:19	TEC	EPA 8260C	
Hexachlorobutadiene	ND	ug/L	0.160	0.500	9/8/20 13:19	TEC	EPA 8260C	
Iodomethane	ND	ug/L	0.460	0.500	9/8/20 13:19	TEC	EPA 8260C	
Isopropylbenzene	ND	ug/L	0.140	0.500	9/8/20 13:19	TEC	EPA 8260C	
m/p Xylenes (MCL for total)	ND	ug/L	0.300	1.00	9/8/20 13:19	TEC	EPA 8260C	
m-Dichlorobenzene	ND	ug/L	0.100	0.500	9/8/20 13:19	TEC	EPA 8260C	
Methyl ethyl ketone (MEK)	ND	ug/L	0.570	2.50	9/8/20 13:19	TEC	EPA 8260C	
Methyl isobutyl ketone (MIBK)	ND	ug/L	0.490	2.50	9/8/20 13:19	TEC	EPA 8260C	
Methylene Chloride (Dichloromethane)	ND	ug/L	0.440	0.500	9/8/20 13:19	TEC	EPA 8260C	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.0600	0.500	9/8/20 13:19	TEC	EPA 8260C	
Naphthalene	ND	ug/L	0.110	0.500	9/8/20 13:19	TEC	EPA 8260C	
n-Butylbenzene	ND	ug/L	0.160	0.500	9/8/20 13:19	TEC	EPA 8260C	
n-Propylbenzene	ND	ug/L	0.140	0.500	9/8/20 13:19	TEC	EPA 8260C	
o-Chlorotoluene	ND	ug/L	0.160	0.500	9/8/20 13:19	TEC	EPA 8260C	
o-Xylene (MCL for total)	ND	ug/L	0.150	0.500	9/8/20 13:19	TEC	EPA 8260C	
p-Chlorotoluene	ND	ug/L	0.130	0.500	9/8/20 13:19	TEC	EPA 8260C	
p-isopropyltoluene	ND	ug/L	0.110	0.500	9/8/20 13:19	TEC	EPA 8260C	
sec-Butylbenzene	ND	ug/L	0.160	0.500	9/8/20 13:19	TEC	EPA 8260C	
Styrene	ND	ug/L	0.100	0.500	9/8/20 13:19	TEC	EPA 8260C	
tert-Butylbenzene	ND	ug/L	0.140	0.500	9/8/20 13:19	TEC	EPA 8260C	
Tetrachloroethylene	ND	ug/L	0.300	0.500	9/8/20 13:19	TEC	EPA 8260C	
Toluene	ND	ug/L	0.0600	0.500	9/8/20 13:19	TEC	EPA 8260C	
Total Xylenes	ND	ug/L	0.100	0.500	9/8/20 13:19	TEC	EPA 8260C	
trans-1,2 Dichloroethylene	ND	ug/L	0.120	0.500	9/8/20 13:19	TEC	EPA 8260C	
trans-1,3-Dichloropropene	ND	ug/L	0.0700	0.200	9/8/20 13:19	TEC	EPA 8260C	
trans-1-4-Dichloro-2-butene	ND	ug/L	0.340	0.500	9/8/20 13:19	TEC	EPA 8260C	
Trichloroethene	ND	ug/L	0.0800	0.500	9/8/20 13:19	TEC	EPA 8260C	
Trichloroflouromethane	ND	ug/L	0.130	0.500	9/8/20 13:19	TEC	EPA 8260C	
Vinyl acetate	ND	ug/L	0.140	0.500	9/8/20 13:19	TEC	EPA 8260C	
Vinyl Chloride	ND	ug/L	0.150	0.200	9/8/20 13:19	TEC	EPA 8260C	
Surrogate: 1,2-Dichlorobenzene-d4	*108%*		*70-130*		*9/8/20 13:19*	*TEC*	*EPA 8260C*	
Surrogate: 4-Bromofluorobenzene	*88.4%*		*70-130*		*9/8/20 13:19*	*TEC*	*EPA 8260C*	
Surrogate: Toluene-d8	*90.7%*		*70-130*		*9/8/20 13:19*	*TEC*	*EPA 8260C*	

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Authorized Signature,

Justin Doty For Todd Taruscio, Laboratory Manager

H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
J	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected
PQL	Practical Quantitation Limit
ND	Not Detected
MDL	Method Detection Limit
Dry	Sample results reported on a dry weight basis
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: BAI0097 - Anions										
Blank (BAI0097-BLK1)					Prepared & Analyzed: 9/3/2020					
Chloride	ND	U	0.100	mg/L						
LCS (BAI0097-BS1)					Prepared & Analyzed: 9/3/2020					
Chloride	3.96		0.100	mg/L	4.00		99.1	90-110		
Matrix Spike (BAI0097-MS1)		**Source: MAI0081-01RE1**			Prepared & Analyzed: 9/3/2020					
Chloride	77.8		1.00	mg/L	40.0	36.8	102	90-110		
Matrix Spike Dup (BAI0097-MSD1)		**Source: MAI0081-01RE1**			Prepared & Analyzed: 9/3/2020					
Chloride	78.4		1.00	mg/L	40.0	36.8	104	90-110	0.871	25
Batch: BAI0143 - Anions										
Blank (BAI0143-BLK1)					Prepared & Analyzed: 9/8/2020					
Chloride	ND	U	0.100	mg/L						
LCS (BAI0143-BS1)					Prepared & Analyzed: 9/8/2020					
Chloride	4.00		0.100	mg/L	4.00		100	90-110		
Matrix Spike (BAI0143-MS1)		**Source: MAI0068-05**			Prepared & Analyzed: 9/8/2020					
Chloride	41700		1000	mg/L	40000	2000	99.2	90-110		
Matrix Spike Dup (BAI0143-MSD1)		**Source: MAI0068-05**			Prepared & Analyzed: 9/8/2020					
Chloride	41700		1000	mg/L	40000	2000	99.2	90-110	0.00	25
Batch: BAI0241 - Anions										
Blank (BAI0241-BLK1)					Prepared & Analyzed: 9/9/2020					
Chloride	ND	U	0.100	mg/L						

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Quality Control Data
(Continued)

Inorganics (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAI0241 - Anions (Continued)										
LCS (BAI0241-BS1)					Prepared & Analyzed: 9/9/2020					
Chloride	4.00		0.100	mg/L	4.00		99.9	90-110		
Matrix Spike (BAI0241-MS1)		**Source: MAI0204-01RE1**			Prepared & Analyzed: 9/9/2020					
Chloride	77.9		1.00	mg/L	40.0	34.2	109	90-110		
Matrix Spike Dup (BAI0241-MSD1)		**Source: MAI0204-01RE1**			Prepared & Analyzed: 9/9/2020					
Chloride	76.3		1.00	mg/L	40.0	34.2	105	90-110	2.13	25

Quality Control Data
(Continued)

Metals by ICP-MS

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAI0598 - ICP-MS_D										
Blank (BAI0598-BLK1)					Prepared: 9/21/2020 Analyzed: 9/28/2020					
Dissolved Arsenic	ND		0.00100	mg/L						
LCS (BAI0598-BS1)					Prepared: 9/21/2020 Analyzed: 9/28/2020					
Dissolved Arsenic	0.0449		0.00100	mg/L	0.0500		89.9	85-115		
Matrix Spike (BAI0598-MS1)		**Source: MAI0068-03**			Prepared: 9/21/2020 Analyzed: 9/28/2020					
Dissolved Arsenic	0.0489		0.00100	mg/L	0.0500	0.000313	97.2	70-130		
Matrix Spike Dup (BAI0598-MSD1)		**Source: MAI0068-03**			Prepared: 9/21/2020 Analyzed: 9/28/2020					
Dissolved Arsenic	0.0461		0.00100	mg/L	0.0500	0.000313	91.5	70-130	5.97	20

Quality Control Data
(Continued)

Semivolatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAI0114 - SVOC Water										
Blank (BAI0114-BLK1)					Prepared: 9/3/2020 Analyzed: 9/17/2020					
Naphthalene	ND	U	0.0100	ug/L						
2-Methylnaphthalene	ND	U	0.0100	ug/L						
1-Methylnaphthalene	ND	U	0.0100	ug/L						
Acenaphthylene	ND	U	0.0100	ug/L						
Acenaphthene	ND	U	0.0100	ug/L						
Fluorene	ND	U	0.0100	ug/L						
Phenanthrene	ND	U	0.0100	ug/L						
Anthracene	ND	U	0.0100	ug/L						
Fluoranthene	ND	U	0.0100	ug/L						
Pyrene	ND	U	0.0100	ug/L						
Benzo[a]anthracene	ND	U	0.0100	ug/L						
Chrysene	ND	U	0.0100	ug/L						
Benzo[b]fluoranthene	ND	U	0.0100	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: BAI0114 - SVOC Water (Continued)										
Blank (BAI0114-BLK1)					Prepared: 9/3/2020 Analyzed: 9/17/2020					
Benzo[k]fluoranthene	ND	U	0.0100	ug/L						
Benzo[a]pyrene	ND	U	0.0100	ug/L						
Indeno[1,2,3-cd]pyrene	ND	U	0.0100	ug/L						
Dibenz[a,h]anthracene	ND	U	0.0100	ug/L						
Benzo[ghi]perylene	ND	U	0.0100	ug/L						
LCS (BAI0114-BS1)					Prepared: 9/3/2020 Analyzed: 9/17/2020					
Naphthalene	4.75		0.0100	ug/L	5.00		95.1	55-135		
2-Methylnaphthalene	4.63		0.0100	ug/L	5.00		92.7	55-135		
1-Methylnaphthalene	4.74		0.0100	ug/L	5.00		94.8	55-135		
Acenaphthylene	4.65		0.0100	ug/L	5.00		93.1	55-135		
Acenaphthene	4.80		0.0100	ug/L	5.00		95.9	55-135		
Fluorene	4.67		0.0100	ug/L	5.00		93.4	55-135		
Phenanthrene	4.84		0.0100	ug/L	5.00		96.8	55-135		
Anthracene	5.49		0.0100	ug/L	5.00		110	55-135		
Fluoranthene	5.41		0.0100	ug/L	5.00		108	55-135		
Pyrene	5.23		0.0100	ug/L	5.00		105	55-135		
Benzo[a]anthracene	5.27		0.0100	ug/L	5.00		105	55-135		
Chrysene	5.05		0.0100	ug/L	5.00		101	55-135		
Benzo[b]fluoranthene	4.80		0.0100	ug/L	5.00		95.9	55-135		
Benzo[k]fluoranthene	4.71		0.0100	ug/L	5.00		94.3	55-135		
Benzo[a]pyrene	4.47		0.0100	ug/L	5.00		89.5	55-135		
Indeno[1,2,3-cd]pyrene	4.52		0.0100	ug/L	5.00		90.4	55-135		
Dibenz[a,h]anthracene	4.47		0.0100	ug/L	5.00		89.3	55-135		
Benzo[ghi]perylene	4.62		0.0100	ug/L	5.00		92.5	55-135		
LCS Dup (BAI0114-BSD1)					Prepared: 9/3/2020 Analyzed: 9/17/2020					
Naphthalene	4.31		0.0100	ug/L	5.00		86.3	55-135	9.74	50
2-Methylnaphthalene	4.23		0.0100	ug/L	5.00		84.6	55-135	9.14	50
1-Methylnaphthalene	4.31		0.0100	ug/L	5.00		86.2	55-135	9.56	50
Acenaphthylene	2.91		0.0100	ug/L	5.00		58.3	55-135	46.0	50
Acenaphthene	4.42		0.0100	ug/L	5.00		88.3	55-135	8.21	50
Fluorene	3.95		0.0100	ug/L	5.00		79.1	55-135	16.5	50
Phenanthrene	4.58		0.0100	ug/L	5.00		91.6	55-135	5.47	50
Anthracene	4.83		0.0100	ug/L	5.00		96.7	55-135	12.6	50
Fluoranthene	4.35		0.0100	ug/L	5.00		87.0	55-135	21.8	50
Pyrene	5.14		0.0100	ug/L	5.00		103	55-135	1.78	50
Benzo[a]anthracene	4.84		0.0100	ug/L	5.00		96.8	55-135	8.49	50
Chrysene	4.88		0.0100	ug/L	5.00		97.5	55-135	3.58	50
Benzo[b]fluoranthene	4.53		0.0100	ug/L	5.00		90.6	55-135	5.72	50
Benzo[k]fluoranthene	4.43		0.0100	ug/L	5.00		88.7	55-135	6.14	50
Benzo[a]pyrene	3.56		0.0100	ug/L	5.00		71.1	55-135	22.8	50
Indeno[1,2,3-cd]pyrene	4.54		0.0100	ug/L	5.00		90.7	55-135	0.363	50
Dibenz[a,h]anthracene	4.64		0.0100	ug/L	5.00		92.7	55-135	3.74	50
Benzo[ghi]perylene	4.51		0.0100	ug/L	5.00		90.2	55-135	2.48	50

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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: BAI0123 - PCBs										
Blank (BAI0123-BLK1)					Prepared & Analyzed: 9/3/2020					
PCB (total)	ND	U	0.200	ug/L						
Aroclor 1260 (PCB-1260)	ND	U	0.200	ug/L						
Aroclor 1254 (PCB-1254)	ND	U	0.200	ug/L						
Aroclor 1248 (PCB-1248)	ND	U	0.200	ug/L						
Aroclor 1242 (PCB-1242)	ND	U	0.200	ug/L						
Aroclor 1232 (PCB-1232)	ND	U	0.200	ug/L						
Aroclor 1221 (PCB-1221)	ND	U	0.200	ug/L						
Aroclor 1016 (PCB-1016)	ND	U	0.200	ug/L						
Surrogate: DCB			*2.39*	*ug/L*	*2.50*		*95.4*	*70-130*		
LCS (BAI0123-BS1)					Prepared & Analyzed: 9/3/2020					
Aroclor 1260 (PCB-1260)	4.55		0.200	ug/L	5.00		91.0	70-130		
Aroclor 1016 (PCB-1016)	3.80		0.200	ug/L	5.00		76.1	70-130		
Surrogate: DCB			*2.39*	*ug/L*	*2.50*		*95.5*	*70-130*		
LCS Dup (BAI0123-BSD1)					Prepared & Analyzed: 9/3/2020					
Aroclor 1016 (PCB-1016)	4.54		0.200	ug/L	5.00		90.9	70-130	17.7	20
Aroclor 1260 (PCB-1260)	4.71		0.200	ug/L	5.00		94.2	70-130	3.45	20
Surrogate: DCB			*2.40*	*ug/L*	*2.50*		*95.9*	*70-130*		
Batch: BAI0316 - TPH-Dx										
Blank (BAI0316-BLK1)					Prepared: 9/11/2020 Analyzed: 9/13/2020					
Lube Oil	ND	U	0.500	mg/L						
Diesel	ND	U	0.100	mg/L						
Surrogate: Hexacosane			*0.0643*	*mg/L*	*0.0500*		*129*	*50-150*		

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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: BAI0316 - TPH-Dx (Continued)										
LCS (BAI0316-BS1)					Prepared: 9/11/2020 Analyzed: 9/13/2020					
Diesel	0.393		0.100	mg/L	0.500		78.7	70-130		
Surrogate: Hexacosane			*0.0639*	*mg/L*	*0.0500*		*128*	*50-150*		
LCS Dup (BAI0316-BSD1)					Prepared: 9/11/2020 Analyzed: 9/13/2020					
Diesel	0.423		0.100	mg/L	0.500		84.6	70-130	7.24	20
Surrogate: Hexacosane			*0.0643*	*mg/L*	*0.0500*		*129*	*50-150*		
Batch: BAJ0086 - TPH-Dx										
Blank (BAJ0086-BLK1)					Prepared: 9/12/2020 Analyzed: 9/13/2020					
Diesel	ND		0.100	mg/L						
Gasoline	ND		0.100	mg/L						
Lube Oil	ND		0.500	mg/L						
Surrogate: Hexacosane			*0.0643*	*mg/L*	*0.0500*		*129*	*50-150*		
LCS (BAJ0086-BS1)					Prepared: 9/12/2020 Analyzed: 9/13/2020					
Diesel	0.393		0.100	mg/L	0.500		78.7	70-130		
Surrogate: Hexacosane			*0.0639*	*mg/L*	*0.0500*		*128*	*50-150*		
LCS Dup (BAJ0086-BSD1)					Prepared: 9/12/2020 Analyzed: 9/13/2020					
Diesel	0.423		0.100	mg/L	0.500		84.6	70-130	7.24	20
Surrogate: Hexacosane			*0.0643*	*mg/L*	*0.0500*		*129*	*50-150*		
Batch: BAJ0239 - TPH-Dx										
Blank (BAJ0239-BLK1)					Prepared & Analyzed: 10/8/2020					
Diesel	ND	U	0.100	mg/L						
Lube Oil	ND	U	0.500	mg/L						
Surrogate: Hexacosane			*0.0410*	*mg/L*	*0.0500*		*82.0*	*50-150*		

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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: BAJ0239 - TPH-Dx (Continued)										
LCS (BAJ0239-BS1)					Prepared & Analyzed: 10/8/2020					
Diesel	0.429		0.100	mg/L	0.500		85.8	70-130		
Surrogate: Hexacosane			*0.0393*	*mg/L*	*0.0500*		*78.7*	*50-150*		

Quality Control Data
(Continued)

Volatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAI0206 - VOC										
Blank (BAI0206-BLK1)					Prepared & Analyzed: 9/8/2020					
Iodomethane	ND		0.500	ug/L						
1,2-Dibromoethane (EDB)	ND	U	0.500	ug/L						
1,2-Dichlorobenzene	ND	U	0.500	ug/L						
1,2-Dichloroethane	ND	U	0.500	ug/L						
1,2,3-Trichlorobenzene	ND	U	0.500	ug/L						
1,2-Dichloropropane	ND	U	0.500	ug/L						
1,2-Dibromo-3-chloropropane(DBCP)	ND	U	0.500	ug/L						
1,2,4-Trimethylbenzene	ND	U	0.500	ug/L						
1,2,3-Trichloropropane	ND	U	0.500	ug/L						
1,3-Dichloropropane	ND	U	0.500	ug/L						
1,1-dichloropropene	ND	U	0.500	ug/L						
1,1-Dichloroethene	ND	U	0.500	ug/L						
1,1-Dichloroethane	ND	U	0.500	ug/L						
1,1,2-Trichloroethane	ND	U	0.500	ug/L						
1,1,2,2-Tetrachloroethane	ND	U	0.500	ug/L						
1,1,1-Trichloroethane	ND	U	0.500	ug/L						
1,1,1,2-Tetrachloroethane	ND	U	0.500	ug/L						
1,2,4-Trichlorobenzene	ND	U	0.500	ug/L						
sec-Butylbenzene	ND	U	0.500	ug/L						
Hexachlorobutadiene	ND	U	0.500	ug/L						
Isopropylbenzene	ND	U	0.500	ug/L						
m+p-Xylene	ND	U	0.500	ug/L						
Methyl ethyl ketone (MEK)	ND	U	2.50	ug/L						
Methyl isobutyl ketone (MIBK)	ND	U	2.50	ug/L						
Methylene chloride	ND	U	2.50	ug/L						
methyl-t-butyl ether (MTBE)	ND	U	0.500	ug/L						
Naphthalene	ND	U	0.500	ug/L						
n-Butylbenzene	ND	U	0.500	ug/L						
n-Propylbenzene	ND	U	0.500	ug/L						
1,3,5-Trimethylbenzene	ND	U	0.500	ug/L						
p-isopropyltoluene	ND	U	0.500	ug/L						
Dibromomethane	ND	U	0.500	ug/L						
Styrene	ND	U	0.500	ug/L						
tert-Butylbenzene	ND	U	0.500	ug/L						
Tetrachloroethene	ND	U	0.500	ug/L						
Toluene	ND	U	0.500	ug/L						
trans-1,2-Dichloroethene	ND	U	0.500	ug/L						
trans-1,3-Dichloropropene	ND	U	0.500	ug/L						
Trichloroethene	ND	U	0.500	ug/L						

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAI0206 - VOC (Continued)										
Blank (BAI0206-BLK1)					Prepared & Analyzed: 9/8/2020					
Trichlorofluoromethane	ND	U	0.500	ug/L						
Vinyl Chloride	ND	U	0.500	ug/L						
o-Xylene	ND	U	0.500	ug/L						
Bromoform	ND	U	0.500	ug/L						
1,4-Dichlorobenzene	ND	U	0.500	ug/L						
2,2-Dichloropropane	ND	U	0.500	ug/L						
2-Chlorotoluene	ND	U	0.500	ug/L						
2-hexanone	ND	U	2.50	ug/L						
4-Chlorotoluene	ND	U	0.500	ug/L						
Acetone	ND	U	2.50	ug/L						
Acrylonitrile	ND	U	0.500	ug/L						
Benzene	ND	U	0.500	ug/L						
Bromobenzene	ND	U	0.500	ug/L						
Ethylbenzene	ND	U	0.500	ug/L						
Bromodichloromethane	ND	U	0.500	ug/L						
Dichlorodifluoromethane	ND	U	0.500	ug/L						
Bromomethane	ND	U	0.500	ug/L						
Carbon disulfide	ND	U	0.500	ug/L						
Carbon Tetrachloride	ND	U	0.500	ug/L						
Chlorobenzene	ND	U	0.500	ug/L						
Chloroethane	ND	U	0.500	ug/L						
Chloroform	ND	U	0.500	ug/L						
Chloromethane	ND	U	0.500	ug/L						
cis-1,2-dichloroethene	ND	U	0.500	ug/L						
cis-1,3-Dichloropropene	ND	U	0.500	ug/L						
Dibromochloromethane	ND	U	0.500	ug/L						
1,3-Dichlorobenzene	ND	U	0.500	ug/L						
Bromochloromethane	ND	U	0.500	ug/L						
Acetone	ND		2.50	ug/L						
Acrolein	ND		2.50	ug/L						
Acrylonitrile	ND		2.50	ug/L						
Benzene	ND		0.200	ug/L						
Bromochloromethane	ND		0.500	ug/L						
Bromodichloromethane	ND		0.200	ug/L						
Bromoform	ND		0.500	ug/L						
Bromomethane	ND		0.500	ug/L						
Methyl ethyl ketone (MEK)	ND		2.50	ug/L						
Carbon disulfide	ND		2.50	ug/L						
Carbon Tetrachloride	ND		0.200	ug/L						
Chlorobenzene	ND		0.500	ug/L						
Chloroethane	ND		0.500	ug/L						
2-Chloroethyl vinyl ether	ND		2.50	ug/L						
Chloroform	ND		0.200	ug/L						
Chloromethane	ND		0.500	ug/L						
cis-1,2-dichloroethene	ND		0.500	ug/L						
cis-1,3-Dichloropropene	ND		0.200	ug/L						
1,2-Dibromo-3-chloropropane(DBCP)	ND		0.500	ug/L						
1,2-Dibromoethane (EDB)	ND		0.200	ug/L						
1,2-Dichlorobenzene	ND		0.500	ug/L						
1,3-Dichlorobenzene	ND		0.500	ug/L						
1,4-Dichlorobenzene	ND		0.500	ug/L						
trans-1-4-Dichloro-2-butene	ND		0.500	ug/L						
Dichlorodifluoromethane	ND		0.500	ug/L						

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAI0206 - VOC (Continued)										
Blank (BAI0206-BLK1)					Prepared & Analyzed: 9/8/2020					
1,1-Dichloroethane	ND		0.500	ug/L						
1,2-Dichloroethane	ND		0.500	ug/L						
1,1-Dichloroethene	ND		0.500	ug/L						
trans-1,2-Dichloroethene	ND		0.500	ug/L						
1,2-Dichloropropane	ND		0.500	ug/L						
trans-1,3-Dichloropropene	ND		0.200	ug/L						
Ethylbenzene	ND		0.500	ug/L						
Hexachlorobutadiene	ND		0.500	ug/L						
2-hexanone	ND		2.50	ug/L						
Isopropylbenzene	ND		0.500	ug/L						
Methylene chloride	ND		0.500	ug/L						
Methyl isobutyl ketone (MIBK)	ND		2.50	ug/L						
Naphthalene	ND		0.500	ug/L						
Styrene	ND		0.500	ug/L						
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L						
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L						
Tetrachloroethene	ND		0.500	ug/L						
Toluene	ND		0.500	ug/L						
1,2,4-Trichlorobenzene	ND		0.500	ug/L						
1,1,1-Trichloroethane	ND		0.500	ug/L						
1,1,2-Trichloroethane	ND		0.500	ug/L						
Trichloroethene	ND		0.500	ug/L						
1,2,3-Trichloropropane	ND		0.500	ug/L						
Vinyl acetate	ND		0.500	ug/L						
Vinyl Chloride	ND		0.200	ug/L						
m+p-Xylene	ND		1.00	ug/L						
o-Xylene	ND		0.500	ug/L						
Total Xylene	ND		0.500	ug/L						
1,1-dichloropropene	ND		0.500	ug/L						
1,2,3-Trichlorobenzene	ND		0.500	ug/L						
1,2,4-Trimethylbenzene	ND		0.500	ug/L						
1,3,5-Trimethylbenzene	ND		0.500	ug/L						
1,3-Dichloropropane	ND		0.500	ug/L						
2,2-Dichloropropane	ND		0.500	ug/L						
2-Chlorotoluene	ND		0.500	ug/L						
4-Chlorotoluene	ND		0.500	ug/L						
Bromobenzene	ND		0.500	ug/L						
Dibromochloromethane	ND		0.500	ug/L						
Dibromomethane	ND		0.500	ug/L						
methyl-t-butyl ether (MTBE)	ND		0.500	ug/L						
n-Butylbenzene	ND		0.500	ug/L						
n-Propylbenzene	ND		0.500	ug/L						
p-isopropyltoluene	ND		0.500	ug/L						
sec-Butylbenzene	ND		0.500	ug/L						
tert-Butylbenzene	ND		0.500	ug/L						
Trichlorofluoromethane	ND		0.500	ug/L						
Surrogate: Toluene-d8			*22.7*	*ug/L*	*25.0*		*90.8*	*70-130*		
Surrogate: Toluene-d8			*22.7*	*ug/L*	*25.0*		*90.8*	*70-130*		
Surrogate: 4-Bromofluorobenzene			*23.4*	*ug/L*	*25.0*		*93.6*	*70-130*		
Surrogate: 4-Bromofluorobenzene			*23.4*	*ug/L*	*25.0*		*93.6*	*70-130*		
Surrogate: 1,2-Dichlorobenzene-d4			*21.2*	*ug/L*	*19.0*		*111*	*70-130*		
Surrogate: 1,2-Dichlorobenzene-d4			*21.2*	*ug/L*	*19.0*		*111*	*70-130*		

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAI0206 - VOC (Continued)										
LCS (BAI0206-BS1)					Prepared & Analyzed: 9/8/2020					
1,1,2,2-Tetrachloroethane	10.7		0.500	ug/L	10.0		107	80-120		
2-Chlorotoluene	11.7		0.500	ug/L	10.0		117	80-120		
1,1,1,2-Tetrachloroethane	9.71		0.500	ug/L	10.0		97.1	80-120		
1,1,1-Trichloroethane	10.2		0.500	ug/L	10.0		102	80-120		
p-isopropyltoluene	10.6		0.500	ug/L	10.0		106	80-120		
Chloroform	10.7		0.500	ug/L	10.0		107	80-120		
cis-1,2-dichloroethene	9.37		0.500	ug/L	10.0		93.7	80-120		
cis-1,3-Dichloropropene	9.40		0.500	ug/L	10.0		94.0	80-120		
Dibromochloromethane	9.67		0.500	ug/L	10.0		96.7	80-120		
Dibromomethane	9.07		0.500	ug/L	10.0		90.7	80-120		
Dichlorodifluoromethane	11.0		0.500	ug/L	10.0		110	80-120		
Ethylbenzene	10.8		0.500	ug/L	10.0		108	80-120		
Hexachlorobutadiene	9.76		0.500	ug/L	10.0		97.6	80-120		
Isopropylbenzene	10.2		0.500	ug/L	10.0		102	80-120		
m+p-Xylene	21.9		0.500	ug/L	20.0		109	80-120		
Methyl ethyl ketone (MEK)	9.25		2.50	ug/L	10.0		92.5	80-120		
Methyl isobutyl ketone (MIBK)	9.99		2.50	ug/L	10.0		99.9	80-120		
methyl-t-butyl ether (MTBE)	8.72		0.500	ug/L	10.0		87.2	80-120		
Chloroethane	11.0		0.500	ug/L	10.0		110	80-120		
1,1,2-Trichloroethane	9.53		0.500	ug/L	10.0		95.3	80-120		
1,4-Dichlorobenzene	10.8		0.500	ug/L	10.0		108	80-120		
Vinyl Chloride	10.5		0.500	ug/L	10.0		105	80-120		
Trichlorofluoromethane	10.6		0.500	ug/L	10.0		106	80-120		
Trichloroethene	8.48		0.500	ug/L	10.0		84.8	80-120		
n-Butylbenzene	11.6		0.500	ug/L	10.0		116	80-120		
trans-1,2-Dichloroethene	10.5		0.500	ug/L	10.0		105	80-120		
o-Xylene	11.0		0.500	ug/L	10.0		110	80-120		
Toluene	10.0		0.500	ug/L	10.0		100	80-120		
Tetrachloroethene	9.12		0.500	ug/L	10.0		91.2	80-120		
tert-Butylbenzene	11.0		0.500	ug/L	10.0		110	80-120		
Styrene	11.0		0.500	ug/L	10.0		110	80-120		
sec-Butylbenzene	11.0		0.500	ug/L	10.0		110	80-120		
Naphthalene	9.40		0.500	ug/L	10.0		94.0	80-120		
trans-1,3-Dichloropropene	10.2		0.500	ug/L	10.0		102	80-120		
1,2,3-Trichloropropane	9.72		0.500	ug/L	10.0		97.2	80-120		
1,3,5-Trimethylbenzene	11.3		0.500	ug/L	10.0		113	80-120		
1,2-Dichloropropane	9.94		0.500	ug/L	10.0		99.4	80-120		
1,2-Dichloroethane	10.9		0.500	ug/L	10.0		109	80-120		
1,2-Dichlorobenzene	10.3		0.500	ug/L	10.0		103	80-120		
1,2-Dibromo-3-chloropropane(DBCP)	9.56		0.500	ug/L	10.0		95.6	80-120		
1,3-Dichlorobenzene	10.5		0.500	ug/L	10.0		105	80-120		
1,2,4-Trichlorobenzene	9.30		0.500	ug/L	10.0		93.0	80-120		
1,2,3-Trichlorobenzene	8.86		0.500	ug/L	10.0		88.6	80-120		
1,1-dichloropropene	8.95		0.500	ug/L	10.0		89.5	80-120		
Chlorobenzene	10.5		0.500	ug/L	10.0		105	80-120		
n-Propylbenzene	11.2		0.500	ug/L	10.0		112	80-120		
1,1-Dichloroethane	10.6		0.500	ug/L	10.0		106	80-120		
1,1-Dichloroethene	10.8		0.500	ug/L	10.0		108	80-120		
1,2,4-Trimethylbenzene	11.0		0.500	ug/L	10.0		110	80-120		
Bromochloromethane	9.37		0.500	ug/L	10.0		93.7	80-120		
Carbon Tetrachloride	10.5		0.500	ug/L	10.0		105	80-120		
Carbon disulfide	10.1		0.500	ug/L	10.0		101	80-120		
Bromoform	10.3		0.500	ug/L	10.0		103	80-120		

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAI0206 - VOC (Continued)										
LCS (BAI0206-BS1)					Prepared & Analyzed: 9/8/2020					
1,2-Dibromoethane (EDB)	9.60		0.500	ug/L	10.0		96.0	70-130		
Bromodichloromethane	10.3		0.500	ug/L	10.0		103	80-120		
Bromobenzene	10.1		0.500	ug/L	10.0		101	80-120		
Benzene	9.50		0.500	ug/L	10.0		95.0	80-120		
Acrylonitrile	9.89		0.500	ug/L	10.0		98.9	80-120		
1,3-Dichloropropane	9.95		0.500	ug/L	10.0		99.5	80-120		
2-hexanone	10.9		2.50	ug/L	10.0		109	80-120		
2,2-Dichloropropane	10.6		0.500	ug/L	10.0		106	80-120		
4-Chlorotoluene	11.9		0.500	ug/L	10.0		119	80-120		
Surrogate: Toluene-d8			*25.3*	*ug/L*	*25.0*		*101*	*70-130*		
Surrogate: 4-Bromofluorobenzene			*26.5*	*ug/L*	*25.0*		*106*	*70-130*		
Surrogate: 1,2-Dichlorobenzene-d4			*18.4*	*ug/L*	*19.0*		*96.6*	*70-130*		
Matrix Spike (BAI0206-MS1)	**Source: MAI0068-01**				Prepared & Analyzed: 9/8/2020					
Dibromochloromethane	100		5.00	ug/L	100	ND	100	70-130		
Methyl ethyl ketone (MEK)	92.6		25.0	ug/L	100	ND	92.6	70-130		
Chloroethane	112		5.00	ug/L	100	ND	112	70-130		
m+p-Xylene	222		5.00	ug/L	200	ND	111	70-130		
Isopropylbenzene	106		5.00	ug/L	100	ND	106	70-130		
Hexachlorobutadiene	112		5.00	ug/L	100	ND	112	70-130		
Ethylbenzene	112		5.00	ug/L	100	ND	112	70-130		
cis-1,2-dichloroethene	98.8		5.00	ug/L	100	ND	98.8	70-130		
Dibromomethane	92.8		5.00	ug/L	100	ND	92.8	70-130		
cis-1,3-Dichloropropene	97.8		5.00	ug/L	100	ND	97.8	70-130		
Chlorobenzene	108		5.00	ug/L	100	ND	108	70-130		
Trichloroethene	86.0		5.00	ug/L	100	ND	86.0	70-130		
Chloroform	111		5.00	ug/L	100	ND	111	70-130		
Methyl isobutyl ketone (MIBK)	108		25.0	ug/L	100	ND	108	70-130		
Dichlorodifluoromethane	112		5.00	ug/L	100	ND	112	70-130		
Styrene	107		5.00	ug/L	100	ND	107	70-130		
Trichlorofluoromethane	104		5.00	ug/L	100	ND	104	70-130		
1,1,2,2-Tetrachloroethane	107		5.00	ug/L	100	ND	107	70-130		
Carbon Tetrachloride	105		5.00	ug/L	100	ND	105	70-130		
trans-1,3-Dichloropropene	107		5.00	ug/L	100	ND	107	70-130		
Toluene	102		5.00	ug/L	100	ND	102	70-130		
trans-1,2-Dichloroethene	112		5.00	ug/L	100	ND	112	70-130		
tert-Butylbenzene	113		5.00	ug/L	100	ND	113	70-130		
methyl-t-butyl ether (MTBE)	89.6		5.00	ug/L	100	ND	89.6	70-130		
sec-Butylbenzene	113		5.00	ug/L	100	ND	113	70-130		
p-isopropyltoluene	110		5.00	ug/L	100	ND	110	70-130		
o-Xylene	111		5.00	ug/L	100	ND	111	70-130		
n-Propylbenzene	116		5.00	ug/L	100	ND	116	70-130		
n-Butylbenzene	124		5.00	ug/L	100	ND	124	70-130		
Naphthalene	105		5.00	ug/L	100	ND	105	70-130		
Tetrachloroethene	92.3		5.00	ug/L	100	ND	92.3	70-130		
1,2,3-Trichlorobenzene	97.7		5.00	ug/L	100	ND	97.7	70-130		
1,1-Dichloroethane	111		5.00	ug/L	100	ND	111	70-130		
1,2-Dichlorobenzene	106		5.00	ug/L	100	ND	106	70-130		
1,2-Dibromoethane (EDB)	95.6		5.00	ug/L	100	ND	95.6	70-130		
1,2-Dibromo-3-chloropropane(DBCP)	96.6		5.00	ug/L	100	ND	96.6	70-130		
1,2,4-Trimethylbenzene	114		5.00	ug/L	100	ND	114	70-130		
1,2-Dichloroethane	111		5.00	ug/L	100	ND	111	70-130		

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAI0206 - VOC (Continued)										
Matrix Spike (BAI0206-MS1)	**Source: MAI0068-01**				Prepared & Analyzed: 9/8/2020					
1,2,3-Trichloropropane	103		5.00	ug/L	100	ND	103	70-130		
1,2-Dichloropropane	105		5.00	ug/L	100	ND	105	70-130		
1,1-dichloropropene	94.5		5.00	ug/L	100	ND	94.5	70-130		
1,1-Dichloroethene	115		5.00	ug/L	100	ND	115	70-130		
Vinyl Chloride	108		5.00	ug/L	100	ND	108	70-130		
1,1,2-Trichloroethane	96.3		5.00	ug/L	100	ND	96.3	70-130		
1,1,1-Trichloroethane	104		5.00	ug/L	100	ND	104	70-130		
1,1,1,2-Tetrachloroethane	99.4		5.00	ug/L	100	ND	99.4	70-130		
1,2,4-Trichlorobenzene	101		5.00	ug/L	100	ND	101	70-130		
Bromoform	102		5.00	ug/L	100	ND	102	70-130		
Bromodichloromethane	104		5.00	ug/L	100	ND	104	70-130		
Bromochloromethane	96.1		5.00	ug/L	100	ND	96.1	70-130		
Bromobenzene	104		5.00	ug/L	100	ND	104	70-130		
Benzene	97.7		5.00	ug/L	100	ND	97.7	70-130		
4-Chlorotoluene	124		5.00	ug/L	100	ND	124	70-130		
Carbon disulfide	117		5.00	ug/L	100	ND	117	70-130		
2-hexanone	115		25.0	ug/L	100	ND	115	70-130		
2-Chlorotoluene	120		5.00	ug/L	100	ND	120	70-130		
2,2-Dichloropropane	110		5.00	ug/L	100	ND	110	70-130		
1,4-Dichlorobenzene	111		5.00	ug/L	100	ND	111	70-130		
1,3-Dichloropropane	102		5.00	ug/L	100	ND	102	70-130		
1,3-Dichlorobenzene	109		5.00	ug/L	100	ND	109	70-130		
1,3,5-Trimethylbenzene	115		5.00	ug/L	100	ND	115	70-130		
Acrylonitrile	104		5.00	ug/L	100	ND	104	70-130		
Surrogate: Toluene-d8			*25.2*	*ug/L*	*25.0*		*101*	*70-130*		
Surrogate: 4-Bromofluorobenzene			*26.2*	*ug/L*	*25.0*		*105*	*70-130*		
Surrogate: 1,2-Dichlorobenzene-d4			*18.5*	*ug/L*	*19.0*		*97.4*	*70-130*		

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAI0206 - VOC (Continued)										
Matrix Spike Dup (BAI0206-MSD1)	**Source: MAI0068-01**				Prepared & Analyzed: 9/8/2020					
m+p-Xylene	225		5.00	ug/L	200	ND	113	70-130	1.57	25
Carbon disulfide	117		5.00	ug/L	100	ND	117	70-130	0.428	25
Ethylbenzene	113		5.00	ug/L	100	ND	113	70-130	1.42	25
2-hexanone	134		25.0	ug/L	100	ND	134	70-130	15.2	25
4-Chlorotoluene	125		5.00	ug/L	100	ND	125	70-130	0.885	25
Acrylonitrile	106		5.00	ug/L	100	ND	106	70-130	1.43	25
Benzene	100		5.00	ug/L	100	ND	100	70-130	2.53	25
Bromobenzene	108		5.00	ug/L	100	ND	108	70-130	3.68	25
Bromochloromethane	92.8		5.00	ug/L	100	ND	92.8	70-130	3.49	25
2,2-Dichloropropane	110		5.00	ug/L	100	ND	110	70-130	0.272	25
Bromoform	109		5.00	ug/L	100	ND	109	70-130	5.96	25
1,4-Dichlorobenzene	112		5.00	ug/L	100	ND	112	70-130	0.983	25
Carbon Tetrachloride	105		5.00	ug/L	100	ND	105	70-130	0.476	25
Chlorobenzene	111		5.00	ug/L	100	ND	111	70-130	2.74	25
Chloroethane	111		5.00	ug/L	100	ND	111	70-130	0.269	25
Chloroform	107		5.00	ug/L	100	ND	107	70-130	2.94	25
cis-1,2-dichloroethene	94.3		5.00	ug/L	100	ND	94.3	70-130	4.66	25
cis-1,3-Dichloropropene	103		5.00	ug/L	100	ND	103	70-130	5.08	25
Dibromochloromethane	107		5.00	ug/L	100	ND	107	70-130	6.74	25
Dibromomethane	93.7		5.00	ug/L	100	ND	93.7	70-130	0.965	25
Methyl isobutyl ketone (MIBK)	117		25.0	ug/L	100	ND	117	70-130	7.97	25
Bromodichloromethane	105		5.00	ug/L	100	ND	105	70-130	1.43	25
1,2,4-Trimethylbenzene	115		5.00	ug/L	100	ND	115	70-130	1.40	25
1,1,1,2-Tetrachloroethane	104		5.00	ug/L	100	ND	104	70-130	4.04	25
1,1,1-Trichloroethane	104		5.00	ug/L	100	ND	104	70-130	0.385	25
1,1,2,2-Tetrachloroethane	117		5.00	ug/L	100	ND	117	70-130	8.39	25
1,1,2-Trichloroethane	105		5.00	ug/L	100	ND	105	70-130	8.55	25
1,1-Dichloroethane	108		5.00	ug/L	100	ND	108	70-130	3.01	25
1,1-Dichloroethene	114		5.00	ug/L	100	ND	114	70-130	0.609	25
1,1-dichloropropene	97.5		5.00	ug/L	100	ND	97.5	70-130	3.12	25
1,2,3-Trichlorobenzene	113		5.00	ug/L	100	ND	113	70-130	14.4	25
2-Chlorotoluene	121		5.00	ug/L	100	ND	121	70-130	0.993	25
1,2,4-Trichlorobenzene	107		5.00	ug/L	100	ND	107	70-130	6.25	25
Hexachlorobutadiene	110		5.00	ug/L	100	ND	110	70-130	1.35	25
1,2-Dibromo-3-chloropropane(DBCP)	108		5.00	ug/L	100	ND	108	70-130	11.6	25
1,2-Dibromoethane (EDB)	104		5.00	ug/L	100	ND	104	70-130	8.32	25
1,2-Dichlorobenzene	106		5.00	ug/L	100	ND	106	70-130	0.189	25
1,2-Dichloroethane	111		5.00	ug/L	100	ND	111	70-130	0.00	25
1,2-Dichloropropane	108		5.00	ug/L	100	ND	108	70-130	2.92	25
1,3,5-Trimethylbenzene	117		5.00	ug/L	100	ND	117	70-130	1.55	25
1,3-Dichlorobenzene	110		5.00	ug/L	100	ND	110	70-130	0.548	25
1,3-Dichloropropane	112		5.00	ug/L	100	ND	112	70-130	9.36	25
1,2,3-Trichloropropane	111		5.00	ug/L	100	ND	111	70-130	7.57	25
trans-1,2-Dichloroethene	108		5.00	ug/L	100	ND	108	70-130	3.53	25
Dichlorodifluoromethane	107		5.00	ug/L	100	ND	107	70-130	4.64	25
Vinyl Chloride	103		5.00	ug/L	100	ND	103	70-130	4.35	25
Trichlorofluoromethane	108		5.00	ug/L	100	ND	108	70-130	3.79	25
trans-1,3-Dichloropropene	117		5.00	ug/L	100	ND	117	70-130	8.66	25
Toluene	102		5.00	ug/L	100	ND	102	70-130	0.0983	25
Tetrachloroethene	98.2		5.00	ug/L	100	ND	98.2	70-130	6.19	25
tert-Butylbenzene	115		5.00	ug/L	100	ND	115	70-130	1.41	25
Styrene	113		5.00	ug/L	100	ND	113	70-130	5.81	25
p-isopropyltoluene	112		5.00	ug/L	100	ND	112	70-130	1.35	25

Anatek Labs, Inc.

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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - fax (509) 838-4433 - email spokane@anateklabs.com

Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAI0206 - VOC (Continued)										
Matrix Spike Dup (BAI0206-MSD1)		**Source: MAI0068-01**			Prepared & Analyzed: 9/8/2020					
o-Xylene	114		5.00	ug/L	100	ND	114	70-130	2.22	25
n-Propylbenzene	118		5.00	ug/L	100	ND	118	70-130	1.53	25
n-Butylbenzene	125		5.00	ug/L	100	ND	125	70-130	1.37	25
Isopropylbenzene	108		5.00	ug/L	100	ND	108	70-130	2.53	25
Naphthalene	123		5.00	ug/L	100	ND	123	70-130	15.7	25
Trichloroethene	90.5		5.00	ug/L	100	ND	90.5	70-130	5.10	25
methyl-t-butyl ether (MTBE)	99.0		5.00	ug/L	100	ND	99.0	70-130	9.97	25
Methyl ethyl ketone (MEK)	109		25.0	ug/L	100	ND	109	70-130	16.6	25
sec-Butylbenzene	115		5.00	ug/L	100	ND	115	70-130	1.57	25
Surrogate: 4-Bromofluorobenzene			*26.5*	*ug/L*	*25.0*		*106*	*70-130*		
Surrogate: Toluene-d8			*24.6*	*ug/L*	*25.0*		*98.6*	*70-130*		
Surrogate: 1,2-Dichlorobenzene-d4			*18.1*	*ug/L*	*19.0*		*95.2*	*70-130*		
Batch: BAI0218 - VOC										
Blank (BAI0218-BLK1)					Prepared & Analyzed: 9/8/2020					
Gasoline	ND	U	0.200	mg/L						
Surrogate: 4-Bromofluorobenzene			*0.0208*	*mg/L*	*0.0250*		*83.4*	*70-130*		
LCS (BAI0218-BS1)					Prepared & Analyzed: 9/8/2020					
Gasoline	0.910		0.200	mg/L	1.00		91.0	80-120		
Surrogate: 4-Bromofluorobenzene			*0.0221*	*mg/L*	*0.0250*		*88.3*	*70-130*		
Matrix Spike (BAI0218-MS1)		**Source: MAI0068-01**			Prepared & Analyzed: 9/8/2020					
Gasoline	8.70		2.00	mg/L	10.0	ND	87.0	50-150		
Surrogate: 4-Bromofluorobenzene			*0.0216*	*mg/L*	*0.0250*		*86.6*	*70-130*		

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BAI0218 - VOC (Continued)										
Matrix Spike Dup (BAI0218-MSD1)		**Source: MAI0068-01**			Prepared & Analyzed: 9/8/2020					
Gasoline	8.90		2.00	mg/L	10.0	ND	89.0	50-150	2.27	25
Surrogate: 4-Bromofluorobenzene			*0.0217*	*mg/L*	*0.0250*		*86.8*	*70-130*		
Batch: BAI0219 - VOC										
Blank (BAI0219-BLK1)					Prepared & Analyzed: 9/8/2020					
Allyl chloride (3-chloropropene)	ND	U	0.0500	ug/L						
Vinyl Chloride	ND	U	0.0500	ug/L						
1,3-Butadiene	ND	U	0.0500	ug/L						
Cyclohexane	ND	U	0.0500	ug/L						
Epichlorohydrin	ND	U	0.0500	ug/L						
Ethyl methacrylate	ND	U	0.0500	ug/L						
Isopropanol	ND	U	0.0500	ug/L						
Methyl methacrylate	ND	U	0.0500	ug/L						
n-Hexane	ND	U	0.0500	ug/L						
Pentachloroethane	ND	U	0.0500	ug/L						
Propionitrile	ND	U	0.0500	ug/L						
tert-Butyl alcohol (t-Butanol)	ND	U	0.0500	ug/L						
Tetrahydrofuran	ND	U	0.0500	ug/L						
Surrogate: 4-Bromofluorobenzene			*23.3*	*ug/L*	*25.0*		*93.1*	*70-130*		
Surrogate: Toluene-d8			*24.0*	*ug/L*	*25.0*		*96.1*	*70-130*		
Surrogate: 1,2-Dichlorobenzene-d4			*16.4*	*ug/L*	*19.0*		*86.2*	*70-130*		

Cooler 3 of 3

MAI0068

Due: 09/16/20

Anatek Labs, Inc.

Chain of Custody Record

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

Anatek Log-In #

Company Name: Pioneer Technologies (PTC)	Project Manager: Joel Hecker
Address: 5205 Corp. Center ct. SE	Project Name & #: Milestone Hardel
City: Lacey State: WA Zip: 98503	Email Address: Heckerj@uspioneer.com
Phone: 360-570-1700	Purchase Order #:
Fax:	Sampler Name & phone: JH 360-828-3739

Turn Around

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

X Normal
__Next Day*
__2nd Day*
__Other*_____

*All rush order requests must be prior approved.

__Phone
__Mail
__Fax
__Email

Provide Sample Description / List Analyses Requested

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative:	TPH-G *2	Select VOCs *2	TPH-D/HO	PAHs +	Dioxins/Furans	PCBs	As	Chloride	EPH
	GW-MW101-0831	8/31 1145	GW	10			X	X	X	X	X	X	X	X	X
	GW-MW102-0831	0930		10			X	X	X	X	X	X	X	X	X
	GW-MW102-0831-01	0930		8 ~~10~~			X	X	X	X		X	X	X	
	GW-MW103-0831	1045		11			X	X	X	X	X	X	X	X	X
	GW-MW104-0831	0810		11			X	X	X	X	X	X	X	X	X
	TB-083120	—		2			X	X							

Note Special Instructions/Comments

* VOCs = BTEX, n-hexane, 1,2-DBA, 1,2-DCA, MTBE, naphthalene
- no silica gel cleanup on TPH
- Dioxins, PCBs, As, Chloride were Field Filtered.
- Hold all samples for EPH

Inspection Checklist

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

Temperature (°C):
Preservative:
Date & Time:
Inspected By:

	Printed Name	Signature	Company	Date	Time
Relinquished by	Joel Hecker		PTC	8/31	1400
Received by			Anatek	9/2	12:29
Relinquished by					
Received by					
Relinquished by					
Received by					

Form COC01.00 - Eff 1 Mar 2015

Page 1 of 1

Samples submitted to Anatek Labs may be subcontracted to other accredited labs if necessary. This message serves as notice of this possibility. Sub-contracted analyses will be clearly noted on the analytical report.

MAI0068

Due: 09/16/20

Anatek Labs, Inc.

Sample Receipt and Preservation Form

Client Name: Pioneer Tech. 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: 1 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): 0.7 Cooler Temp Corrected (°C): — Thermometer Used: IR-5

				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	with other coolers
Labels and Chains Agree?	(Yes)	No	N/A	Use time on chain
Total Number of Sample Bottles Received: 19				

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:

HCl (1925) → TPH-Dx
(1919) → VOC, TPH-G

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

Received all bottles for sample GW-MW103-0831 (11)
Received 3 of 8 bottles for sample GW-MW102-0831-01 (PAH, chloride/As, PCB)
Received 5 of 11 bottles for sample GW-MW102-0831 (Dioxin/Furan x2, EPH^{x1}, PCB^{x1}, chloride/As)

Sub Dioxin → Pace

Received/Inspected By: _____ Date/Time: 9/1/20 12:35

MAI0068

Due: 09/16/20

Anatek Labs, Inc.

Sample Receipt and Preservation Form

Client Name: PTC 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: 2 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): 3.8 Cooler Temp Corrected (°C): — Thermometer Used: IR-5

				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	use times on COC
Total Number of Sample Bottles Received: 35				

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:

HCl (1919) → VOC, TPH-G
(1925) → TPH-Dx

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

Sub Dioxin → Pace MN

Received/Inspected By: HS Date/Time: 9/2/20 12:29

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Todd Taruscio
Anatek Labs, Inc.
1282 Alturas Drive
Moscow ID 83843

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

Pace Project #: 10530961
Sample Receipt Date: 09/04/2020
Client Project #: MAI0068
Client Sub PO #: N/A
State Cert #: C486

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Joanne Richardson, your Pace Project Manager.

This report has been reviewed by:

September 29, 2020

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
September 29, 2020

Report of Laboratory Analysis

Pace Analytical™

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on four samples submitted by a representative of Anatek Labs, Inc. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. The estimated detection limits (EDLs) were based on signal-to-noise measurements. Estimated maximum possible concentration (EMPC) values were treated as positives in the toxic equivalence calculations.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 54-86%. All of the labeled internal standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted congeners was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained.

Values were flagged "I" where incorrect isotope ratios were obtained. Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain a trace level of Total HpCDD. This level was below the calibration range of the method. The levels reported for Total HpCDD in the field samples were higher than the corresponding blank levels by one or more orders of magnitude. These results indicate that the sample processing steps did not contribute significantly to the levels reported for the field samples.

Laboratory spike samples were also prepared with the sample batch using clean reference matrix that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 96-123% with relative percent differences of 0.0-13.3%. These results were within the target ranges for the method. Matrix spikes were not prepared with the sample batch.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
		Mississippi	MN00064
A2LA	2926.01	Missouri	10100
Alabama	40770	Montana	CERT0092
Alaska-DW	MN00064	Nebraska	NE-OS-18-06
Alaska-UST	17-009	Nevada	MN00064
Arizona	AZ0014	New Hampshire	2081
Arkansas - WW	88-0680	New Jersey	MN002
Arkansas-DW	MN00064	New York	11647
California	2929	North Carolina-	27700
Colorado	MN00064	North Carolina-	530
Connecticut	PH-0256	North Dakota	R-036
Florida	E87605	Ohio - VAP	CL101
Georgia	959	Ohio-DW	41244
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon- rimary	MN300001
Illinois	200011	Oregon-Second	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky-DW	90062	Tennessee	TN02818
Kentucky-WW	90062	Texas	T104704192
Louisiana-DEQ	AI-84596	Utah	MN00064
Louisiana-DW	MN00064	Vermont	VT-027053137
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Massachusetts-	via MN 027-053	West Virginia-D	382
Michigan	9909	West Virginia-D	9952C
Minnesota	027-053-137	Wisconsin	999407970
Minnesota-Ag	via MN 027-053	Wyoming-UST	via A2LA 2926.
Minnesota-Petr	1240		

REPORT OF LABORATORY ANALYSIS

Appendix A

Sample Management

SUBCONTRACT ORDER

Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 8832839 - Fax (208) 8829246 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - fax (509) 838-4433 - email spokane@anateklabs.com

Sending Laboratory:

Anatek Labs Inc, Moscow ID
1282 Alturas Drive
Moscow, ID 83843
Phone: 208-883-2839
Fax: 208-882-9246

Project Manager: Todd Taruscio
toddt@anateklabs.com

Subcontracted Laboratory:

Pace Analytical - MN
1800 Elm Street SE
Minneaplis, MN 55414
Phone: (612) 607-6400
Fax:

WO# : 10530961

10530961

Work Order: MAI0068

Analysis	Due	Expires	Comments
Lab Sample ID: MAI0068-01 ***Groundwater*** ***Sampled: 08/31/2020 11:45***			001
Client Sample Name: GW-MW101-0831			
Dioxin	09/14/2020	09/14/2020 11:45	Field Filtered
Containers Supplied: G 1000mL (B) G 1000mL (C)			
Lab Sample ID: MAI0068-02 ***Groundwater*** ***Sampled: 08/31/2020 09:30***			002
Client Sample Name: GW-MW102-0831			
Dioxin	09/14/2020	09/14/2020 09:30	Field Filtered
Containers Supplied: G 1000mL (B) G 1000mL (C)			
Lab Sample ID: MAI0068-04 ***Groundwater*** ***Sampled: 08/31/2020 10:45***			003
Client Sample Name: GW-MW103-0831			
Dioxin	09/14/2020	09/14/2020 10:45	Field Filtered
Containers Supplied: G 1000mL (B) G 1000mL (C)			
Lab Sample ID: MAI0068-05 ***Groundwater*** ***Sampled: 08/31/2020 08:10***			004
Client Sample Name: GW-MW104-0831			
Dioxin	09/14/2020	09/14/2020 08:10	Field Filtered
Containers Supplied: G 1000mL (B) G 1000mL (C)			

From the State of Washington
Dioxin / Furans by 8290

5.3°

Released By Chris Sanders 09/03/2020 Date

Received By TN/Psa 910 9/4/20 Date

Pace Analytical®	Document Name: Sample Condition Upon Receipt (SCUR) - MN	Document Revised: 12Aug2020 Page 1 of 1
	Document No.: ENV-FRM-MIN4-0150 Rev.01	Pace Analytical Services - Minneapolis

Sample Condition Upon Receipt

Client Name: Anatek Labs

Project #:

WO#: 10530961

PM: JMR Due Date: 09/14/20

CLIENT: Anatek

Courier: ☐ Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial

Tracking Number: 12 981 17E 01 4277 6800 See Exceptions ☐ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No **Seals Intact?** ☐ Yes ☒ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☐ Yes ☒ No

Thermometer: ☐ T1(0461) ☒ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ No **Were All Container Temps Taken?** ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** _____ °C

Correction Factor: +0.1 (8/29/14/20) **Cooler Temp Corrected w/temp blank:** _____ °C

Average Corrected Temp (no temp blank only): 5.3 °C ☒ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: (☒ N/A, water sample/Other: _____)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Date/Initials of Person Examining Contents: TN 9/4/20

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☐ Yes	☐ No	☒ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other_____
Rush Turn Around Time Requested?	☒ Yes	☐ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used?	☒ Yes	☐ No		8.
-Pace Containers Used?	☒ Yes	☐ No		
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC?	☒ Yes	☐ No		11. If no, write ID/ Date/Time on Container Below: ☐ See Exception ENV-FRM-MIN4-0142
Matrix: ☒ Water ☐ Soil ☐ Oil ☐ Other_____				
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes	☐ No	☒ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☒ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# ☐ See Exception ENV-FRM-MIN4-0142
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☒ N/A	13. ☐ See Exception ENV-FRM-MIN4-0140
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☒ N/A	
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Kirsten Hoffing **Date:** 9/4/2020

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: TN

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) Exception Form**	Document Revised: 04Jun2020 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0142 Rev.01**	Pace Analytical Services - **Minneapolis**

SCUR Exceptions: **Workorder #:** 10530961

Out of Temp Sample IDs	Container Type	# of Containers

PM Notified? ☐Yes ☐No

If yes, indicate who was contacted/date/time.
If no, indicate reason why.

Multiple Cooler Project? ☐Yes ☐No
If you answered yes, fill out information to the left.

No Temp Blank		
Read Temp	Corrected Temp	Average Temp
5.9		5.3
4.9	TW	
5.2		
5.4		

Tracking Number/Temperature	

Issue Type: Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preserv.	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance after addition?	Initials
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	
								☐Yes ☐No	

Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interferencepresent

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDEInterference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = SeeDiscussion

Appendix B

Sample Analysis Summary

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

Pace Analytical™

Method 8290 Sample Analysis Results

Client - Anatek Labs, Inc.

Client's Sample ID	MAI0068-01		
Lab Sample ID	10530961001		
Filename	Y200922A_08		
Injected By	SMT		
Total Amount Extracted	937 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	08/31/2020 11:45
ICAL ID	Y200611	Received	09/04/2020 09:10
CCal Filename(s)	Y200922A_02 & Y200922B_01	Extracted	09/15/2020 13:26
Method Blank ID	BLANK-82452	Analyzed	09/22/2020 12:15

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.8		2,3,7,8-TCDF-13C	2.00	67
Total TCDF	ND	-----	1.8		2,3,7,8-TCDD-13C	2.00	68
					1,2,3,7,8-PeCDF-13C	2.00	72
2,3,7,8-TCDD	ND	-----	3.9		2,3,4,7,8-PeCDF-13C	2.00	68
Total TCDD	ND	-----	3.9		1,2,3,7,8-PeCDD-13C	2.00	77
					1,2,3,4,7,8-HxCDF-13C	2.00	72
1,2,3,7,8-PeCDF	ND	-----	3.4		1,2,3,6,7,8-HxCDF-13C	2.00	76
2,3,4,7,8-PeCDF	ND	-----	3.1		2,3,4,6,7,8-HxCDF-13C	2.00	76
Total PeCDF	ND	-----	3.1		1,2,3,7,8,9-HxCDF-13C	2.00	72
					1,2,3,4,7,8-HxCDD-13C	2.00	71
1,2,3,7,8-PeCDD	ND	-----	3.3		1,2,3,6,7,8-HxCDD-13C	2.00	64
Total PeCDD	ND	-----	3.3		1,2,3,4,6,7,8-HpCDF-13C	2.00	61
					1,2,3,4,7,8,9-HpCDF-13C	2.00	63
1,2,3,4,7,8-HxCDF	ND	-----	2.4		1,2,3,4,6,7,8-HpCDD-13C	2.00	66
1,2,3,6,7,8-HxCDF	ND	-----	2.5		OCDD-13C	4.00	69
2,3,4,6,7,8-HxCDF	ND	-----	2.3				
1,2,3,7,8,9-HxCDF	ND	-----	2.3		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	2.3		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	3.6		2,3,7,8-TCDD-37Cl4	0.20	81
1,2,3,6,7,8-HxCDD	ND	-----	2.9				
1,2,3,7,8,9-HxCDD	ND	-----	2.4				
Total HxCDD	3.2	-----	2.4	J			
1,2,3,4,6,7,8-HpCDF	ND	-----	1.5		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	2.2		Equivalence: 0.071 pg/L		
Total HpCDF	ND	-----	1.5		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	----	3.4	2.5	IJ			
Total HpCDD	ND	-----	2.5				
OCDF	----	6.3	3.5	IJ			
OCDD	30	-----	5.9	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

J = Estimated value
I = Interference present

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Method 8290 Sample Analysis Results

Client - Anatek Labs, Inc.

Client's Sample ID	MAI0068-02		
Lab Sample ID	10530961002		
Filename	Y200922A_13		
Injected By	SMT		
Total Amount Extracted	924 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	08/31/2020 09:30
ICAL ID	Y200611	Received	09/04/2020 09:10
CCal Filename(s)	Y200922A_02 & Y200922B_01	Extracted	09/15/2020 13:26
Method Blank ID	BLANK-82452	Analyzed	09/22/2020 15:04

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	2.0		2,3,7,8-TCDF-13C	2.00	70
Total TCDF	ND	-----	2.0		2,3,7,8-TCDD-13C	2.00	71
					1,2,3,7,8-PeCDF-13C	2.00	76
2,3,7,8-TCDD	ND	-----	2.5		2,3,4,7,8-PeCDF-13C	2.00	72
Total TCDD	ND	-----	2.5		1,2,3,7,8-PeCDD-13C	2.00	81
					1,2,3,4,7,8-HxCDF-13C	2.00	77
1,2,3,7,8-PeCDF	ND	-----	3.4		1,2,3,6,7,8-HxCDF-13C	2.00	79
2,3,4,7,8-PeCDF	ND	-----	1.9		2,3,4,6,7,8-HxCDF-13C	2.00	79
Total PeCDF	ND	-----	1.9		1,2,3,7,8,9-HxCDF-13C	2.00	74
					1,2,3,4,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDD	ND	-----	3.3		1,2,3,6,7,8-HxCDD-13C	2.00	70
Total PeCDD	ND	-----	3.3		1,2,3,4,6,7,8-HpCDF-13C	2.00	66
					1,2,3,4,7,8,9-HpCDF-13C	2.00	66
1,2,3,4,7,8-HxCDF	ND	-----	2.7		1,2,3,4,6,7,8-HpCDD-13C	2.00	70
1,2,3,6,7,8-HxCDF	ND	-----	2.0		OCDD-13C	4.00	68
2,3,4,6,7,8-HxCDF	ND	-----	2.0				
1,2,3,7,8,9-HxCDF	ND	-----	2.5		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	2.0		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	2.9		2,3,7,8-TCDD-37Cl4	0.20	77
1,2,3,6,7,8-HxCDD	ND	-----	2.0				
1,2,3,7,8,9-HxCDD	ND	-----	2.2				
Total HxCDD	ND	-----	2.0				
1,2,3,4,6,7,8-HpCDF	ND	-----	3.5		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	3.8		Equivalence: 0.010 pg/L		
Total HpCDF	ND	-----	3.5		(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	ND	-----	5.0				
Total HpCDD	ND	-----	5.0				
OCDF	ND	-----	5.5				
OCDD	10	-----	6.1	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

J = Estimated value

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

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Method 8290 Sample Analysis Results

Client - Anatek Labs, Inc.

Client's Sample ID	MAI0068-04		
Lab Sample ID	10530961003		
Filename	Y200922A_15		
Injected By	SMT		
Total Amount Extracted	945 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	08/31/2020 10:45
ICAL ID	Y200611	Received	09/04/2020 09:10
CCal Filename(s)	Y200922A_02 & Y200922B_01	Extracted	09/15/2020 13:26
Method Blank ID	BLANK-82452	Analyzed	09/22/2020 16:29

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L
2,3,7,8-TCDF	ND	-----	1.7
Total TCDF	ND	-----	1.7
2,3,7,8-TCDD	ND	-----	2.4
Total TCDD	ND	-----	2.4
1,2,3,7,8-PeCDF	ND	-----	3.8
2,3,4,7,8-PeCDF	ND	-----	2.4
Total PeCDF	ND	-----	2.4
1,2,3,7,8-PeCDD	ND	-----	2.4
Total PeCDD	ND	-----	2.4
1,2,3,4,7,8-HxCDF	ND	-----	1.7
1,2,3,6,7,8-HxCDF	ND	-----	1.4
2,3,4,6,7,8-HxCDF	ND	-----	1.3
1,2,3,7,8,9-HxCDF	ND	-----	2.1
Total HxCDF	ND	-----	1.3
1,2,3,4,7,8-HxCDD	ND	-----	2.6
1,2,3,6,7,8-HxCDD	ND	-----	2.1
1,2,3,7,8,9-HxCDD	ND	-----	2.1
Total HxCDD	ND	-----	2.1
1,2,3,4,6,7,8-HpCDF	ND	-----	1.5
1,2,3,4,7,8,9-HpCDF	ND	-----	3.0
Total HpCDF	ND	-----	1.5
1,2,3,4,6,7,8-HpCDD	ND	-----	2.2
Total HpCDD	ND	-----	2.2
OCDF	ND	-----	4.6
OCDD	7.0	-----	5.6

Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF-13C	2.00	59
2,3,7,8-TCDD-13C	2.00	61
1,2,3,7,8-PeCDF-13C	2.00	66
2,3,4,7,8-PeCDF-13C	2.00	61
1,2,3,7,8-PeCDD-13C	2.00	69
1,2,3,4,7,8-HxCDF-13C	2.00	67
1,2,3,6,7,8-HxCDF-13C	2.00	70
2,3,4,6,7,8-HxCDF-13C	2.00	71
1,2,3,7,8,9-HxCDF-13C	2.00	67
1,2,3,4,7,8-HxCDD-13C	2.00	68
1,2,3,6,7,8-HxCDD-13C	2.00	59
1,2,3,4,6,7,8-HpCDF-13C	2.00	59
1,2,3,4,7,8,9-HpCDF-13C	2.00	54
1,2,3,4,6,7,8-HpCDD-13C	2.00	63
OCDD-13C	4.00	55
1,2,3,4-TCDD-13C	2.00	NA
1,2,3,7,8,9-HxCDD-13C	2.00	NA
2,3,7,8-TCDD-37Cl4	0.20	66

Total 2,3,7,8-TCDD
Equivalence: 0.0070 pg/L
(Lower-bound - Using ITE Factors)

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
EDL = Estimated Detection Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

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Method 8290 Sample Analysis Results

Client - Anatek Labs, Inc.

Client's Sample ID	MAI0068-05		
Lab Sample ID	10530961004		
Filename	Y200922A_16		
Injected By	SMT		
Total Amount Extracted	943 mL	Matrix	Water
% Moisture	NA	Dilution	NA
Dry Weight Extracted	NA	Collected	08/31/2020 08:10
ICAL ID	Y200611	Received	09/04/2020 09:10
CCal Filename(s)	Y200922A_02 & Y200922B_01	Extracted	09/15/2020 13:26
Method Blank ID	BLANK-82452	Analyzed	09/22/2020 17:11

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	1.4		2,3,7,8-TCDF-13C	2.00	72
Total TCDF	ND	-----	1.4		2,3,7,8-TCDD-13C	2.00	75
					1,2,3,7,8-PeCDF-13C	2.00	81
2,3,7,8-TCDD	ND	-----	1.8		2,3,4,7,8-PeCDF-13C	2.00	77
Total TCDD	ND	-----	1.8		1,2,3,7,8-PeCDD-13C	2.00	86
					1,2,3,4,7,8-HxCDF-13C	2.00	80
1,2,3,7,8-PeCDF	ND	-----	4.5		1,2,3,6,7,8-HxCDF-13C	2.00	82
2,3,4,7,8-PeCDF	ND	-----	2.8		2,3,4,6,7,8-HxCDF-13C	2.00	86
Total PeCDF	ND	-----	2.8		1,2,3,7,8,9-HxCDF-13C	2.00	84
					1,2,3,4,7,8-HxCDD-13C	2.00	84
1,2,3,7,8-PeCDD	ND	-----	2.7		1,2,3,6,7,8-HxCDD-13C	2.00	71
Total PeCDD	ND	-----	2.7		1,2,3,4,6,7,8-HpCDF-13C	2.00	69
					1,2,3,4,7,8,9-HpCDF-13C	2.00	71
1,2,3,4,7,8-HxCDF	ND	-----	1.9		1,2,3,4,6,7,8-HpCDD-13C	2.00	74
1,2,3,6,7,8-HxCDF	ND	-----	1.7		OCDD-13C	4.00	61
2,3,4,6,7,8-HxCDF	ND	-----	1.6				
1,2,3,7,8,9-HxCDF	ND	-----	1.8		1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	1.6		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	3.8		2,3,7,8-TCDD-37Cl4	0.20	79
1,2,3,6,7,8-HxCDD	-----	3.7	2.8	IJ			
1,2,3,7,8,9-HxCDD	ND	-----	2.4				
Total HxCDD	48	-----	2.4	J			
1,2,3,4,6,7,8-HpCDF	ND	-----	3.8		Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	4.8		Equivalence: 2.0 pg/L		
Total HpCDF	18	-----	3.8	J	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	130	-----	4.1				
Total HpCDD	280	-----	4.1				
OCDF	-----	18	4.5	IJ			
OCDD	310	-----	4.9				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
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ND = Not Detected
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NC = Not Calculated

J = Estimated value
I = Interference present

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Method 8290 Blank Analysis Results

Lab Sample Name	DFBLKMS		
Lab Sample ID	BLANK-82452	Matrix	Water
Filename	U200920B_05	Dilution	NA
Total Amount Extracted	1030 mL	Extracted	09/15/2020 13:26
ICAL ID	U200729	Analyzed	09/20/2020 13:53
CCal Filename(s)	U200920B_01 & U200920B_19	Injected By	BAL

Native Isomers	Conc pg/L	EMPC pg/L	EDL pg/L	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	4.8	2,3,7,8-TCDF-13C	2.00	51
Total TCDF	ND	-----	4.8	2,3,7,8-TCDD-13C	2.00	56
				1,2,3,7,8-PeCDF-13C	2.00	54
2,3,7,8-TCDD	ND	-----	7.6	2,3,4,7,8-PeCDF-13C	2.00	57
Total TCDD	ND	-----	7.6	1,2,3,7,8-PeCDD-13C	2.00	64
				1,2,3,4,7,8-HxCDF-13C	2.00	65
1,2,3,7,8-PeCDF	ND	-----	5.7	1,2,3,6,7,8-HxCDF-13C	2.00	58
2,3,4,7,8-PeCDF	ND	-----	3.6	2,3,4,6,7,8-HxCDF-13C	2.00	64
Total PeCDF	ND	-----	3.6	1,2,3,7,8,9-HxCDF-13C	2.00	63
				1,2,3,4,7,8-HxCDD-13C	2.00	69
1,2,3,7,8-PeCDD	ND	-----	5.7	1,2,3,6,7,8-HxCDD-13C	2.00	56
Total PeCDD	ND	-----	5.7	1,2,3,4,6,7,8-HpCDF-13C	2.00	59
				1,2,3,4,7,8,9-HpCDF-13C	2.00	57
1,2,3,4,7,8-HxCDF	ND	-----	1.9	1,2,3,4,6,7,8-HpCDD-13C	2.00	75
1,2,3,6,7,8-HxCDF	ND	-----	2.1	OCDD-13C	4.00	45
2,3,4,6,7,8-HxCDF	ND	-----	2.3			
1,2,3,7,8,9-HxCDF	ND	-----	2.7	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	ND	-----	1.9	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	2.6	2,3,7,8-TCDD-37Cl4	0.20	70
1,2,3,6,7,8-HxCDD	ND	-----	4.0			
1,2,3,7,8,9-HxCDD	ND	-----	3.8			
Total HxCDD	ND	-----	2.6			
1,2,3,4,6,7,8-HpCDF	ND	-----	2.9	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	5.1	Equivalence: 0.093 pg/L		
Total HpCDF	ND	-----	2.9	(Lower-bound - Using ITE Factors)		
1,2,3,4,6,7,8-HpCDD	----	5.4	3.6 IJ			
Total HpCDD	11	-----	3.6 J			
OCDF	----	8.8	6.1 IJ			
OCDD	----	31	8.9 IJ			

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Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-82453		
Filename	U200920B_02	Matrix	Water
Total Amount Extracted	1040 mL	Dilution	NA
ICAL ID	U200729	Extracted	09/15/2020 13:26
CCal Filename(s)	U200920B_01 & U200920B_19	Analyzed	09/20/2020 11:50
Method Blank ID	BLANK-82452	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.
2,3,7,8-TCDF	0.20	0.22	108
Total TCDF			
2,3,7,8-TCDD	0.20	0.21	105
Total TCDD			
1,2,3,7,8-PeCDF	1.0	1.0	105
2,3,4,7,8-PeCDF	1.0	1.1	108
Total PeCDF			
1,2,3,7,8-PeCDD	1.0	0.96	96
Total PeCDD			
1,2,3,4,7,8-HxCDF	1.0	1.2	119
1,2,3,6,7,8-HxCDF	1.0	1.1	111
2,3,4,6,7,8-HxCDF	1.0	1.0	105
1,2,3,7,8,9-HxCDF	1.0	1.2	115
Total HxCDF			
1,2,3,4,7,8-HxCDD	1.0	1.1	108
1,2,3,6,7,8-HxCDD	1.0	1.2	118
1,2,3,7,8,9-HxCDD	1.0	1.1	110
Total HxCDD			
1,2,3,4,6,7,8-HpCDF	1.0	0.98	98
1,2,3,4,7,8,9-HpCDF	1.0	0.99	99
Total HpCDF			
1,2,3,4,6,7,8-HpCDD	1.0	0.96	96
Total HpCDD			
OCDF	2.0	2.1	105
OCDD	2.0	2.4	118

Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF-13C	2.0	69
2,3,7,8-TCDD-13C	2.0	78
1,2,3,7,8-PeCDF-13C	2.0	76
2,3,4,7,8-PeCDF-13C	2.0	78
1,2,3,7,8-PeCDD-13C	2.0	91
1,2,3,4,7,8-HxCDF-13C	2.0	89
1,2,3,6,7,8-HxCDF-13C	2.0	81
2,3,4,6,7,8-HxCDF-13C	2.0	91
1,2,3,7,8,9-HxCDF-13C	2.0	88
1,2,3,4,7,8-HxCDD-13C	2.0	97
1,2,3,6,7,8-HxCDD-13C	2.0	72
1,2,3,4,6,7,8-HpCDF-13C	2.0	80
1,2,3,4,7,8,9-HpCDF-13C	2.0	78
1,2,3,4,6,7,8-HpCDD-13C	2.0	104
OCDD-13C	4.0	66
1,2,3,4-TCDD-13C	2.0	NA
1,2,3,7,8,9-HxCDD-13C	2.0	NA
2,3,7,8-TCDD-37Cl4	0.20	82

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

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Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCSD-82454		
Filename	U200920B_03	Matrix	Water
Total Amount Extracted	1040 mL	Dilution	NA
ICAL ID	U200729	Extracted	09/15/2020 13:26
CCal Filename(s)	U200920B_01 & U200920B_19	Analyzed	09/20/2020 12:30
Method Blank ID	BLANK-82452	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.
2,3,7,8-TCDF	0.20	0.21	107
Total TCDF			
2,3,7,8-TCDD	0.20	0.20	98
Total TCDD			
1,2,3,7,8-PeCDF	1.0	1.0	103
2,3,4,7,8-PeCDF	1.0	1.0	102
Total PeCDF			
1,2,3,7,8-PeCDD	1.0	1.0	103
Total PeCDD			
1,2,3,4,7,8-HxCDF	1.0	1.2	120
1,2,3,6,7,8-HxCDF	1.0	1.1	109
2,3,4,6,7,8-HxCDF	1.0	1.1	115
1,2,3,7,8,9-HxCDF	1.0	1.1	115
Total HxCDF			
1,2,3,4,7,8-HxCDD	1.0	1.2	123
1,2,3,6,7,8-HxCDD	1.0	1.2	118
1,2,3,7,8,9-HxCDD	1.0	1.2	120
Total HxCDD			
1,2,3,4,6,7,8-HpCDF	1.0	1.1	112
1,2,3,4,7,8,9-HpCDF	1.0	1.0	104
Total HpCDF			
1,2,3,4,6,7,8-HpCDD	1.0	0.98	98
Total HpCDD			
OCDF	2.0	2.2	108
OCDD	2.0	2.4	118

Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF-13C	2.0	62
2,3,7,8-TCDD-13C	2.0	72
1,2,3,7,8-PeCDF-13C	2.0	67
2,3,4,7,8-PeCDF-13C	2.0	71
1,2,3,7,8-PeCDD-13C	2.0	77
1,2,3,4,7,8-HxCDF-13C	2.0	81
1,2,3,6,7,8-HxCDF-13C	2.0	75
2,3,4,6,7,8-HxCDF-13C	2.0	78
1,2,3,7,8,9-HxCDF-13C	2.0	78
1,2,3,4,7,8-HxCDD-13C	2.0	79
1,2,3,6,7,8-HxCDD-13C	2.0	68
1,2,3,4,6,7,8-HpCDF-13C	2.0	70
1,2,3,4,7,8,9-HpCDF-13C	2.0	68
1,2,3,4,6,7,8-HpCDD-13C	2.0	86
OCDD-13C	4.0	53
1,2,3,4-TCDD-13C	2.0	NA
1,2,3,7,8,9-HxCDD-13C	2.0	NA
2,3,7,8-TCDD-37Cl4	0.20	74

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
R = Recovery outside of target range

Y = RF averaging used in calculations
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

Method 8290

Spike Recovery Relative Percent Difference (RPD) Results

Client: Anatek Labs, Inc.

Spike 1 ID	LCS-82453	Spike 2 ID	LCSD-82454
Spike 1 Filename	U200920B_02	Spike 2 Filename	U200920B_03

Compound	Spike 1 %REC	Spike 2 %REC	%RPD
2,3,7,8-TCDF	108	107	0.9
2,3,7,8-TCDD	105	98	6.9
1,2,3,7,8-PeCDF	105	103	1.9
2,3,4,7,8-PeCDF	108	102	5.7
1,2,3,7,8-PeCDD	96	103	7.0
1,2,3,4,7,8-HxCDF	119	120	0.8
1,2,3,6,7,8-HxCDF	111	109	1.8
2,3,4,6,7,8-HxCDF	105	115	9.1
1,2,3,7,8,9-HxCDF	115	115	0.0
1,2,3,4,7,8-HxCDD	108	123	13.0
1,2,3,6,7,8-HxCDD	118	118	0.0
1,2,3,7,8,9-HxCDD	110	120	8.7
1,2,3,4,6,7,8-HpCDF	98	112	13.3
1,2,3,4,7,8,9-HpCDF	99	104	4.9
1,2,3,4,6,7,8-HpCDD	96	98	2.1
OCDF	105	108	2.8
OCDD	118	118	0.0

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

REPORT OF LABORATORY ANALYSIS

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
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F : +1 360 636 1068
www.alsglobal.com

October 20, 2020

Analytical Report for Service Request No: K2008742

Todd Taruscio
Anatek Labs
1282 Alturas Drive
Moscow, ID 83843

RE: MAI0068

Dear Todd,

Enclosed are the results of the sample(s) submitted to our laboratory October 01, 2020
For your reference, these analyses have been assigned our service request number **K2008742.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
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www.alsglobal.com

Table of Contents

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

ALS Environmental

Chain of Custody

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

SUBCONTRACT ORDER

Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 8832839 - Fax (208) 8829246 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - fax (509) 838-4433 - email spokane@anateklabs.com

Sending Laboratory:

Anatek Labs Inc, Moscow ID
1282 Alturas Drive
Moscow, ID 83843
Phone: 208-883-2839
Fax: 208-882-9246

Project Manager: Todd Taruscio
toddt@anateklabs.com

Subcontracted Laboratory: K2008742

ALS Environmental
1317 S 13th Ave
Kelso, WA 98626
Phone: (360) 577-7222
Fax: -

Work Order: MAI0068

Analysis	Due	Expires	Comments
Lab Sample ID: MAI0068-05 *Groundwater* *Sampled: 08/31/2020 08:10*			
Client Sample Name: GW-MW104-0831			
EPH	09/14/2020	09/14/2020 08:10	
Containers Supplied:			

Released By Chris Sanders — Date 09/29/2020

Received By — Date 10/1/2020 1000 BL 1015

PM Mark

Cooler Receipt and Preservation Form

Client Anatech Service Request K20 08746R

Received: 10/1/20 Opened: 10/1/20 By: BR Unloaded: 10/1/20 By: BR

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N
4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA Y N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
5.3	—	IR01		—	—	1Z98171E0342904015	

6. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
13. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

ALS Environmental

Subcontract Lab Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

October 19, 2020

Mr. Mark Harris
ALS Laboratory Group
1317 South 13th Avenue
Kelso, WA 98626

Dear Mr. Harris,

On October 6th, 1 sample was received by our laboratory and assigned our laboratory project number EV20100023. The project was identified as your K2008742. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Glen Perry
Laboratory Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	ALS Laboratory Group 1317 South 13th Avenue Kelso, WA 98626	DATE:	10/19/2020
		ALS JOB#:	EV20100023
		ALS SAMPLE#:	EV20100023-01
CLIENT CONTACT:	Mark Harris	DATE RECEIVED:	10/06/2020
CLIENT PROJECT:	K2008742	COLLECTION DATE:	8/31/2020 8:10:00 AM
CLIENT SAMPLE ID	MAI0068-05	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics	NWEPH	U, HT05	50	1	UG/L	10/16/2020	EBS
>C10-C12 Aliphatics	NWEPH	U, HT05	50	1	UG/L	10/16/2020	EBS
>C12-C16 Aliphatics	NWEPH	U, HT05	50	1	UG/L	10/16/2020	EBS
>C16-C21 Aliphatics	NWEPH	U, HT05	50	1	UG/L	10/16/2020	EBS
>C21-C34 Aliphatics	NWEPH	U, HT05	50	1	UG/L	10/16/2020	EBS
>C8-C10 Aromatics	NWEPH	U, HT05	50	1	UG/L	10/17/2020	EBS
>C10-C12 Aromatics	NWEPH	**250 HT05**	50	1	UG/L	10/17/2020	EBS
>C12-C16 Aromatics	NWEPH	**930 HT05**	50	1	UG/L	10/17/2020	EBS
>C16-C21 Aromatics	NWEPH	**520 HT05**	50	1	UG/L	10/17/2020	EBS
>C21-C34 Aromatics	NWEPH	**99 HT05**	50	1	UG/L	10/17/2020	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWEPH	**85.2 HT05**	10/16/2020	EBS
p-Terphenyl	NWEPH	**66.0 HT05**	10/17/2020	EBS

HT05 -Sample was analyzed outside of the holding time at the request of the client. Results should be considered estimated.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98201 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: ALS Laboratory Group
1317 South 13th Avenue
Kelso, WA 98626

CLIENT CONTACT: Mark Harris
CLIENT PROJECT: K2008742

DATE: 10/19/2020
ALS SDG#: EV20100023
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBLK-R370817 - Batch R370817 - Water by NWEPH

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C10-C12 Aliphatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C12-C16 Aliphatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C16-C21 Aliphatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C21-C34 Aliphatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C8-C10 Aromatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C10-C12 Aromatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C12-C16 Aromatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C16-C21 Aromatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C21-C34 Aromatics	NWEPH	U	UG/L	50	10/16/2020	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: ALS Laboratory Group
1317 South 13th Avenue
Kelso, WA 98626

CLIENT CONTACT: Mark Harris
CLIENT PROJECT: K2008742

DATE: 10/19/2020
ALS SDG#: EV20100023
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R370817 - Water by NWEPH

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics - BS	NWEPH	89.0			70	130	10/16/2020	EBS
>C8-C10 Aliphatics - BSD	NWEPH	78.8	12		70	130	10/16/2020	EBS
>C10-C12 Aliphatics - BS	NWEPH	91.0			70	130	10/16/2020	EBS
>C10-C12 Aliphatics - BSD	NWEPH	81.2	11		70	130	10/16/2020	EBS
>C12-C16 Aliphatics - BS	NWEPH	96.3			70	130	10/16/2020	EBS
>C12-C16 Aliphatics - BSD	NWEPH	86.4	11		70	130	10/16/2020	EBS
>C16-C21 Aliphatics - BS	NWEPH	99.5			70	130	10/16/2020	EBS
>C16-C21 Aliphatics - BSD	NWEPH	88.9	11		70	130	10/16/2020	EBS
>C21-C34 Aliphatics - BS	NWEPH	106			70	130	10/16/2020	EBS
>C21-C34 Aliphatics - BSD	NWEPH	94.7	11		70	130	10/16/2020	EBS
>C8-C10 Aromatics - BS	NWEPH	93.1			70	130	10/17/2020	EBS
>C8-C10 Aromatics - BSD	NWEPH	80.3	15		70	130	10/17/2020	EBS
>C10-C12 Aromatics - BS	NWEPH	93.2			70	130	10/17/2020	EBS
>C10-C12 Aromatics - BSD	NWEPH	81.2	14		70	130	10/17/2020	EBS
>C12-C16 Aromatics - BS	NWEPH	92.6			70	130	10/17/2020	EBS
>C12-C16 Aromatics - BSD	NWEPH	82.5	12		70	130	10/17/2020	EBS
>C16-C21 Aromatics - BS	NWEPH	90.4			70	130	10/17/2020	EBS
>C16-C21 Aromatics - BSD	NWEPH	82.6	9		70	130	10/17/2020	EBS
>C21-C34 Aromatics - BS	NWEPH	93.4			70	130	10/17/2020	EBS
>C21-C34 Aromatics - BSD	NWEPH	85.3	9		70	130	10/17/2020	EBS

APPROVED BY

Laboratory Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Mark Harris

EV2010090023

Project Number: K2008742
Project Manager: Mark Harris
QAP: LAB QAP

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	* Misc Out 1 None
K2008742-001	MAI0068-05	1	Ground Water	8/31/20	0810	Everett ALS	X

Special Instructions/Comments

Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com.

* EPH

H - Test is On Hold P - Test is Authorized for Prep Only

Turnaround Requirements

____ **RUSH** (Surcharges Apply)

PLEASE CIRCLE WORK DAYS

1 2 3 4 5

✓ **STANDARD**

Requested FAX Date: _____

Requested Report Date: 10/14/20

Report Requirements

___ I. Results Only

✓ II. Results + QC Summaries

___ III. Results + QC and Calibration Summaries

___ IV. Data Validation Report with Raw Data

PQL/MDL/J N

EDD N

Invoice Information

PO# 51K2008742

Bill to

Relinquished By: [signature] 10/5/2020 1000 Received By: [signature] ALS 10/6/20 10:15AM Airbill Number: _____

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

October 20, 2020

Analytical Report for Service Request No: K2008953

Todd Taruscio
Anatek Labs
1282 Alturas Drive
Moscow, ID 83843

RE: MAI0068

Dear Todd,

Enclosed are the results of the sample(s) submitted to our laboratory October 07, 2020
For your reference, these analyses have been assigned our service request number **K2008953.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
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www.alsglobal.com

Table of Contents

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

ALS Environmental

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

SUBCONTRACT ORDER

Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 8832839 - Fax (208) 8829246 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - fax (509) 838-4433 - email spokane@anateklabs.com

Sending Laboratory:

Anatek Labs Inc, Moscow ID
1282 Alturas Drive
Moscow, ID 83843
Phone: 208-883-2839
Fax: 208-882-9246

Project Manager: Todd Taruscio
toddt@anateklabs.com

Subcontracted Laboratory: K2008953

ALS Environmental
1317 S 13th Ave
Kelso, WA 98626
Phone: (360) 577-7222
Fax: -

Work Order: MAI0068

Analysis	Due	Expires	Comments
Lab Sample ID: MAI0068-02 *Groundwater* *Sampled: 08/31/2020 09:30*			
Client Sample Name: GW-MW102-0831			
EPH	09/14/2020	09/14/2020 09:30	
Containers Supplied:			
~~**Lab Sample ID: MAI0068-05** *Groundwater* *Sampled: 08/31/2020 08:10*~~			
~~**Client Sample Name: GW-MW104-0831**~~			
EPH	09/14/2020	09/14/2020 08:10	
Containers Supplied: this sample was already sent.			

Released By Chris Sandberg — 10/05/2020 Date

Received By — 10/7/20 1015 Date

PM Mack

Cooler Receipt and Preservation Form

Client Anatek Service Request K20 08953

Received: 10/7/20 Opened: 10/7/20 By: Unloaded: 10/7/20 By:

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N
4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA Y N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
—	11.7	IR01		X		1Z 9817F0340277	
						6592	

6. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
13. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

ALS Environmental

Subcontract Lab Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

October 19, 2020

Mr. Mark Harris
ALS Laboratory Group
1317 South 13th Avenue
Kelso, WA 98626

Dear Mr. Harris,

On October 9th, 1 sample was received by our laboratory and assigned our laboratory project number EV20100057. The project was identified as your K2008953. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Glen Perry
Laboratory Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	ALS Laboratory Group 1317 South 13th Avenue Kelso, WA 98626	DATE:	10/19/2020
		ALS JOB#:	EV20100057
		ALS SAMPLE#:	EV20100057-01
CLIENT CONTACT:	Mark Harris	DATE RECEIVED:	10/09/2020
CLIENT PROJECT:	K2008953	COLLECTION DATE:	8/31/2020 9:30:00 AM
CLIENT SAMPLE ID	MAI0068-02	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics	NWEPH	U, HT05	50	1	UG/L	10/16/2020	EBS
>C10-C12 Aliphatics	NWEPH	U, HT05	50	1	UG/L	10/16/2020	EBS
>C12-C16 Aliphatics	NWEPH	U, HT05	50	1	UG/L	10/16/2020	EBS
>C16-C21 Aliphatics	NWEPH	U, HT05	50	1	UG/L	10/16/2020	EBS
>C21-C34 Aliphatics	NWEPH	U, HT05	50	1	UG/L	10/16/2020	EBS
>C8-C10 Aromatics	NWEPH	U, HT05	50	1	UG/L	10/17/2020	EBS
>C10-C12 Aromatics	NWEPH	U, HT05	50	1	UG/L	10/17/2020	EBS
>C12-C16 Aromatics	NWEPH	U, HT05	50	1	UG/L	10/17/2020	EBS
>C16-C21 Aromatics	NWEPH	U, HT05	50	1	UG/L	10/17/2020	EBS
>C21-C34 Aromatics	NWEPH	U, HT05	50	1	UG/L	10/17/2020	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWEPH	**77.5 HT05**	10/16/2020	EBS
p-Terphenyl	NWEPH	**76.0 HT05**	10/17/2020	EBS

HT05 -Sample was analyzed outside of the holding time at the request of the client. Results should be considered estimated.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: ALS Laboratory Group
1317 South 13th Avenue
Kelso, WA 98626

CLIENT CONTACT: Mark Harris
CLIENT PROJECT: K2008953

DATE: 10/19/2020
ALS SDG#: EV20100057
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBLK-R370817 - Batch R370817 - Water by NWEPH

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C10-C12 Aliphatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C12-C16 Aliphatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C16-C21 Aliphatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C21-C34 Aliphatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C8-C10 Aromatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C10-C12 Aromatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C12-C16 Aromatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C16-C21 Aromatics	NWEPH	U	UG/L	50	10/16/2020	EBS
>C21-C34 Aromatics	NWEPH	U	UG/L	50	10/16/2020	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	ALS Laboratory Group 1317 South 13th Avenue Kelso, WA 98626	DATE: ALS SDG#: WDOE ACCREDITATION:	10/19/2020 EV20100057 C601
CLIENT CONTACT:	Mark Harris		
CLIENT PROJECT:	K2008953		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R370817 - Water by NWEPH

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
>C8-C10 Aliphatics - BS	NWEPH	89.0			70	130	10/16/2020	EBS
>C8-C10 Aliphatics - BSD	NWEPH	78.8	12		70	130	10/16/2020	EBS
>C10-C12 Aliphatics - BS	NWEPH	91.0			70	130	10/16/2020	EBS
>C10-C12 Aliphatics - BSD	NWEPH	81.2	11		70	130	10/16/2020	EBS
>C12-C16 Aliphatics - BS	NWEPH	96.3			70	130	10/16/2020	EBS
>C12-C16 Aliphatics - BSD	NWEPH	86.4	11		70	130	10/16/2020	EBS
>C16-C21 Aliphatics - BS	NWEPH	99.5			70	130	10/16/2020	EBS
>C16-C21 Aliphatics - BSD	NWEPH	88.9	11		70	130	10/16/2020	EBS
>C21-C34 Aliphatics - BS	NWEPH	106			70	130	10/16/2020	EBS
>C21-C34 Aliphatics - BSD	NWEPH	94.7	11		70	130	10/16/2020	EBS
>C8-C10 Aromatics - BS	NWEPH	93.1			70	130	10/17/2020	EBS
>C8-C10 Aromatics - BSD	NWEPH	80.3	15		70	130	10/17/2020	EBS
>C10-C12 Aromatics - BS	NWEPH	93.2			70	130	10/17/2020	EBS
>C10-C12 Aromatics - BSD	NWEPH	81.2	14		70	130	10/17/2020	EBS
>C12-C16 Aromatics - BS	NWEPH	92.6			70	130	10/17/2020	EBS
>C12-C16 Aromatics - BSD	NWEPH	82.5	12		70	130	10/17/2020	EBS
>C16-C21 Aromatics - BS	NWEPH	90.4			70	130	10/17/2020	EBS
>C16-C21 Aromatics - BSD	NWEPH	82.6	9		70	130	10/17/2020	EBS
>C21-C34 Aromatics - BS	NWEPH	93.4			70	130	10/17/2020	EBS
>C21-C34 Aromatics - BSD	NWEPH	85.3	9		70	130	10/17/2020	EBS

APPROVED BY

Laboratory Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Mark Harris

EV2110057

Project Number: K2008953
Project Manager: Mark Harris
QAP: LAB QAP

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Misc Out 1 None
K2008953-001	MAI0668-02	1	Water	8/31/20	0930	Everett ALS	X

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com.

EPA

H - Test is On Hold P - Test is Authorized for Prep Only

Turnaround Requirements
____ **RUSH** (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
/ 1 2 3 4 5
____ **STANDARD**
Requested FAX Date: _____
Requested Report Date: 10/21/20

Report Requirements
____ I. Results Only
✓ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J N
EDD N

Invoice Information
PO# 51K2008953
Bill to

Relinquished By: 10/8/2020 1600 Received By: 1335PM Airbill Number: _____

November 2020 GWM

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

December 14, 2020

Joel Hecker, Project Manager
Pioneer Technologies Corp
5205 Corporate Center Ct, Suite A
Lacey, WA 98503

Dear Mr Hecker:

Included are the amended results from the testing of material submitted on November 24, 2020 from the Hardel, F&BI 011454 project. The reporting limits were lowered for several compounds.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: heckerj@uspioneer.com
PTC1209R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

December 9, 2020

Joel Hecker, Project Manager
Pioneer Technologies Corp
5205 Corporate Center Ct, Suite A
Lacey, WA 98503

Dear Mr Hecker:

Included are the results from the testing of material submitted on November 24, 2020 from the Hardel, F&BI 011454 project. There are 30 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: heckerj@uspioneer.com
PTC1209R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 24, 2020 by Friedman & Bruya, Inc. from the Pioneer Technologies Corp Hardel, F&BI 011454 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Pioneer Technologies Corp
011454 -01	GW-MW101-112420
011454 -02	GW-MW102-112420
011454 -03	GW-MW102-01-112420
011454 -04	GW-MW103-112420
011454 -05	GW-MW104-112420
011454 -06	TB-112420

Samples GW-MW101-112420, GW-MW102-112420, GW-MW102-01-112420, GW-MW103-112420, and GW-MW104-112420 were sent to Fremont Analytical for chloride analysis. The report is enclosed.

The benzo(b)fluoranthene calibration standard did not pass the acceptance criteria in sample GW-MW104-112420. The data were flagged accordingly.

1,2-Dibromoethane (EDB) by 8260D was reported below standard laboratory reporting limit. The data were qualified accordingly.

All other quality control requirements were acceptable.

Date of Report: 12/09/20
Date Received: 11/24/20
Project: Hardel, F&BI 011454
Date Extracted: 12/01/20
Date Analyzed: 12/02/20

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
GW-MW101-112420 011454-01	<100	98
GW-MW102-112420 011454-02	<100	100
GW-MW102-01-112420 011454-03	<100	100
GW-MW103-112420 011454-04	<100	100
GW-MW104-112420 011454-05	150	107
Method Blank 00-2596 MB	<100	97

Date of Report: 12/09/20
Date Received: 11/24/20
Project: Hardel, F&BI 011454
Date Extracted: 11/25/20
Date Analyzed: 11/25/20

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
GW-MW101-112420 011454-01	410	290 x	66
GW-MW102-112420 011454-02	<50	<250	79
GW-MW102-01-112420 011454-03	<50	<250	81
GW-MW103-112420 011454-04	170	<250	85
GW-MW104-112420 011454-05	4,100	480 x	82
Method Blank 00-2591 MB2	<50	<250	79

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	GW-MW101-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	12/02/20	Lab ID:	011454-01 rr
Date Analyzed:	12/09/20 19:24:54	Data File:	011454-01 rr.150
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	6.18
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	GW-MW102-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	12/02/20	Lab ID:	011454-02 rr
Date Analyzed:	12/09/20 19:29:35	Data File:	011454-02 rr.151
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	2.30
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	GW-MW102-01-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	12/02/20	Lab ID:	011454-03 rr
Date Analyzed:	12/09/20 19:34:16	Data File:	011454-03 rr.152
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	2.32
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	GW-MW103-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	12/02/20	Lab ID:	011454-04 rr
Date Analyzed:	12/09/20 19:38:57	Data File:	011454-04 rr.153
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	GW-MW104-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	12/02/20	Lab ID:	011454-05 rr
Date Analyzed:	12/09/20 19:43:38	Data File:	011454-05 rr.154
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	2.26
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Pioneer Technologies Corp
Date Received:	NA	Project:	Hardel, F&BI 011454
Date Extracted:	12/02/20	Lab ID:	I0-743 mb rr
Date Analyzed:	12/03/20 17:53:01	Data File:	I0-743 mb rr.119
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Silver	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-MW101-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	12/01/20	Lab ID:	011454-01
Date Analyzed:	12/01/20	Data File:	120129.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05 j
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-MW102-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	12/01/20	Lab ID:	011454-02
Date Analyzed:	12/01/20	Data File:	120130.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05 j
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	1.3

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-MW102-01-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	12/01/20	Lab ID:	011454-03
Date Analyzed:	12/01/20	Data File:	120131.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05 j
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	1.4

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-MW103-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	12/01/20	Lab ID:	011454-04
Date Analyzed:	12/01/20	Data File:	120132.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05 j
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-MW104-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	12/01/20	Lab ID:	011454-05
Date Analyzed:	12/01/20	Data File:	120133.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05 j
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	240 ve

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-MW104-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	12/01/20	Lab ID:	011454-05 1/10
Date Analyzed:	12/02/20	Data File:	120215.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
Naphthalene	220

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	TB-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	12/01/20	Lab ID:	011454-06
Date Analyzed:	12/02/20	Data File:	120211.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05 j
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Pioneer Technologies Corp
Date Received:	Not Applicable	Project:	Hardel, F&BI 011454
Date Extracted:	12/01/20	Lab ID:	00-2565 mb
Date Analyzed:	12/01/20	Data File:	120109.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05 j
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-MW101-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	11/25/20	Lab ID:	011454-01 1/2
Date Analyzed:	11/25/20	Data File:	112508.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	38	15	61
Phenol-d6	26	10	46
Nitrobenzene-d5	70	17	143
2-Fluorobiphenyl	71	50	150
2,4,6-Tribromophenol	88	50	150
Terphenyl-d14	86	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	<0.04
Fluorene	<0.04
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-MW102-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	11/25/20	Lab ID:	011454-02 1/2
Date Analyzed:	11/25/20	Data File:	112509.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	35	15	61
Phenol-d6	22	10	46
Nitrobenzene-d5	85	17	143
2-Fluorobiphenyl	88	50	150
2,4,6-Tribromophenol	90	50	150
Terphenyl-d14	106	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	1.3
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	1.3
Fluorene	0.40
Phenanthrene	0.13
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-MW102-01-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	11/25/20	Lab ID:	011454-03 1/2
Date Analyzed:	11/25/20	Data File:	112510.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	36	15	61
Phenol-d6	24	10	46
Nitrobenzene-d5	88	17	143
2-Fluorobiphenyl	87	50	150
2,4,6-Tribromophenol	97	50	150
Terphenyl-d14	103	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	1.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	1.2
Fluorene	0.40
Phenanthrene	0.13
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-MW103-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	11/25/20	Lab ID:	011454-04 1/2
Date Analyzed:	11/25/20	Data File:	112511.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	42	15	61
Phenol-d6	28	10	46
Nitrobenzene-d5	91	17	143
2-Fluorobiphenyl	91	50	150
2,4,6-Tribromophenol	107	50	150
Terphenyl-d14	112	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.4
2-Methylnaphthalene	<0.4
1-Methylnaphthalene	<0.4
Acenaphthylene	<0.04
Acenaphthene	1.7
Fluorene	0.21
Phenanthrene	<0.04
Anthracene	<0.04
Fluoranthene	<0.04
Pyrene	<0.04
Benz(a)anthracene	<0.04
Chrysene	<0.04
Benzo(a)pyrene	<0.04
Benzo(b)fluoranthene	<0.04
Benzo(k)fluoranthene	<0.04
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-MW104-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	11/25/20	Lab ID:	011454-05 1/2
Date Analyzed:	11/25/20	Data File:	112512.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	41	15	61
Phenol-d6	28	10	46
Nitrobenzene-d5	93	17	143
2-Fluorobiphenyl	85	50	150
2,4,6-Tribromophenol	107	50	150
Terphenyl-d14	104	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	150 ve
2-Methylnaphthalene	160 ve
1-Methylnaphthalene	130 ve
Acenaphthylene	<0.04
Acenaphthene	140 ve
Fluorene	56
Phenanthrene	89 ve
Anthracene	11
Fluoranthene	8.3
Pyrene	8.4
Benz(a)anthracene	0.32
Chrysene	0.39
Benzo(a)pyrene	0.098
Benzo(b)fluoranthene	0.12 ca
Benzo(k)fluoranthene	0.050
Indeno(1,2,3-cd)pyrene	<0.04
Dibenz(a,h)anthracene	<0.04
Benzo(g,h,i)perylene	<0.08

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-MW104-112420	Client:	Pioneer Technologies Corp
Date Received:	11/24/20	Project:	Hardel, F&BI 011454
Date Extracted:	11/25/20	Lab ID:	011454-05 1/20
Date Analyzed:	12/01/20	Data File:	120106.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	30 d	15	61
Phenol-d6	23 d	10	46
Nitrobenzene-d5	82 d	17	143
2-Fluorobiphenyl	82 d	50	150
2,4,6-Tribromophenol	87 d	50	150
Terphenyl-d14	94 d	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	160
2-Methylnaphthalene	160
1-Methylnaphthalene	120
Acenaphthene	150
Phenanthrene	96

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Pioneer Technologies Corp
Date Received:	Not Applicable	Project:	Hardel, F&BI 011454
Date Extracted:	11/25/20	Lab ID:	00-2729 mb
Date Analyzed:	11/25/20	Data File:	112506.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	17	15	61
Phenol-d6	12	10	46
Nitrobenzene-d5	86	17	143
2-Fluorobiphenyl	89	50	150
2,4,6-Tribromophenol	63	50	150
Terphenyl-d14	115	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Date of Report: 12/09/20
Date Received: 11/24/20
Project: Hardel, F&BI 011454

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 011431-01(Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Gasoline	ug/L (ppb)	1,000	<100	94	101	53-117	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	99	69-134

Date of Report: 12/09/20
Date Received: 11/24/20
Project: Hardel, F&BI 011454

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	94	98	63-142	4

Date of Report: 12/09/20
Date Received: 11/24/20
Project: Hardel, F&BI 011454

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 6020B

Laboratory Code: 011492-01 rr (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	22.9	91	82	75-125	10
Silver	ug/L (ppb)	5	<1	83	89	75-125	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	96	80-120
Silver	ug/L (ppb)	5	93	80-120

Date of Report: 12/09/20
Date Received: 11/24/20
Project: Hardel, F&BI 011454

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 011466-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	10	<0.2	90	36-166
Hexane	ug/L (ppb)	10	<5	95	52-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	100	74-127
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	104	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<1	116	48-149
Benzene	ug/L (ppb)	10	<0.35	100	76-125
Trichloroethene	ug/L (ppb)	10	<1	108	66-135
Toluene	ug/L (ppb)	10	<1	96	76-122
Tetrachloroethene	ug/L (ppb)	10	<1	103	10-226
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	108	69-134
Ethylbenzene	ug/L (ppb)	10	<1	97	69-135
m,p-Xylene	ug/L (ppb)	20	<2	98	69-135
o-Xylene	ug/L (ppb)	10	<1	97	60-140
Naphthalene	ug/L (ppb)	10	<1	91	44-164

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	10	88	82	50-154	7
Hexane	ug/L (ppb)	10	85	82	57-137	4
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	99	98	64-147	1
cis-1,2-Dichloroethene	ug/L (ppb)	10	102	102	74-136	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	117	111	66-129	5
Benzene	ug/L (ppb)	10	98	96	69-134	2
Trichloroethene	ug/L (ppb)	10	106	100	67-133	6
Toluene	ug/L (ppb)	10	91	91	72-122	0
Tetrachloroethene	ug/L (ppb)	10	96	97	76-121	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	102	103	82-115	1
Ethylbenzene	ug/L (ppb)	10	92	92	77-124	0
m,p-Xylene	ug/L (ppb)	20	92	93	81-112	1
o-Xylene	ug/L (ppb)	10	93	93	81-121	0
Naphthalene	ug/L (ppb)	10	93	92	64-133	1

Date of Report: 12/09/20
Date Received: 11/24/20
Project: Hardel, F&BI 011454

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	83	84	70-130	1
2-Methylnaphthalene	ug/L (ppb)	5	85	85	70-130	0
1-Methylnaphthalene	ug/L (ppb)	5	82	82	70-130	0
Acenaphthylene	ug/L (ppb)	5	96	98	70-130	2
Acenaphthene	ug/L (ppb)	5	90	92	70-130	2
Fluorene	ug/L (ppb)	5	91	92	70-130	1
Phenanthrene	ug/L (ppb)	5	92	95	70-130	3
Anthracene	ug/L (ppb)	5	92	95	70-130	3
Fluoranthene	ug/L (ppb)	5	96	97	70-130	1
Pyrene	ug/L (ppb)	5	105	104	70-130	1
Benz(a)anthracene	ug/L (ppb)	5	98	97	70-130	1
Chrysene	ug/L (ppb)	5	96	95	70-130	1
Benzo(a)pyrene	ug/L (ppb)	5	104	102	70-130	2
Benzo(b)fluoranthene	ug/L (ppb)	5	110	127	62-130	14
Benzo(k)fluoranthene	ug/L (ppb)	5	104	105	70-130	1
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	101	100	70-130	1
Dibenz(a,h)anthracene	ug/L (ppb)	5	103	100	70-130	3
Benzo(g,h,i)perylene	ug/L (ppb)	5	104	100	70-130	4

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 011454
Work Order Number: 2011535

December 04, 2020

Attention Michael Erdahl:

Fremont Analytical, Inc. received 5 sample(s) on 11/25/2020 for the analyses presented in the following report.

Ion Chromatography by EPA Method 300.0

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *12/04/2020*

CLIENT: Friedman & Bruya
Project: 011454
Work Order: 2011535

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2011535-001	GW-MW101-112420	11/24/2020 9:25 AM	11/25/2020 12:26 PM
2011535-002	GW-MW102-112420	11/24/2020 10:30 AM	11/25/2020 12:26 PM
2011535-003	GW-MW102-01-112420	11/24/2020 10:30 AM	11/25/2020 12:26 PM
2011535-004	GW-MW103-112420	11/24/2020 11:30 AM	11/25/2020 12:26 PM
2011535-005	GW-MW104-112420	11/24/2020 12:30 PM	11/25/2020 12:26 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Original

Case Narrative

WO#: **2011535**
Date: **12/4/2020**

CLIENT: Friedman & Bruya
Project: 011454

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

CLIENT: Friedman & Bruya
Project: 011454

Lab ID: 2011535-001 **Collection Date:** 11/24/2020 9:25:00 AM
Client Sample ID: **GW-MW101-112420** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 30566		Analyst: SS
Chloride	175	10.0	D	mg/L	100	12/1/2020 11:51:00 AM

Lab ID: 2011535-002 **Collection Date:** 11/24/2020 10:30:00 AM
Client Sample ID: **GW-MW102-112420** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 30566		Analyst: SS
Chloride	2.40	1.00	D	mg/L	10	11/30/2020 4:51:00 PM

Lab ID: 2011535-003 **Collection Date:** 11/24/2020 10:30:00 AM
Client Sample ID: **GW-MW102-01-112420** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 30566		Analyst: SS
Chloride	2.41	1.00	D	mg/L	10	11/30/2020 5:14:00 PM

Lab ID: 2011535-004 **Collection Date:** 11/24/2020 11:30:00 AM
Client Sample ID: **GW-MW103-112420** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 30566		Analyst: SS
Chloride	5.80	1.00	D	mg/L	10	11/30/2020 5:37:00 PM

Analytical Report

Work Order: **2011535**
Date Reported: **12/4/2020**

CLIENT: Friedman & Bruya
Project: 011454

Lab ID: 2011535-005 **Collection Date:** 11/24/2020 12:30:00 PM
Client Sample ID: **GW-MW104-112420** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 30566		Analyst: SS
Chloride	329	20.0	D	mg/L	200	12/1/2020 12:14:00 PM

Work Order: 2011535
CLIENT: Friedman & Bruya
Project: 011454

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID: **MB-30566**	SampType: **MBLK**	Units: **mg/L**	Prep Date: **11/30/2020**	RunNo: **63748**
Client ID: **MBLKW**	Batch ID: **30566**		Analysis Date: **11/30/2020**	SeqNo: **1280063**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.100									

Sample ID: **LCS-30566**	SampType: **LCS**	Units: **mg/L**	Prep Date: **11/30/2020**	RunNo: **63748**
Client ID: **LCSW**	Batch ID: **30566**		Analysis Date: **11/30/2020**	SeqNo: **1280064**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.705	0.100	0.7500	0	94.0	90	110				

Sample ID: **2011542-001BDUP**	SampType: **DUP**	Units: **mg/L**	Prep Date: **11/30/2020**	RunNo: **63748**
Client ID: **BATCH**	Batch ID: **30566**		Analysis Date: **11/30/2020**	SeqNo: **1280071**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	270	0.100						269.3	0.0861	20	E

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: **2011542-001BMS**	SampType: **MS**	Units: **mg/L**	Prep Date: **11/30/2020**	RunNo: **63748**
Client ID: **BATCH**	Batch ID: **30566**		Analysis Date: **11/30/2020**	SeqNo: **1280072**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	268	0.100	0.7500	269.3	-145	80	120				ES

NOTES:
S - Analyte concentration was too high for accurate spike recovery(ies).
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: **2011542-001BMSD**	SampType: **MSD**	Units: **mg/L**	Prep Date: **11/30/2020**	RunNo: **63748**
Client ID: **BATCH**	Batch ID: **30566**		Analysis Date: **11/30/2020**	SeqNo: **1280073**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	268	0.100	0.7500	269.3	-186	80	120	268.2	0.114	20	ES

Work Order: 2011535
CLIENT: Friedman & Bruya
Project: 011454

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID: **2011542-001BMSD** SampType: **MSD** Units: **mg/L** Prep Date: **11/30/2020** RunNo: **63748**
Client ID: **BATCH** Batch ID: **30566** Analysis Date: **11/30/2020** SeqNo: **1280073**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Analyte concentration was too high for accurate spike recovery(ies).
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample Log-In Check List

Client Name:	**FB**	Work Order Number:	**2011535**
Logged by:	**Clare Griggs**	Date Received:	**11/25/2020 12:26:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample	1.9

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

2011535

Page # 1 of 1

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER Fremont

PROJECT NAME/NO. 011454

PO # A-478

REMARKS

Please Email Results

TURNAROUND TIME

☒ Standard TAT

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Dioxins/Furans	EPH	VPH	Chloride							Notes
GW-MW101-112420		11/24/20	0925	GW	1				x							
GW-MW102-112420			1030						x							
GW-MW102-01-112420			1030						x							
GW-MW103-112420			1130						x							
GW-MW104-112420			1230						x							

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	11/25/20	09:40
Received by:		Dave Anderson	FAI	11/25/20	1220
Relinquished by:					
Received by:					

011454

SAMPLE CHAIN OF CUSTODY

ME 11-24-20 VW4/E03/AE5

Page # 1 of 1

Report To Joel Hecker
Company Pioneer Technologies Corp.
Address 5205 Corporate Center Ct. SE
City, State, ZIP Lacey WA 98503
Phone 360-828-3739 Email Heckerj@pioneer.com

SAMPLERS (signature) [signature]
PROJECT NAME: Hardel
PO #:
REMARKS:
Project specific RLs? - Yes / No
INVOICE TO: Joel Hecker

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260*	PAHs EPA 8270	PCBs EPA 8082	Dissolved Arsenic/Silver	chlorides	EDB		Notes
						ANALYSES REQUESTED											
GW-MW101-112420	01 A-K (NP)	11/24	0925	W GW	14	X	X			X	X		X	X			select VOCs: PCE, TCE, cis-DCE, vinyl chloride, BTEX, n-hexane,
GW-MW102-112420	02 A-K (NP)	11/24	1035	W GW	14	↓	↓			↓	↓		↓	↓			EDB, EDC, MTBE, and naphthalene
GW-MW102-01-112420	03 A-K	11/24	1030	W GW	11	↓	↓			↓	↓		↓	↓			
GW-MW103-112420	04 A-N	11/24	1130	W GW	14	↓	↓			↓	↓		↓	↓	✓		Hold all samples for EPH/VPH/ HCID
GW-MW104-112420	05 A-N	11/24	1230	W GW	14	↓	↓			↓	↓		↓	↓	✓		EPH/VPH/ HCID
TB-112420	06 AB	11/24	—	Trip Blank	2					X							
																	Samples were Field Filtered for metals
																	√ per JH 12/9
																	Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Joel Hecker	PTC	11/24	1406
Received by: [signature]	Michael Erdahl	FBI	11/24/20	1630
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

January 11, 2021

Joel Hecker, Project Manager
Pioneer Technologies Corp
5205 Corporate Center Ct, Suite A
Lacey, WA 98503

Dear Mr Hecker:

Included are the additional results from the testing of material submitted on November 24, 2020 from the Hardel, F&BI 011454 project. There are 3 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
PTC0111R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 24, 2020 by Friedman & Bruya, Inc. from the Pioneer Technologies Corp Hardel, F&BI 011454 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Pioneer Technologies Corp
011454 -01	GW-MW101-112420
011454 -02	GW-MW102-112420
011454 -03	GW-MW102-01-112420
011454 -04	GW-MW103-112420
011454 -05	GW-MW104-112420
011454 -06	TB-112420

Sample GW-MW104-112420 was sent to Fremont Analytical for EPH analysis. The report is enclosed.

All quality control requirements were acceptable.

Date of Report: 01/11/21
Date Received: 11/24/20
Project: Hardel, F&BI 011454
Date Extracted: 11/25/20
Date Analyzed: 11/25/20

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery) (Limit 56-165)
GW-MW101-112420 011454-01	ND	D	ND	ip
Method Blank 00-2591 MB2	ND	ND	ND	79

ND - Material not detected at or above 0.2 mg/L gas, 0.5 mg/L diesel and 0.5 mg/L heavy oil.

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 011454
Work Order Number: 2012157

January 07, 2021

Attention Michael Erdahl:

Fremont Analytical, Inc. received 1 sample(s) on 12/9/2020 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *01/07/2021*

CLIENT: Friedman & Bruya
Project: 011454
Work Order: 2012157

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2012157-001	GW-MW104-112420	11/24/2020 12:30 PM	12/09/2020 3:08 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Original

Case Narrative

WO#: **2012157**
Date: **1/7/2021**

CLIENT: Friedman & Bruya
Project: 011454

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2012157**
Date Reported: **1/7/2021**

Client: Friedman & Bruya
Collection Date: 11/24/2020 12:30:00 PM
Project: 011454
Lab ID: 2012157-001
Matrix: Groundwater
Client Sample ID: **GW-MW104-112420**

Extractable Petroleum Hydrocarbons by NWEPH

Batch ID: 30682 Analyst: IH

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Aliphatic Hydrocarbon (C8-C10)	ND	158	*H	µg/L	1	1/7/2021 2:04:08 AM
Aliphatic Hydrocarbon (C10-C12)	ND	79.0	H	µg/L	1	1/7/2021 2:04:08 AM
Aliphatic Hydrocarbon (C12-C16)	ND	79.0	H	µg/L	1	1/7/2021 2:04:08 AM
Aliphatic Hydrocarbon (C16-C21)	ND	79.0	H	µg/L	1	1/7/2021 2:04:08 AM
Aliphatic Hydrocarbon (C21-C34)	ND	79.0	H	µg/L	1	1/7/2021 2:04:08 AM
Aromatic Hydrocarbon (C8-C10)	ND	158	*H	µg/L	1	1/7/2021 2:04:08 AM
Aromatic Hydrocarbon (C10-C12)	241	79.0	H	µg/L	1	1/7/2021 2:04:08 AM
Aromatic Hydrocarbon (C12-C16)	654	79.0	H	µg/L	1	1/7/2021 2:04:08 AM
Aromatic Hydrocarbon (C16-C21)	528	79.0	H	µg/L	1	1/7/2021 2:04:08 AM
Aromatic Hydrocarbon (C21-C34)	ND	79.0	H	µg/L	1	1/7/2021 2:04:08 AM
Surr: 1-Chlorooctadecane	46.3	60 - 140	SH	%Rec	1	1/7/2021 2:04:08 AM
Surr: o-Terphenyl	72.3	60 - 140	H	%Rec	1	1/7/2021 2:04:08 AM

NOTES:
* - Flagged value is not within established control limits.
S - Outlying surrogate recovery(ies) observed.

Work Order: 2012157
CLIENT: Friedman & Bruya
Project: 011454

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **MB-30682** SampType: **MBLK** Units: **µg/L** Prep Date: **12/10/2020** RunNo: **64524**
Client ID: **MBLKW** Batch ID: **30682** Analysis Date: **1/6/2021** SeqNo: **1297760**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	160		0	0						*
Aromatic Hydrocarbon (C10-C12)	ND	79.9		0	0						
Aromatic Hydrocarbon (C12-C16)	ND	79.9		0	0						
Aromatic Hydrocarbon (C16-C21)	ND	79.9		0	0						
Aromatic Hydrocarbon (C21-C34)	ND	79.9		0	0						
Surr: o-Terphenyl	306		399.4		76.7	60	140				

NOTES:
* - Flagged value is not within established control limits.

Sample ID: **MB-30682** SampType: **MBLK** Units: **µg/L** Prep Date: **12/10/2020** RunNo: **64525**
Client ID: **MBLKW** Batch ID: **30682** Analysis Date: **1/6/2021** SeqNo: **1297778**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	160		0	0						*
Aliphatic Hydrocarbon (C10-C12)	ND	79.9		0	0						
Aliphatic Hydrocarbon (C12-C16)	ND	79.9		0	0						
Aliphatic Hydrocarbon (C16-C21)	ND	79.9		0	0						
Aliphatic Hydrocarbon (C21-C34)	ND	79.9		0	0						
Surr: 1-Chlorooctadecane	320		399.4		80.0	60	140				

NOTES:
* - Flagged value is not within established control limits.

Sample ID: **LCS-30682** SampType: **LCS** Units: **µg/L** Prep Date: **12/10/2020** RunNo: **64524**
Client ID: **LCSW** Batch ID: **30682** Analysis Date: **1/6/2021** SeqNo: **1297761**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	453	158	987.9	0	45.9	70	130				S
Aromatic Hydrocarbon (C10-C12)	366	79.0	494.0	0	74.1	70	130				
Aromatic Hydrocarbon (C12-C16)	354	79.0	494.0	0	71.7	70	130				
Aromatic Hydrocarbon (C16-C21)	560	79.0	494.0	0	113	70	130				
Aromatic Hydrocarbon (C21-C34)	562	79.0	494.0	0	114	70	130				

Work Order: 2012157
CLIENT: Friedman & Bruya
Project: 011454

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **LCS-30682** SampType: **LCS** Units: **µg/L** Prep Date: **12/10/2020** RunNo: **64524**
Client ID: **LCSW** Batch ID: **30682** Analysis Date: **1/6/2021** SeqNo: **1297761**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: o-Terphenyl	349		395.2		88.4	60	140				

NOTES:
S - Outlying spike recovery observed (low bias). Samples will be qualified with a *.

Sample ID: **LCS-30682** SampType: **LCS** Units: **µg/L** Prep Date: **12/10/2020** RunNo: **64525**
Client ID: **LCSW** Batch ID: **30682** Analysis Date: **1/6/2021** SeqNo: **1297779**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	440	158	987.9	0	44.5	70	130				S
Aliphatic Hydrocarbon (C10-C12)	375	79.0	494.0	0	76.0	70	130				
Aliphatic Hydrocarbon (C12-C16)	417	79.0	494.0	0	84.5	70	130				
Aliphatic Hydrocarbon (C16-C21)	442	79.0	494.0	0	89.6	70	130				
Aliphatic Hydrocarbon (C21-C34)	406	79.0	494.0	0	82.3	70	130				
Surr: 1-Chlorooctadecane	321		395.2		81.3	60	140				

NOTES:
S - Outlying spike recovery observed (low bias). Samples will be qualified with a *.

Sample ID: **2012115-001AMS** SampType: **MS** Units: **µg/L** Prep Date: **12/10/2020** RunNo: **64524**
Client ID: **BATCH** Batch ID: **30682** Analysis Date: **1/6/2021** SeqNo: **1297763**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	216	159	993.9	0	21.7	70	130				S
Aromatic Hydrocarbon (C10-C12)	170	79.5	496.9	0	34.2	70	130				S
Aromatic Hydrocarbon (C12-C16)	324	79.5	496.9	0	65.2	70	130				S
Aromatic Hydrocarbon (C16-C21)	315	79.5	496.9	0	63.4	70	130				S
Aromatic Hydrocarbon (C21-C34)	456	79.5	496.9	71.49	77.3	70	130				
Surr: o-Terphenyl	310		397.6		77.9	60	140				

NOTES:
S - Outlying spike recovery(ies) observed.

Work Order: 2012157
CLIENT: Friedman & Bruya
Project: 011454

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **2012115-001AMS** SampType: **MS** Units: **µg/L** Prep Date: **12/10/2020** RunNo: **64525**
Client ID: **BATCH** Batch ID: **30682** Analysis Date: **1/6/2021** SeqNo: **1297781**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	352	159	993.9	0	35.4	70	130				S
Aliphatic Hydrocarbon (C10-C12)	540	79.5	496.9	0	109	70	130				
Aliphatic Hydrocarbon (C12-C16)	419	79.5	496.9	0	84.3	70	130				
Aliphatic Hydrocarbon (C16-C21)	404	79.5	496.9	0	81.2	70	130				
Aliphatic Hydrocarbon (C21-C34)	491	79.5	496.9	0	98.8	70	130				
Surr: 1-Chlorooctadecane	303		397.6		76.3	60	140				

NOTES:
S - Outlying spike recovery observed.

Sample ID: **2012115-001AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **12/10/2020** RunNo: **64524**
Client ID: **BATCH** Batch ID: **30682** Analysis Date: **1/6/2021** SeqNo: **1297764**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	252	158	986.1	0	25.6	70	130	216.1	15.4	30	S
Aromatic Hydrocarbon (C10-C12)	218	78.9	493.0	0	44.3	70	130	170.2	24.8	30	S
Aromatic Hydrocarbon (C12-C16)	340	78.9	493.0	0	69.0	70	130	323.8	4.90	30	S
Aromatic Hydrocarbon (C16-C21)	381	78.9	493.0	0	77.2	70	130	315.0	18.9	30	
Aromatic Hydrocarbon (C21-C34)	546	78.9	493.0	71.49	96.2	70	130	455.6	18.0	30	
Surr: o-Terphenyl	291		394.4		73.7	60	140		0		

NOTES:
S - Outlying spike recovery(ies) observed.

Sample ID: **2012115-001AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **12/10/2020** RunNo: **64525**
Client ID: **BATCH** Batch ID: **30682** Analysis Date: **1/6/2021** SeqNo: **1297782**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	389	158	986.1	0	39.4	70	130	351.6	10.0	30	S
Aliphatic Hydrocarbon (C10-C12)	472	78.9	493.0	0	95.8	70	130	540.2	13.4	30	
Aliphatic Hydrocarbon (C12-C16)	423	78.9	493.0	0	85.8	70	130	419.1	0.978	30	
Aliphatic Hydrocarbon (C16-C21)	424	78.9	493.0	0	86.1	70	130	403.7	5.00	30	
Aliphatic Hydrocarbon (C21-C34)	476	78.9	493.0	0	96.5	70	130	491.0	3.15	30	

Work Order: 2012157
CLIENT: Friedman & Bruya
Project: 011454

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: **2012115-001AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **12/10/2020** RunNo: **64525**
Client ID: **BATCH** Batch ID: **30682** Analysis Date: **1/6/2021** SeqNo: **1297782**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1-Chlorooctadecane	319		394.4		81.0	60	140		0		

NOTES:
S - Outlying spike recovery observed.

Sample Log-In Check List

Client Name:	**FB**	Work Order Number:	**2012157**
Logged by:	**Gabrielle Coeuille**	Date Received:	**12/9/2020 3:08:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☑	No ☐	NA ☐ HCL
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☐	No ☑	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Sample received out of hold

Item Information

Item #	Temp ºC
Sample 1	2.3

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

2012157

Page # 1 of 1

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER Fremont

PROJECT NAME/NO.	PO #
011454	A-488

REMARKS

Please Email Results

TURNAROUND TIME

X Standard TAT

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Dioxins/Furans	EPH	VPH	EPH							Notes
GW-MW104-112420		11/24/20	1230	GW					X							

Page 11 of 11

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	12/9/20	1430
Received by:		Lauren Baker	FAI	12/9/20	1508
Relinquished by:					
Received by:					

011454

SAMPLE CHAIN OF CUSTODY

ME 11-24-20 VW4/EO3/AE5

Page # 1 of 1

Report To Joel Hecker

Company Pioneer Technologies Corp.

Address 5205 Corporate Center Ct. SE

City, State, ZIP Lacey WA 98503

Phone 360-828-1739 Email Heckerj@ usplumer.com

SAMPLERS (signature) Joel Hecker

PROJECT NAME: Hardel

PO #:

REMARKS:

Project specific RLs? - Yes / No

INVOICE TO: Joel Hecker

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID (NP)	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260*	PAHs EPA 8270	PCBs EPA 8082	Dissolved Arsenic/Silver	chloride	EPH	HCID	Notes (✓ - per JH 12/11 ✓)
GW-MW101-112420	01 A-K N	11/24	0925	W	4	X	X			X	X		X	X		✓	select VOCs: PCE, TCE, cis-DCE, vinyl chloride, BTEX, n-hexane, EDB, EDC, MTBE, and naphthalene
GW-MW102-112420	02 A-K N	11/24	1030	W	4	↓	↓			↓	↓		↓	↓			
GW-MW102-01-112420	03 A-K	11/24	1030	W	4												
GW-MW103-112420	04 A-N	11/24	1130	W	4												Hold all samples for EPH/VPH, HCID
GW-MW104-112420	05 A-N	11/24	1230	W	4	↓	↓			↓	↓		↓	↓	✓		
TB-112420	06 AB	11/24	—	Trip Blank	2					X							
																	Sample filtered in field for metals
																	✓ - per JH 12/9
																	Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Joel Hecker	Joel Hecker	PTC	11/24	1400
Received by: Michael Erdahl	Michael Erdahl	F:B:a	11/24/20	1630
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

January 2021
Investigation Activities

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

January 20, 2021

Joel Hecker, Project Manager
Pioneer Technologies Corp
5205 Corporate Center Ct, Suite A
Lacey, WA 98503

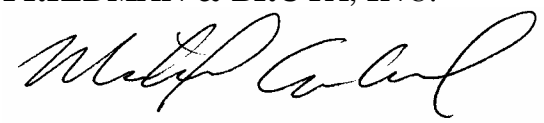
Dear Mr Hecker:

Included are the results from the testing of material submitted on January 8, 2021 from the Hardel, F&BI 101069 project. There are 29 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PTC0120R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 8, 2021 by Friedman & Bruya, Inc. from the Pioneer Technologies Corp Hardel, F&BI 101069 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Pioneer Technologies Corp
101069 -01	GW-B201-010721
101069 -02	GW-B202-010721
101069 -03	S-B202-5-6-010721
101069 -04	GW-B204-010721
101069 -05	S-B204-5-7-010721
101069 -06	TB-010721
101069 -07	WCS-010721

Naphthalene was detected in the 8270E analysis of the soil method blank. The data were flagged as due to laboratory contamination.

The 8270E calibration standard failed the acceptance criteria for several analytes. The data were flagged accordingly.

The 8260D matrix spike and matrix spike duplicate failed the relative percent difference for several analytes. In addition, acetone in the laboratory control sample exceeded the acceptance criteria. The analytes were not detected in the sample therefore the data were acceptable.

Per the chain of custody, sample WCS-010721 was reported in a separate report.

All other quality control requirements were acceptable.

Date of Report: 01/20/21
Date Received: 01/08/21
Project: Hardel, F&BI 101069
Date Extracted: 01/08/20
Date Analyzed: 01/11/20

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
S-B202-5-6-010721 101069-03 1/5	120	92
Method Blank 01-53 MB	<5	93

Date of Report: 01/20/21
Date Received: 01/08/21
Project: Hardel, F&BI 101069
Date Extracted: 01/11/21
Date Analyzed: 01/12/21

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
GW-B201-010721 101069-01	110	96
GW-B202-010721 101069-02	1,800	101
GW-B204-010721 101069-04	<100	66
TB-010721 101069-06	<100	94
Method Blank 01-52 MB	<100	98

Date of Report: 01/20/21
Date Received: 01/08/21
Project: Hardel, F&BI 101069
Date Extracted: 01/08/21
Date Analyzed: 01/08/21

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
S-B202-5-6-010721 101069-03	2,600 x	600 x	83
Method Blank 01-75 MB	<50	<250	92

Date of Report: 01/20/21
Date Received: 01/08/21
Project: Hardel, F&BI 101069
Date Extracted: 01/08/20
Date Analyzed: 01/08/20

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
GW-B201-010721 101069-01	140 x	<250	98
GW-B202-010721 101069-02	5,000 x	610 x	114
GW-B204-010721 101069-04	98 x	<250	97
Method Blank 01-71 MB2	<50	<250	118

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	S-B202-5-6-010721	Client:	Pioneer Technologies Corp
Date Received:	01/08/21	Project:	Hardel, F&BI 101069
Date Extracted:	01/08/21	Lab ID:	101069-03 1/500
Date Analyzed:	01/08/21	Data File:	010817.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	40 d	32	100
Phenol-d6	53 d	46	107
Nitrobenzene-d5	70 d	24	127
2-Fluorobiphenyl	90 d	46	108
2,4,6-Tribromophenol	333 d	25	127
Terphenyl-d14	100 d	50	150

Compounds:	Concentration mg/kg (ppm)
Naphthalene	120
2-Methylnaphthalene	63
1-Methylnaphthalene	36
Acenaphthylene	<1
Acenaphthene	74
Fluorene	89
Phenanthrene	210
Anthracene	29
Fluoranthene	88
Pyrene	43
Benz(a)anthracene	12
Chrysene	11
Benzo(a)pyrene	2.5
Benzo(b)fluoranthene	4.1
Benzo(k)fluoranthene	1.6
Indeno(1,2,3-cd)pyrene	<1
Dibenz(a,h)anthracene	<1
Benzo(g,h,i)perylene	<1

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Pioneer Technologies Corp
Date Received:	Not Applicable	Project:	Hardel, F&BI 101069
Date Extracted:	01/08/21	Lab ID:	01-74 mb 2 1/5
Date Analyzed:	01/08/21	Data File:	010809.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	92	32	100
Phenol-d6	97	46	107
Nitrobenzene-d5	110	24	127
2-Fluorobiphenyl	106	46	108
2,4,6-Tribromophenol	96	25	127
Terphenyl-d14	111	50	150

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.010 lc
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-B201-010721	Client:	Pioneer Technologies Corp
Date Received:	01/08/21	Project:	Hardel, F&BI 101069
Date Extracted:	01/11/21	Lab ID:	101069-01
Date Analyzed:	01/11/21	Data File:	011113.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	14 ip	15	99
Phenol-d6	13	11	65
Nitrobenzene-d5	87	10	145
2-Fluorobiphenyl	90	16	138
2,4,6-Tribromophenol	61	12	132
Terphenyl-d14	96	35	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	0.22
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	5.1
Fluorene	1.3
Phenanthrene	0.13
Anthracene	0.034
Fluoranthene	0.049
Pyrene	0.031
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-B202-010721	Client:	Pioneer Technologies Corp
Date Received:	01/08/21	Project:	Hardel, F&BI 101069
Date Extracted:	01/11/21	Lab ID:	101069-02 1/5
Date Analyzed:	01/11/21	Data File:	011116.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	20 d	15	99
Phenol-d6	14 d	11	65
Nitrobenzene-d5	62 d	10	145
2-Fluorobiphenyl	56 d	16	138
2,4,6-Tribromophenol	73 d	12	132
Terphenyl-d14	71 d	35	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	440 ve
2-Methylnaphthalene	200 ve
1-Methylnaphthalene	120
Acenaphthylene	2.2
Acenaphthene	190 ve
Fluorene	210 ve
Phenanthrene	380 ve
Anthracene	55
Fluoranthene	150
Pyrene	76
Benz(a)anthracene	24
Chrysene	20
Benzo(a)pyrene	5.8
Benzo(b)fluoranthene	9.5
Benzo(k)fluoranthene	3.7
Indeno(1,2,3-cd)pyrene	1.4 ca
Dibenz(a,h)anthracene	0.48 ca
Benzo(g,h,i)perylene	1.0

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-B202-010721	Client:	Pioneer Technologies Corp
Date Received:	01/08/21	Project:	Hardel, F&BI 101069
Date Extracted:	01/11/21	Lab ID:	101069-02 1/100
Date Analyzed:	01/12/21	Data File:	011210.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	13 d	15	99
Phenol-d6	7 d	11	65
Nitrobenzene-d5	50 d	10	145
2-Fluorobiphenyl	50 d	16	138
2,4,6-Tribromophenol	247 d	12	132
Terphenyl-d14	60 d	35	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	560
2-Methylnaphthalene	200
1-Methylnaphthalene	120
Acenaphthylene	<2
Acenaphthene	210
Fluorene	230
Phenanthrene	430
Anthracene	54
Fluoranthene	170
Pyrene	74
Benz(a)anthracene	21
Chrysene	18
Benzo(a)pyrene	4.8
Benzo(b)fluoranthene	8.5
Benzo(k)fluoranthene	3.3
Indeno(1,2,3-cd)pyrene	<2
Dibenz(a,h)anthracene	<2
Benzo(g,h,i)perylene	<4

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-B204-010721	Client:	Pioneer Technologies Corp
Date Received:	01/08/21	Project:	Hardel, F&BI 101069
Date Extracted:	01/11/21	Lab ID:	101069-04
Date Analyzed:	01/11/21	Data File:	011114.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	25	15	99
Phenol-d6	16	11	65
Nitrobenzene-d5	83	10	145
2-Fluorobiphenyl	84	16	138
2,4,6-Tribromophenol	95	12	132
Terphenyl-d14	89	35	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	1.8
Fluorene	0.81
Phenanthrene	0.26
Anthracene	0.097
Fluoranthene	0.53
Pyrene	0.31
Benz(a)anthracene	0.064
Chrysene	0.065
Benzo(a)pyrene	0.055
Benzo(b)fluoranthene	0.085
Benzo(k)fluoranthene	0.031
Indeno(1,2,3-cd)pyrene	0.059 ca
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	0.085

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Pioneer Technologies Corp
Date Received:	Not Applicable	Project:	Hardel, F&BI 101069
Date Extracted:	01/11/21	Lab ID:	01-078 mb2
Date Analyzed:	01/11/21	Data File:	011108.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	23	15	99
Phenol-d6	15	11	65
Nitrobenzene-d5	96	10	145
2-Fluorobiphenyl	96	16	138
2,4,6-Tribromophenol	81	12	132
Terphenyl-d14	106	35	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	S-B202-5-6-010721	Client:	Pioneer Technologies Corp
Date Received:	01/08/21	Project:	Hardel, F&BI 101069
Date Extracted:	01/08/21	Lab ID:	101069-03
Date Analyzed:	01/08/21	Data File:	010817.D
Matrix:	Soil	Instrument:	GCMS13
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	84	118
Toluene-d8	92	86	117
4-Bromofluorobenzene	96	90	112

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Hexane	<0.25
Methyl t-butyl ether (MTBE)	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Trichloroethene	<0.02
Toluene	<0.05
Tetrachloroethene	<0.025
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	15

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Pioneer Technologies Corp
Date Received:	Not Applicable	Project:	Hardel, F&BI 101069
Date Extracted:	01/08/21	Lab ID:	01-023 mb
Date Analyzed:	01/08/21	Data File:	010809.D
Matrix:	Soil	Instrument:	GCMS13
Units:	mg/kg (ppm) Dry Weight	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	84	118
Toluene-d8	103	86	117
4-Bromofluorobenzene	101	90	112

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Hexane	<0.25
Methyl t-butyl ether (MTBE)	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
Benzene	<0.03
Trichloroethene	<0.02
Toluene	<0.05
Tetrachloroethene	<0.025
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-B201-010721	Client:	Pioneer Technologies Corp
Date Received:	01/08/21	Project:	Hardel, F&BI 101069
Date Extracted:	01/11/21	Lab ID:	101069-01
Date Analyzed:	01/11/21	Data File:	011118.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	78	126
Toluene-d8	104	87	115
4-Bromofluorobenzene	100	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	0.51
Trichloroethene	<0.7
Toluene	5.0
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	1.2
m,p-Xylene	6.0
o-Xylene	2.1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-B202-010721	Client:	Pioneer Technologies Corp
Date Received:	01/08/21	Project:	Hardel, F&BI 101069
Date Extracted:	01/11/21	Lab ID:	101069-02
Date Analyzed:	01/11/21	Data File:	011119.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	78	126
Toluene-d8	104	87	115
4-Bromofluorobenzene	98	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	3.0
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	4.3
m,p-Xylene	10
o-Xylene	5.2
Naphthalene	1,300 ve

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-B202-010721	Client:	Pioneer Technologies Corp
Date Received:	01/08/21	Project:	Hardel, F&BI 101069
Date Extracted:	01/11/21	Lab ID:	101069-02 1/100
Date Analyzed:	01/11/21	Data File:	011123.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	90	78	126
Toluene-d8	96	87	115
4-Bromofluorobenzene	97	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<20
Hexane	<500
Methyl t-butyl ether (MTBE)	<100
cis-1,2-Dichloroethene	<100
1,2-Dichloroethane (EDC)	<100
Benzene	<35
Trichloroethene	<70
Toluene	<100
Tetrachloroethene	<100
1,2-Dibromoethane (EDB)	<5
Ethylbenzene	<100
m,p-Xylene	<200
o-Xylene	<100
Naphthalene	1,700

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-B204-010721	Client:	Pioneer Technologies Corp
Date Received:	01/08/21	Project:	Hardel, F&BI 101069
Date Extracted:	01/11/21	Lab ID:	101069-04
Date Analyzed:	01/11/21	Data File:	011117.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	78	126
Toluene-d8	106	87	115
4-Bromofluorobenzene	102	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	1.6
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<1
m,p-Xylene	2.1
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	TB-010721	Client:	Pioneer Technologies Corp
Date Received:	01/08/21	Project:	Hardel, F&BI 101069
Date Extracted:	01/11/21	Lab ID:	101069-06
Date Analyzed:	01/11/21	Data File:	011116.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	78	126
Toluene-d8	104	87	115
4-Bromofluorobenzene	99	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Pioneer Technologies Corp
Date Received:	Not Applicable	Project:	Hardel, F&BI 101069
Date Extracted:	01/11/21	Lab ID:	01-026 mb
Date Analyzed:	01/11/21	Data File:	011108.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	85	117
Toluene-d8	104	88	112
4-Bromofluorobenzene	105	90	111

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05 j
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Date of Report: 01/20/21
Date Received: 01/08/21
Project: Hardel, F&BI 101069

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 101067-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	95	61-153

Date of Report: 01/20/21
Date Received: 01/08/21
Project: Hardel, F&BI 101069

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 101070-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	102	69-134

Date of Report: 01/20/21
Date Received: 01/08/21
Project: Hardel, F&BI 101069

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 101044-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	86	88	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	58-147

Date of Report: 01/20/21
Date Received: 01/08/21
Project: Hardel, F&BI 101069

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	104	104	63-142	0

Date of Report: 01/20/21
Date Received: 01/08/21
Project: Hardel, F&BI 101069

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: 101062-01 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.83	<0.01	84	80	50-150	5
2-Methylnaphthalene	mg/kg (ppm)	0.83	0.022	87	82	50-150	6
1-Methylnaphthalene	mg/kg (ppm)	0.83	0.019	87	82	50-150	6
Acenaphthylene	mg/kg (ppm)	0.83	<0.01	95	91	50-150	4
Acenaphthene	mg/kg (ppm)	0.83	<0.01	90	87	50-150	3
Fluorene	mg/kg (ppm)	0.83	<0.01	96	93	50-150	3
Phenanthrene	mg/kg (ppm)	0.83	0.016	98	93	50-150	5
Anthracene	mg/kg (ppm)	0.83	<0.01	98	93	50-150	5
Fluoranthene	mg/kg (ppm)	0.83	<0.01	105	103	50-150	2
Pyrene	mg/kg (ppm)	0.83	<0.01	97	93	50-150	4
Benz(a)anthracene	mg/kg (ppm)	0.83	<0.01	102	98	50-150	4
Chrysene	mg/kg (ppm)	0.83	<0.01	102	99	50-150	3
Benzo(a)pyrene	mg/kg (ppm)	0.83	<0.01	104	99	50-150	5
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	<0.01	100	95	50-150	5
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	<0.01	101	97	50-150	4
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	<0.01	113	117	50-150	3
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	<0.01	112	116	50-150	4
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	<0.01	111	115	50-150	4

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.83	85	58-108
2-Methylnaphthalene	mg/kg (ppm)	0.83	89	70-130
1-Methylnaphthalene	mg/kg (ppm)	0.83	89	70-130
Acenaphthylene	mg/kg (ppm)	0.83	98	70-130
Acenaphthene	mg/kg (ppm)	0.83	93	70-130
Fluorene	mg/kg (ppm)	0.83	98	70-130
Phenanthrene	mg/kg (ppm)	0.83	97	70-130
Anthracene	mg/kg (ppm)	0.83	98	70-130
Fluoranthene	mg/kg (ppm)	0.83	104	70-130
Pyrene	mg/kg (ppm)	0.83	96	70-130
Benz(a)anthracene	mg/kg (ppm)	0.83	103	70-130
Chrysene	mg/kg (ppm)	0.83	106	70-130
Benzo(a)pyrene	mg/kg (ppm)	0.83	104	70-130
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	99	70-130
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	99	70-130
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	113	70-130
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	116	70-130
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	114	70-130

Date of Report: 01/20/21
Date Received: 01/08/21
Project: Hardel, F&BI 101069

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: Laboratory Control Sample 1/0.5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	80	80	56-100	0
2-Methylnaphthalene	ug/L (ppb)	5	83	83	60-104	0
1-Methylnaphthalene	ug/L (ppb)	5	83	84	60-104	1
Acenaphthylene	ug/L (ppb)	5	91	91	70-130	0
Acenaphthene	ug/L (ppb)	5	87	87	65-122	0
Fluorene	ug/L (ppb)	5	93	93	70-130	0
Phenanthrene	ug/L (ppb)	5	91	93	70-130	2
Anthracene	ug/L (ppb)	5	93	97	70-130	4
Fluoranthene	ug/L (ppb)	5	99	105	70-130	6
Pyrene	ug/L (ppb)	5	88	95	70-130	8
Benz(a)anthracene	ug/L (ppb)	5	94	100	70-130	6
Chrysene	ug/L (ppb)	5	95	101	70-130	6
Benzo(a)pyrene	ug/L (ppb)	5	105	110	70-130	5
Benzo(b)fluoranthene	ug/L (ppb)	5	99	104	70-130	5
Benzo(k)fluoranthene	ug/L (ppb)	5	106	109	70-130	3
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	105	116	57-141	10
Dibenz(a,h)anthracene	ug/L (ppb)	5	104	115	57-137	10
Benzo(g,h,i)perylene	ug/L (ppb)	5	100	113	50-143	12

Date of Report: 01/20/21
Date Received: 01/08/21
Project: Hardel, F&BI 101069

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 101093-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	1.0	<0.05	52	67	10-79	25 vo
Hexane	mg/kg (ppm)	1.0	<0.25	65	82	10-106	23 vo
Methylene chloride	mg/kg (ppm)	1.0	<0.5	55	48	10-139	14
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1.0	<0.05	79	99	18-131	22 vo
cis-1,2-Dichloroethene	mg/kg (ppm)	1.0	<0.05	76	95	18-129	22 vo
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1.0	<0.05	88	110	19-138	22 vo
Benzene	mg/kg (ppm)	1.0	<0.03	76	97	15-129	24 vo
Trichloroethene	mg/kg (ppm)	1.0	<0.02	77	97	14-127	23 vo
Toluene	mg/kg (ppm)	1.0	<0.05	75	93	15-129	21 vo
Tetrachloroethene	mg/kg (ppm)	1.0	<0.025	73	91	20-121	22 vo
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1.0	<0.05	78	94	21-130	19
Ethylbenzene	mg/kg (ppm)	1.0	<0.05	77	97	23-133	23 vo
m,p-Xylene	mg/kg (ppm)	2.0	<0.1	77	97	19-134	23 vo
o-Xylene	mg/kg (ppm)	1.0	<0.05	75	96	20-132	25 vo
Naphthalene	mg/kg (ppm)	1.0	<0.05	84	100	30-138	17

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	mg/kg (ppm)	1.0	89	47-106
Hexane	mg/kg (ppm)	1.0	103	54-142
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1.0	112	70-130
cis-1,2-Dichloroethene	mg/kg (ppm)	1.0	108	70-130
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1.0	124	66-140
Benzene	mg/kg (ppm)	1.0	111	70-130
Trichloroethene	mg/kg (ppm)	1.0	111	53-133
Toluene	mg/kg (ppm)	1.0	109	63-127
Tetrachloroethene	mg/kg (ppm)	1.0	107	66-124
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1.0	111	70-130
Ethylbenzene	mg/kg (ppm)	1.0	113	70-130
m,p-Xylene	mg/kg (ppm)	2.0	112	67-129
o-Xylene	mg/kg (ppm)	1.0	111	70-130
Naphthalene	mg/kg (ppm)	1.0	120	67-143

Date of Report: 01/20/21
Date Received: 01/08/21
Project: Hardel, F&BI 101069

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 101112-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	10	<0.2	111	16-176
Hexane	ug/L (ppb)	10	<5	105	49-161
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	112	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	110	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<1	126	50-150
Benzene	ug/L (ppb)	10	<0.35	110	50-150
Trichloroethene	ug/L (ppb)	10	<1	110	43-133
Toluene	ug/L (ppb)	10	<1	107	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	104	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	111	50-150
Ethylbenzene	ug/L (ppb)	10	<1	109	50-150
m,p-Xylene	ug/L (ppb)	20	<2	108	50-150
o-Xylene	ug/L (ppb)	10	<1	107	50-150
Naphthalene	ug/L (ppb)	10	<1	114	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	10	102	103	70-130	1
Hexane	ug/L (ppb)	10	86	75	50-161	14
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	108	109	70-130	1
cis-1,2-Dichloroethene	ug/L (ppb)	10	105	104	70-130	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	120	120	70-130	0
Benzene	ug/L (ppb)	10	105	105	70-130	0
Trichloroethene	ug/L (ppb)	10	104	103	70-130	1
Toluene	ug/L (ppb)	10	101	99	70-130	2
Tetrachloroethene	ug/L (ppb)	10	97	92	70-130	5
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	106	104	70-130	2
Ethylbenzene	ug/L (ppb)	10	102	102	70-130	0
m,p-Xylene	ug/L (ppb)	20	99	101	70-130	2
o-Xylene	ug/L (ppb)	10	100	101	70-130	1
Naphthalene	ug/L (ppb)	10	106	113	70-130	6

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

101069

SAMPLE CHAIN OF CUSTODY ME 01/08/21 VW2/E04/VS2/A01

Page # 1 of 1

Report To Joel Hecker

Company Pioneer Technologies

Address 5205 Corporate Cntr Ct.

City, State, ZIP Lacey WA 98503

Phone 3608283739 Email Heckerj@ussioneer.com

SAMPLERS (signature) [signature]

PROJECT NAME Hardel

PO #

REMARKS run TPH w/ out silica gel cleanup first. pending results, may run both

Project specific RLs? (Yes) / No

INVOICE TO Joel Hecker

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [x] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260 *	PAHs EPA 8270	PCBs EPA 8082		VOCs	RCRA8		Notes
										Select VOCs							* Select VOCs
GW-B201-010721	01A-I	1/7/21	840	GW	9	X	X			X	X						Include BTEX, n-hexane, 12DBA,
GW-B202-010721	02A-H	1/7/21	940	GW	9	X	X			X	X						12DCA, MTBE, naphthalene, PCE,
S-B202-5-6-010721	03A-E	1/7/21	900	Soil	5	X	X			X	X						TCE, cis-12-DCE, and vinyl chloride
GW-B204-010721	04A-I	1/7/21	1100	GW	9	X	X			X	X						
S-B204-5-7-010721	05A-E	1/7/21	1050	Soil	5												HOLD
TB-010721	06AB	1/7/21	—	Water	2		X			X							
WCS-010721	07A-F	1/7/21	1300	Soil	6	X	X				X			X			Report separately

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Joel Hecker	Pioneer Technologies	1/8/21	5:31
Received by: [signature]	Abbigail Stapton		1/8/21	5:31
Relinquished by:				
Received by:		Samples received at 2 °C		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

January 2021 GWM

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

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January 22, 2021

Joel Hecker Project Manager
Pioneer Technologies Corp
5205 Corporate Center Ct, Suite A
Lacey, WA 98503

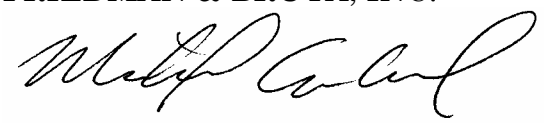
Dear Mr Hecker:

Included are the results from the testing of material submitted on January 15, 2021 from the Hardel, F&BI 101190 project. There are 32 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PTC0122R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 15, 2021 by Friedman & Bruya, Inc. from the Pioneer Technologies Corp Hardel, F&BI 101190 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Pioneer Technologies Corp
101190 -01	GW-MW101-011421
101190 -02	GW-MW102-011421
101190 -03	GW-MW104-011421
101190 -04	GW-MW105-011421
101190 -05	GW-MW105-011421-01
101190 -06	GW-MW106-011421
101190 -07	Trip Blank-011421

The samples were sent to Fremont Analytical for GW-MW101-011421, GW-MW102-011421, GW-MW104-011421, GW-MW105-011421, GW-MW105-011421-01, and GW-MW106-011421 for chloride analysis. The report is enclosed.

All quality control requirements were acceptable.

Date of Report: 01/22/21
Date Received: 01/15/21
Project: Hardel, F&BI 101190
Date Extracted: 01/20/21
Date Analyzed: 01/20/21

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
GW-MW101-011421 101190-01	<100	84
GW-MW102-011421 101190-02	<100	86
GW-MW104-011421 101190-03	<100	89
GW-MW105-011421 101190-04	<100	92
GW-MW105-011421-01 101190-05	<100	90
GW-MW106-011421 101190-06	<100	89
Trip Blank-011421 101190-07	<100	87
Method Blank 01-120 MB	<100	90

Date of Report: 01/22/21
Date Received: 01/15/21
Project: Hardel, F&BI 101190
Date Extracted: 01/18/21
Date Analyzed: 01/18/21

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
GW-MW101-011421 101190-01	460 x	<250	111
GW-MW102-011421 101190-02	<50	<250	121
GW-MW104-011421 101190-03	1,200 x	<250	106
GW-MW105-011421 101190-04	<50	<250	118
GW-MW105-011421-01 101190-05	<50	<250	119
GW-MW106-011421 101190-06	220 x	<250	125
Method Blank 01-115 MB	<50	<250	114

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	GW-MW101-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/20/21	Lab ID:	101190-01
Date Analyzed:	01/20/21	Data File:	101190-01.216
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	6.75
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	GW-MW102-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/20/21	Lab ID:	101190-02
Date Analyzed:	01/20/21	Data File:	101190-02.218
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	1.75
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	GW-MW104-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/20/21	Lab ID:	101190-03
Date Analyzed:	01/20/21	Data File:	101190-03.219
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	1.17
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	GW-MW105-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/20/21	Lab ID:	101190-04
Date Analyzed:	01/20/21	Data File:	101190-04.220
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	GW-MW105-011421-01	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/20/21	Lab ID:	101190-05
Date Analyzed:	01/20/21	Data File:	101190-05.224
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	GW-MW106-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/20/21	Lab ID:	101190-06
Date Analyzed:	01/20/21	Data File:	101190-06.225
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	1.78
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Pioneer Technologies Corp
Date Received:	NA	Project:	Hardel, F&BI 101190
Date Extracted:	01/20/21	Lab ID:	I1-35 mb
Date Analyzed:	01/20/21	Data File:	I1-35 mb.085
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Silver	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-MW101-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/15/21	Lab ID:	101190-01
Date Analyzed:	01/15/21	Data File:	011515.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	78	126
Toluene-d8	104	87	115
4-Bromofluorobenzene	101	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-MW102-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/15/21	Lab ID:	101190-02
Date Analyzed:	01/15/21	Data File:	011516.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	78	126
Toluene-d8	102	87	115
4-Bromofluorobenzene	98	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	1.3

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-MW104-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/15/21	Lab ID:	101190-03
Date Analyzed:	01/18/21	Data File:	011808.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	78	126
Toluene-d8	109	87	115
4-Bromofluorobenzene	96	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	110

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-MW105-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/15/21	Lab ID:	101190-04
Date Analyzed:	01/18/21	Data File:	011805.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	91	78	126
Toluene-d8	95	87	115
4-Bromofluorobenzene	100	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-MW105-011421-01	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/15/21	Lab ID:	101190-05
Date Analyzed:	01/18/21	Data File:	011806.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	78	126
Toluene-d8	103	87	115
4-Bromofluorobenzene	102	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	GW-MW106-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/15/21	Lab ID:	101190-06
Date Analyzed:	01/18/21	Data File:	011807.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	78	126
Toluene-d8	105	87	115
4-Bromofluorobenzene	100	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Trip Blank-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/15/21	Lab ID:	101190-07
Date Analyzed:	01/15/21	Data File:	011514.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	78	126
Toluene-d8	99	87	115
4-Bromofluorobenzene	103	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Pioneer Technologies Corp
Date Received:	Not Applicable	Project:	Hardel, F&BI 101190
Date Extracted:	01/15/21	Lab ID:	01-93 mb
Date Analyzed:	01/15/21	Data File:	011507.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	JCM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	92	78	126
Toluene-d8	104	87	115
4-Bromofluorobenzene	99	92	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Hexane	<5
Methyl t-butyl ether (MTBE)	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Trichloroethene	<0.7
Toluene	<1
Tetrachloroethene	<1
1,2-Dibromoethane (EDB)	<0.05
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-MW101-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/18/21	Lab ID:	101190-01
Date Analyzed:	01/18/21	Data File:	011819.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	22	15	61
Phenol-d6	14	10	46
Nitrobenzene-d5	84	17	143
2-Fluorobiphenyl	75	50	150
2,4,6-Tribromophenol	99	50	150
Terphenyl-d14	76	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	0.020
Phenanthrene	0.033
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-MW102-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/18/21	Lab ID:	101190-02
Date Analyzed:	01/18/21	Data File:	011820.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	11 ip	15	61
Phenol-d6	9 ip	10	46
Nitrobenzene-d5	94	17	143
2-Fluorobiphenyl	85	50	150
2,4,6-Tribromophenol	55	50	150
Terphenyl-d14	96	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	1.0
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	0.26
Acenaphthylene	<0.02
Acenaphthene	1.0
Fluorene	0.33
Phenanthrene	0.081
Anthracene	<0.02
Fluoranthene	0.020
Pyrene	0.020
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-MW104-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/18/21	Lab ID:	101190-03
Date Analyzed:	01/18/21	Data File:	011821.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	20	15	61
Phenol-d6	12	10	46
Nitrobenzene-d5	50	17	143
2-Fluorobiphenyl	42 ip	50	150
2,4,6-Tribromophenol	64	50	150
Terphenyl-d14	45 ip	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	39 ve
2-Methylnaphthalene	41 ve
1-Methylnaphthalene	36 ve
Acenaphthylene	<0.02
Acenaphthene	34 ve
Fluorene	14
Phenanthrene	18
Anthracene	2.2
Fluoranthene	1.9
Pyrene	1.4
Benz(a)anthracene	0.051
Chrysene	0.059
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	0.020
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-MW104-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/18/21	Lab ID:	101190-03 1/10
Date Analyzed:	01/19/21	Data File:	011913.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	15 d	15	61
Phenol-d6	9 d	10	46
Nitrobenzene-d5	45 d	17	143
2-Fluorobiphenyl	41 d	50	150
2,4,6-Tribromophenol	75 d	50	150
Terphenyl-d14	38 d	50	150

Compounds:	Concentration ug/L (ppb)
Naphthalene	44
2-Methylnaphthalene	40
1-Methylnaphthalene	34
Acenaphthylene	<0.2
Acenaphthene	37
Fluorene	14
Phenanthrene	19
Anthracene	2.1
Fluoranthene	1.7
Pyrene	1.3
Benz(a)anthracene	<0.2
Chrysene	<0.2
Benzo(a)pyrene	<0.2
Benzo(b)fluoranthene	<0.2
Benzo(k)fluoranthene	<0.2
Indeno(1,2,3-cd)pyrene	<0.2
Dibenz(a,h)anthracene	<0.2
Benzo(g,h,i)perylene	<0.4

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-MW105-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/18/21	Lab ID:	101190-04
Date Analyzed:	01/18/21	Data File:	011815.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	25	15	99
Phenol-d6	16	11	65
Nitrobenzene-d5	74	10	145
2-Fluorobiphenyl	74	16	138
2,4,6-Tribromophenol	80	12	132
Terphenyl-d14	91	35	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-MW105-011421-01	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/18/21	Lab ID:	101190-05
Date Analyzed:	01/18/21	Data File:	011816.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	21	15	99
Phenol-d6	15	11	65
Nitrobenzene-d5	68	10	145
2-Fluorobiphenyl	72	16	138
2,4,6-Tribromophenol	75	12	132
Terphenyl-d14	83	35	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	GW-MW106-011421	Client:	Pioneer Technologies Corp
Date Received:	01/15/21	Project:	Hardel, F&BI 101190
Date Extracted:	01/18/21	Lab ID:	101190-06
Date Analyzed:	01/18/21	Data File:	011817.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	12 ip	15	99
Phenol-d6	10 ip	11	65
Nitrobenzene-d5	83	10	145
2-Fluorobiphenyl	85	16	138
2,4,6-Tribromophenol	54	12	132
Terphenyl-d14	92	35	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	0.031
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Pioneer Technologies Corp
Date Received:	Not Applicable	Project:	Hardel, F&BI 101190
Date Extracted:	01/18/21	Lab ID:	01-116 mb
Date Analyzed:	01/18/21	Data File:	011812.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	16	15	99
Phenol-d6	14	11	65
Nitrobenzene-d5	83	10	145
2-Fluorobiphenyl	79	16	138
2,4,6-Tribromophenol	48	12	132
Terphenyl-d14	93	35	138

Compounds:	Concentration ug/L (ppb)
Naphthalene	<0.2
2-Methylnaphthalene	<0.2
1-Methylnaphthalene	<0.2
Acenaphthylene	<0.02
Acenaphthene	<0.02
Fluorene	<0.02
Phenanthrene	<0.02
Anthracene	<0.02
Fluoranthene	<0.02
Pyrene	<0.02
Benz(a)anthracene	<0.02
Chrysene	<0.02
Benzo(a)pyrene	<0.02
Benzo(b)fluoranthene	<0.02
Benzo(k)fluoranthene	<0.02
Indeno(1,2,3-cd)pyrene	<0.02
Dibenz(a,h)anthracene	<0.02
Benzo(g,h,i)perylene	<0.04

Date of Report: 01/22/21
Date Received: 01/15/21
Project: Hardel, F&BI 101190

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 101216-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	102	69-134

Date of Report: 01/22/21
Date Received: 01/15/21
Project: Hardel, F&BI 101190

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	84	96	63-142	13

Date of Report: 01/22/21
Date Received: 01/15/21
Project: Hardel, F&BI 101190

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 6020B

Laboratory Code: 101199-05 x10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	<10	96	93	75-125	3
Silver	ug/L (ppb)	10	<10	78	85	75-125	9

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	96	80-120
Silver	ug/L (ppb)	10	93	80-120

Date of Report: 01/22/21
Date Received: 01/15/21
Project: Hardel, F&BI 101190

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 101190-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	10	<0.2	109	50-150
Hexane	ug/L (ppb)	10	<5	99	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	108	50-150
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	111	50-150
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<1	105	50-150
Benzene	ug/L (ppb)	10	<0.35	110	50-150
Trichloroethene	ug/L (ppb)	10	<1	110	50-150
Toluene	ug/L (ppb)	10	<1	101	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	103	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<1	106	50-150
Ethylbenzene	ug/L (ppb)	10	<1	104	50-150
m,p-Xylene	ug/L (ppb)	20	<2	102	50-150
o-Xylene	ug/L (ppb)	10	<1	104	50-150
Naphthalene	ug/L (ppb)	10	<1	113	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	10	113	108	70-130	5
Hexane	ug/L (ppb)	10	81	81	54-136	0
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	114	110	70-130	4
cis-1,2-Dichloroethene	ug/L (ppb)	10	109	109	70-130	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	106	105	70-130	1
Benzene	ug/L (ppb)	10	109	110	70-130	1
Trichloroethene	ug/L (ppb)	10	106	108	70-130	2
Toluene	ug/L (ppb)	10	101	100	70-130	1
Tetrachloroethene	ug/L (ppb)	10	100	98	70-130	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	111	109	70-130	2
Ethylbenzene	ug/L (ppb)	10	100	100	70-130	0
m,p-Xylene	ug/L (ppb)	20	96	99	70-130	3
o-Xylene	ug/L (ppb)	10	100	102	70-130	2
Naphthalene	ug/L (ppb)	10	118	101	70-130	16

Date of Report: 01/22/21
Date Received: 01/15/21
Project: Hardel, F&BI 101190

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	ug/L (ppb)	5	78	77	56-100	1
2-Methylnaphthalene	ug/L (ppb)	5	86	86	60-104	0
1-Methylnaphthalene	ug/L (ppb)	5	87	86	60-104	1
Acenaphthylene	ug/L (ppb)	5	89	90	70-130	1
Acenaphthene	ug/L (ppb)	5	84	85	65-122	1
Fluorene	ug/L (ppb)	5	92	94	70-130	2
Phenanthrene	ug/L (ppb)	5	87	86	70-130	1
Anthracene	ug/L (ppb)	5	90	89	70-130	1
Fluoranthene	ug/L (ppb)	5	98	96	70-130	2
Pyrene	ug/L (ppb)	5	89	89	70-130	0
Benz(a)anthracene	ug/L (ppb)	5	95	96	70-130	1
Chrysene	ug/L (ppb)	5	94	95	70-130	1
Benzo(a)pyrene	ug/L (ppb)	5	109	107	70-130	2
Benzo(b)fluoranthene	ug/L (ppb)	5	106	103	70-130	3
Benzo(k)fluoranthene	ug/L (ppb)	5	107	104	70-130	3
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	103	113	57-141	9
Dibenz(a,h)anthracene	ug/L (ppb)	5	99	108	57-137	9
Benzo(g,h,i)perylene	ug/L (ppb)	5	91	101	50-143	10

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

101190

SAMPLE CHAIN OF CUSTODY ME 01-15-21

E04 / A14 / VW6

Page # _____ of _____

Report To Joel Heck

Company Pioneer Technologies

Address 5205 Corporate Center Ct. SE

City, State, ZIP Lacey WA 98503

Phone 360 828 3739 Email Heckerj@uspioneer.com

SAMPLERS (signature) [signature]

PROJECT NAME Hardel

PO #

REMARKS run TPH w/o Silica gel cleanup first based on chromatography we may run w/ silica gel

Project specific RLs? (Yes) No

INVOICE TO Joel Heck

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH _____
Rush charges authorized by: _____

SAMPLE DISPOSAL
☒ Archive samples
☐ Other _____
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	Select VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Dissolved Arsenic/Silver	Chloride			Notes
						ANALYSES REQUESTED											
GW-MW101-011421	01 A-K	1/14/21	1220	GW	11	X	X			X	X		X	X			select VOCs: BTEX, hexane, 12DBA, 12DCA, MTBE, naphthalene, PCE TCE, cis12DCE, vinyl chloride
GW-MW102-011421	02		1135		11												
GW-MW104-011421	03		950		11												
GW-MW105-011421	04		840		11												
GW-MW105-011421-01	05A-H		840		8												
GW-MW106-011421	06 A-K		1040		11												
Trip Blank-011421	07 A-B		—		2	~~X~~	X			X							

Samples received at 1 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:				
Received by: [signature]	Abbigail Stanton	FBI	1/15/21	~~0~~ 5:30
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 101190
Work Order Number: 2101253

January 21, 2021

Attention Michael Erdahl:

Fremont Analytical, Inc. received 6 sample(s) on 1/15/2021 for the analyses presented in the following report.

Ion Chromatography by EPA Method 300.0

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *01/21/2021*

CLIENT: Friedman & Bruya
Project: 101190
Work Order: 2101253

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2101253-001	GW-MW101-011421	01/14/2021 12:20 PM	01/15/2021 10:14 AM
2101253-002	GW-MW102-011421	01/14/2021 11:35 AM	01/15/2021 10:14 AM
2101253-003	GW-MW104-011421	01/14/2021 9:50 AM	01/15/2021 10:14 AM
2101253-004	GW-MW105-011421	01/14/2021 8:40 AM	01/15/2021 10:14 AM
2101253-005	GW-MW105-011421-01	01/14/2021 8:40 AM	01/15/2021 10:14 AM
2101253-006	GW-MW106-011421	01/14/2021 10:40 AM	01/15/2021 10:14 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2101253**
Date: **1/21/2021**

CLIENT: Friedman & Bruya
Project: 101190

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2101253**
Date Reported: **1/21/2021**

CLIENT: Friedman & Bruya
Project: 101190

Lab ID: 2101253-001 **Collection Date:** 1/14/2021 12:20:00 PM
Client Sample ID: **GW-MW101-011421** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 31086		Analyst: SS
Chloride	182	10.0	D	mg/L	100	1/19/2021 1:03:00 PM

Lab ID: 2101253-002 **Collection Date:** 1/14/2021 11:35:00 AM
Client Sample ID: **GW-MW102-011421** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 31086		Analyst: SS
Chloride	1.09	0.100		mg/L	1	1/19/2021 1:26:00 PM

Lab ID: 2101253-003 **Collection Date:** 1/14/2021 9:50:00 AM
Client Sample ID: **GW-MW104-011421** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 31086		Analyst: SS
Chloride	60.4	5.00	D	mg/L	50	1/19/2021 1:49:00 PM

Lab ID: 2101253-004 **Collection Date:** 1/14/2021 8:40:00 AM
Client Sample ID: **GW-MW105-011421** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 31086		Analyst: SS
Chloride	30.5	2.00	D	mg/L	20	1/19/2021 2:12:00 PM

Analytical Report

Work Order: **2101253**
Date Reported: **1/21/2021**

CLIENT: Friedman & Bruya
Project: 101190

Lab ID: 2101253-005 **Collection Date:** 1/14/2021 8:40:00 AM
Client Sample ID: **GW-MW105-011421-01** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 31086		Analyst: SS
Chloride	33.2	2.00	D	mg/L	20	1/19/2021 2:35:00 PM

Lab ID: 2101253-006 **Collection Date:** 1/14/2021 10:40:00 AM
Client Sample ID: **GW-MW106-011421** **Matrix:** Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ion Chromatography by EPA Method 300.0				Batch ID: 31086		Analyst: SS
Chloride	7.86	1.00	D	mg/L	10	1/19/2021 2:11:00 AM

Work Order: 2101253
CLIENT: Friedman & Bruya
Project: 101190

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID: **MB-31086**	SampType: **MBLK**	Units: **mg/L**	Prep Date: **1/18/2021**	RunNo: **64800**
Client ID: **MBLKW**	Batch ID: **31086**		Analysis Date: **1/18/2021**	SeqNo: **1303427**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.100									

Sample ID: **LCS-31086**	SampType: **LCS**	Units: **mg/L**	Prep Date: **1/18/2021**	RunNo: **64800**
Client ID: **LCSW**	Batch ID: **31086**		Analysis Date: **1/18/2021**	SeqNo: **1303428**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.695	0.100	0.7500	0	92.7	90	110				

Sample ID: **2101242-001ADUP**	SampType: **DUP**	Units: **mg/L**	Prep Date: **1/18/2021**	RunNo: **64800**
Client ID: **BATCH**	Batch ID: **31086**		Analysis Date: **1/18/2021**	SeqNo: **1303430**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	41.0	1.00						41.01	0.0244	20	DE

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: **2101242-001AMS**	SampType: **MS**	Units: **mg/L**	Prep Date: **1/18/2021**	RunNo: **64800**
Client ID: **BATCH**	Batch ID: **31086**		Analysis Date: **1/18/2021**	SeqNo: **1303431**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	49.1	1.00	7.500	41.01	108	80	120				DE

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: **2101242-001AMSD**	SampType: **MSD**	Units: **mg/L**	Prep Date: **1/18/2021**	RunNo: **64800**
Client ID: **BATCH**	Batch ID: **31086**		Analysis Date: **1/18/2021**	SeqNo: **1303432**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	49.2	1.00	7.500	41.01	109	80	120	49.12	0.163	20	DE

Work Order: 2101253
CLIENT: Friedman & Bruya
Project: 101190

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID: **2101242-001AMSD** SampType: **MSD** Units: **mg/L** Prep Date: **1/18/2021** RunNo: **64800**
Client ID: **BATCH** Batch ID: **31086** Analysis Date: **1/18/2021** SeqNo: **1303432**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: **2101251-001BDUP** SampType: **DUP** Units: **mg/L** Prep Date: **1/18/2021** RunNo: **64800**
Client ID: **BATCH** Batch ID: **31086** Analysis Date: **1/18/2021** SeqNo: **1303440**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.00	0.200						1.998	0.200	20	DH

Sample ID: **2101251-001BMS** SampType: **MS** Units: **mg/L** Prep Date: **1/18/2021** RunNo: **64800**
Client ID: **BATCH** Batch ID: **31086** Analysis Date: **1/18/2021** SeqNo: **1303441**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3.54	0.200	1.500	1.998	103	80	120				DH

Sample Log-In Check List

Client Name:	**FB**	Work Order Number:	**2101253**
Logged by:	**Carissa True**	Date Received:	**1/15/2021 10:14:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes	☑	No	☐	Not Present ☐
2.	How was the sample delivered?	Client				

Log In

3.	Coolers are present?	Yes	☑	No	☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes	☑	No	☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes	☐	No	☐	Not Present ☑
6.	Was an attempt made to cool the samples?	Yes	☑	No	☐	NA ☐
7.	Were all items received at a temperature of >2°C to 6°C *	Yes	☑	No	☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes	☑	No	☐	
9.	Sufficient sample volume for indicated test(s)?	Yes	☑	No	☐	
10.	Are samples properly preserved?	Yes	☑	No	☐	
11.	Was preservative added to bottles?	Yes	☐	No	☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes	☐	No	☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes	☑	No	☐	
14.	Does paperwork match bottle labels?	Yes	☑	No	☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes	☑	No	☐	
16.	Is it clear what analyses were requested?	Yes	☑	No	☐	
17.	Were all holding times able to be met?	Yes	☑	No	☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes	☐	No	☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample 1	3.6

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

210125 3 Page # 1 of 1

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER Fremont

PROJECT NAME/NO. 101190

PO # B-104

REMARKS

Please Email Results

TURNAROUND TIME

☒ Standard TAT

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	chloride										Notes
GW-MW101-011421		1/14/21	1220	GW	1	x										
GW-MW102-011421			1135													
GW-MW104-011421			950													
GW-MW105-011421			840													
GW-MW105-011421-01			840													
GW-MW106-011421			1040													

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Ann Webber-Bruya	Friedman & Bruya	1/15/21	
Received by:		Claire Anderson	FBI	1/15/21	10:14
Relinquished by:					
Received by:					

May 2021 GWM

Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

June 9, 2021

Joel Hecker
Pioneer Technologies Corporation
5205 Corporate Center Ct SE, Suite C
Lacey, WA 98503

Dear Mr. Hecker:

Please find enclosed the analytical data report for the Hardel Data Gap Investigation Project located in Olympia, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 5/5/21 Page: 1 of 1

Client: Pioneer Technological Corp.
Project Manager: Joel Hecker

Address: 5205 Corporate Cntr Ct. SE
Project Name: Hardel Data Gaps Investigation

City: Olympia State: WA Zip: 98503
Location: Hardel site City, State: Oly, WA

Phone: 360-570-1700 Fax:
Collector: JH Date of Collection: 5/5/21

Client Project # Hardel Data Gaps Inv.
Email: Hecker-j@usploneer.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	As + Ag (Dis.)	MTCA VOCs		Field Notes
1 GW-MW102-0521		1300	GW	multiple	X	X			X					X		X	X			
2 GW-MW103-0521		1215			X	X			X					X		X	X			
3 GW-MW105-0521		1055			X	X			X					X		X	X			
4 GW-MW106-0521		1135			X	X			X					X		X	X			
5 GW-MW107-0521		1350			X	X			X					X		X	X			
6 GW-MW107-0521-01		1350												X		X				
7 TB-050521	—	—			X												X			
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
[signature]	5/5/21 1458	[signature]	5.5.21 1458
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks:
- If possible, please run internal duplicates from MW107 sample.
- Metals are Field Filtered

TAT: 24HR 48HR (5-DAY)

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

HARDEL DATA GAPS INVESTIGATION PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L210505-1

Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		Method Blank	GW-MW102-0521	GW-MW103-0521	GW-MW105-0521	GW-MW106-0521	GW-MW107-0521
Date Sampled	Reporting	N/A	5/5/2021	5/5/2021	5/5/2021	5/5/2021	5/5/2021
Date Analyzed	Limits	5/7/2021	5/7/2021	5/7/2021	5/7/2021	5/7/2021	5/7/2021
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Vinyl chloride	0.2	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.5	nd	nd	nd	nd	nd	nd
Methyl *tert*- Butyl Ether (MTBE)	5.0	nd	nd	nd	nd	nd	nd
trans -1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
cis -1,2-Dichloroethene	1.0	nd	nd	nd	nd	nd	nd
Benzene	1.0	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	1.0	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.4	nd	nd	nd	nd	nd	nd
Toluene	2.0	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB) *	0.01	nd	nd	nd	nd	nd	nd
Ethylbenzene	1.0	nd	nd	nd	nd	nd	nd
Total Xylenes	2.0	nd	nd	nd	nd	nd	nd
Naphthalene	5.0	nd	nd	nd	nd	nd	nd
1-Methylnaphthalene	5.0	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene	5.0	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		108	111	110	108	108	108
1,2-Dichloroethane-d4		96	101	97	91	94	96
Toluene-d8		99	99	100	99	99	98
4-Bromofluorobenzene		102	102	99	101	101	98

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

* ANALYZED BY SIM
ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

HARDEL DATA GAPS INVESTIGATION PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L210505-1

Volatile Organic Compounds by EPA Method 8260D in Water

Sample Description		GW-MW107-0521 Dup	TB-050521
Date Sampled	Reporting	5/5/2021	5/5/2021
Date Analyzed	Limits	5/7/2021	5/7/2021
	(µg/L)	(µg/L)	(µg/L)
Vinyl chloride	0.2	nd	nd
1,1-Dichloroethene	0.5	nd	nd
Methyl *tert*- Butyl Ether (MTBE)	5.0	nd	nd
trans -1,2-Dichloroethene	1.0	nd	nd
cis -1,2-Dichloroethene	1.0	nd	nd
Benzene	1.0	nd	nd
1,2-Dichloroethane (EDC)	1.0	nd	nd
Trichloroethene (TCE)	0.4	nd	nd
Toluene	2.0	nd	nd
Tetrachloroethene (PCE)	1.0	nd	nd
1,2-Dibromoethane (EDB) *	0.01	nd	nd
Ethylbenzene	1.0	nd	nd
Total Xylenes	2.0	nd	nd
Naphthalene	5.0	nd	nd
1-Methylnaphthalene	5.0	nd	nd
2-Methylnaphthalene	5.0	nd	nd
Surrogate Recovery			
Dibromofluoromethane		110	111
1,2-Dichloroethane-d4		96	104
Toluene-d8		98	97
4-Bromofluorobenzene		100	98

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

* ANALYZED BY SIM
ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

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HARDEL DATA GAPS INVESTIGATION PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L210505-1

Gasoline by NWTPH-Gx in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Gasoline (µg/L)
Method Blank	5/7/2021	99%	nd
GW-MW102-0521	5/7/2021	99%	nd
GW-MW103-0521	5/7/2021	100%	nd
GW-MW105-0521	5/7/2021	99%	nd
GW-MW106-0521	5/7/2021	99%	nd
GW-MW107-0521	5/7/2021	98%	nd
GW-MW107-0521 Dup	5/7/2021	98%	nd
Practical Quantitation Limit			100

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Toluene-d8): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

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Olympia, Washington
Libby Project # L210505-1

Diesel & Oil by NWTPH-Dx/Dx Extended in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (µg/L)	Oil (µg/L)
Method Blank	5/6/2021	95%	nd	nd
GW-MW102-0521	5/6/2021	94%	nd	nd
GW-MW103-0521	5/6/2021	91%	nd	nd
GW-MW105-0521	5/6/2021	86%	nd	nd
GW-MW106-0521	5/6/2021	93%	nd	nd
GW-MW107-0521	5/6/2021	92%	nd	nd
GW-MW107-0521 Dup	5/6/2021	90%	nd	nd
Practical Quantitation Limit			200	400

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Kory Dixon

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HARDEL DATA GAPS INVESTIGATION PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L210505-1

QA/QC Data - Volatile Organic Compounds by EPA 8260D in Water

Matrix Spike Sample Identification: GW-MW107-0521

	Spiked Conc. (µg/L)	MS Response (µg/L)	MSD Response (µg/L)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Vinyl chloride	5.0	4.3	4.5	87	90	3.6	65-135	
1,1-Dichloroethene	5.0	4.7	5.1	95	102	7.7	65-135	
Methyl *tert*- Butyl Ether (MTBE)	5.0	5.3	5.0	105	101	4.3	65-135	
trans -1,2-Dichloroethene	5.0	5.4	5.6	109	113	3.6	65-135	
cis -1,2-Dichloroethene	5.0	4.9	4.9	98	99	1.0	65-135	
Benzene	5.0	4.4	4.5	88	89	1.1	65-135	
1,2-Dichloroethane (EDC)	5.0	4.7	4.8	95	96	1.9	65-135	
Trichloroethene (TCE)	5.0	4.8	4.8	95	95	0.2	65-135	
Toluene	5.0	4.2	4.4	84	87	3.5	65-135	
Tetrachloroethene (PCE)	5.0	5.8	4.9	115	98	15.9	65-135	
1,2-Dibromoethane (EDB) *	5.0	4.4	4.4	87	88	1.1	65-135	
Ethylbenzene	5.0	4.6	4.4	91	88	3.6	65-135	
Total Xylenes	15.0	13.0	12.7	87	85	2.3	65-135	
Naphthalene	5.0	3.8	4.0	75	79	5.2	65-135	
1-Methylnaphthalene	5.0	5.9	5.1	119	103	14.3	65-135	
2-Methylnaphthalene	5.0	6.4	5.1	128	102	23.0	65-135	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	113	113	65-135
1,2-Dichloroethane-d4	106	106	65-135
Toluene-d8	100	100	65-135
4-Bromofluorobenzene	105	103	65-135

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Sherry Chilcutt

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HARDEL DATA GAPS INVESTIGATION PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L210505-1

Laboratory Control Sample

	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Vinyl chloride	5.0	5.2	103	80-120	
1,1-Dichloroethene	5.0	5.5	110	80-120	
Methyl *tert*- Butyl Ether (MTBE)	5.0	5.6	112	80-120	
trans -1,2-Dichloroethene	5.0	4.9	97	80-120	
cis -1,2-Dichloroethene	5.0	5.6	112	80-120	
Benzene	5.0	5.3	107	80-120	
1,2-Dichloroethane (EDC)	5.0	5.3	106	80-120	
Trichloroethene (TCE)	5.0	5.5	111	80-120	
Toluene	5.0	5.3	105	80-120	
Tetrachloroethene (PCE)	5.0	4.9	97	80-120	
1,2-Dibromoethane (EDB) *	5.0	5.9	117	80-120	
Ethylbenzene	5.0	5.9	119	80-120	
Total Xylenes	15.0	17.4	116	80-120	
Naphthalene	5.0	5.5	109	80-120	
1-Methylnaphthalene	10.0	8.0	80	80-120	
2-Methylnaphthalene	10.0	8.5	85	80-120	
Surrogate Recovery					
Dibromofluoromethane			92	65-135	
1,2-Dichloroethane-d4			73	65-135	
Toluene-d8			69	65-135	
4-Bromofluorobenzene			103	65-135	

ANALYSES PERFORMED BY: Sherry Chilcutt

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HARDEL DATA GAPS INVESTIGATION PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L210505-1

CCV 5/7/2021

	Spiked Conc. (µg/L)	CCV Response (µg/L)	CCV Recovery (%)	CCV Recovery Limits (%)
Vinyl chloride	10.0	9.8	98	80-120
1,1-Dichloroethene	10.0	10.4	104	80-120
Methyl *tert*- Butyl Ether (MTBE)	10.0	11.8	118	80-120
trans -1,2-Dichloroethene	10.0	11.9	119	80-120
cis -1,2-Dichloroethene	10.0	10.7	107	80-120
Benzene	10.0	10.1	101	80-120
1,2-Dichloroethane (EDC)	10.0	10.0	100	80-120
Trichloroethene (TCE)	10.0	10.9	109	80-120
Toluene	10.0	10.0	100	80-120
Tetrachloroethene (PCE)	10.0	12.0	120	80-120
1,2-Dibromoethane (EDB) *	10.0	11.3	113	80-120
Ethylbenzene	10.0	11.5	115	80-120
Total Xylenes	30.0	34.2	114	80-120
Naphthalene	10.0	9.2	92	80-120
1-Methylnaphthalene	10.0	11.0	110	80-120
2-Methylnaphthalene	10.0	11.3	113	80-120
Surrogate Recovery				
Dibromofluoromethane			94	65-135
1,2-Dichloroethane-d4			73	65-135
Toluene-d8			70	65-135
4-Bromofluorobenzene			105	65-135

ANALYSES PERFORMED BY: Sherry Chilcutt

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HARDEL DATA GAPS INVESTIGATION PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L210505-1

QA/QC Gasoline by NWTPH-Gx in Water

Sample Number	Date Analyzed	Gasoline (µg/L)	Gasoline (% Recovery)	CCV Recovery Limits (%)
500 ppb LCS	5/7/2021	543	109%	70-130%
500 ppb LCSD	5/7/2021	582	116%	70-130%
RPD			6%	30%
Practical Quantitation Limit		100		

CCV Gasoline by NWTPH-Gx in Water

Sample Number	Date Analyzed	Gasoline (µg/L)	CCV Recovery (%)	CCV Recovery Limits (%)
1000 ppb CCV	5/7/2021	1076	108%	80-120%
Practical Quantitation Limit		100		

ANALYSES PERFORMED BY: Sherry Chilcutt

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HARDEL DATA GAPS INVESTIGATION PROJECT
Pioneer Technologies
Olympia, Washington
Libby Project # L210505-1

QA/QC Diesel by NWTPH-Dx in Water

Sample Number	Date Analyzed	Diesel (µg/L)	Diesel (% Recovery)	CCV Recovery Limits (%)
400 ppb LCS	5/6/2021	370	93%	70-130%
400 ppb LCSD	5/6/2021	370	93%	70-130%
RPD			0%	30%
Practical Quantitation Limit		50		

CCV Diesel by NWTPH-Dx in Water

Sample Number	Date Analyzed	Diesel (µg/L)	CCV (%)	CCV Recovery Limits (%)
CCV Kilvan FID 1 500 ppm	5/6/2021	430	86%	85-115%
CCV Kilvan FID 1 500 ppm	5/6/2021	440	88%	85-115%
Practical Quantitation Limit		50		

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

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HARDEL DATA GAPS INVESTIGATION PROJECT
Pioneer Technologies
Libby Project # L210505-1
Date Received 5/5/2021
Time Received 2:58 PM

Received By RJK

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody complete?	☑ Yes	☐ No	
2. How was the sample delivered?	☑ Hand Delivered	☐ Picked Up	☐ Shipped

Log In

3. Cooler or Shipping Container is present.	☑ Yes	☐ No	☐ N/A
4. Cooler or Shipping Container is in good condition.	☑ Yes	☐ No	☐ N/A
5. Cooler or Shipping Container has Custody Seals present.	☐ Yes	☑ No	☐ N/A
6. Was an attempt made to cool the samples?	☑ Yes	☐ No	☐ N/A
7. Temperature of cooler (0°C to 8°C recommended)	0.3 °C		
8. Temperature of sample(s) (0°C to 8°C recommended)	2.3 °C		
9. Did all containers arrive in good condition (unbroken)?	☑ Yes	☐ No	
10. Is it clear what analyses were requested?	☑ Yes	☐ No	
11. Did container labels match Chain of Custody?	☑ Yes	☐ No	
12. Are matrices correctly identified on Chain of Custody?	☑ Yes	☐ No	
13. Are correct containers used for the analysis indicated?	☑ Yes	☐ No	
14. Is there sufficient sample volume for indicated analysis?	☑ Yes	☐ No	
15. Were all containers properly preserved per each analysis?	☑ Yes	☐ No	
16. Were VOA vials collected correctly (no headspace)?	☑ Yes	☐ No	☐ N/A
17. Were all holding times able to be met?	☑ Yes	☐ No	

Discrepancies/ Notes

18. Was client notified of all discrepancies? ☐ Yes ☐ No ☑ N/A

Person Notified: _____ Date: _____

By Whom: _____ Via: _____

Regarding: _____

19. Comments. _____

3600 Fremont Ave. N.
Seattle, WA 98103
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F: (206) 352-7178
info@fremontanalytical.com

Libby Environmental
Kodey Eley
3322 South Bay Road NE
Olympia, WA 98506

RE: Hardel Data Gaps Investigation
Work Order Number: 2105070

May 28, 2021

Attention Kodey Eley:

Fremont Analytical, Inc. received 6 sample(s) on 5/6/2021 for the analyses presented in the following report.

Dissolved Metals by EPA Method 200.8
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *06/08/2021*

CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation
Work Order: 2105070

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2105070-001	GW-MW102-0521	05/05/2021 1:00 PM	05/06/2021 10:27 AM
2105070-002	GW-MW103-0521	05/05/2021 12:15 PM	05/06/2021 10:27 AM
2105070-003	GW-MW105-0521	05/05/2021 10:55 AM	05/06/2021 10:27 AM
2105070-004	GW-MW106-0521	05/05/2021 11:35 AM	05/06/2021 10:27 AM
2105070-005	GW-MW107-0521	05/05/2021 1:50 PM	05/06/2021 10:27 AM
2105070-006	GW-MW107-0521-01	05/05/2021 1:50 PM	05/06/2021 10:27 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Original

Case Narrative

WO#: **2105070**
Date: **5/28/2021**

CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2105070**
Date Reported: **5/28/2021**

Client: Libby Environmental
Collection Date: 5/5/2021 1:00:00 PM
Project: Hardel Data Gaps Investigation
Lab ID: 2105070-001
Matrix: Water
Client Sample ID: GW-MW102-0521

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 32250		Analyst: IH
Naphthalene	0.927	0.0993		µg/L	1	5/11/2021 1:05:07 PM
2-Methylnaphthalene	0.144	0.0993		µg/L	1	5/11/2021 1:05:07 PM
1-Methylnaphthalene	0.330	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Acenaphthylene	ND	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Acenaphthene	0.968	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Fluorene	0.298	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Phenanthrene	ND	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Anthracene	ND	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Fluoranthene	ND	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Pyrene	ND	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Benz(a)anthracene	ND	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Chrysene	ND	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Benzo(b)fluoranthene	ND	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Benzo(k)fluoranthene	ND	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Benzo(a)pyrene	ND	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Indeno(1,2,3-cd)pyrene	ND	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Dibenz(a,h)anthracene	ND	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Benzo(g,h,i)perylene	ND	0.0993		µg/L	1	5/11/2021 1:05:07 PM
Surr: 2-Fluorobiphenyl	84.2	33.2 - 139		%Rec	1	5/11/2021 1:05:07 PM
Surr: Terphenyl-d14	94.3	24.6 - 136		%Rec	1	5/11/2021 1:05:07 PM
Dissolved Metals by EPA Method 200.8				Batch ID: 32446		Analyst: EH
Arsenic	2.91	1.00		µg/L	1	5/26/2021 11:01:53 PM
Silver	ND	0.350		µg/L	1	5/11/2021 2:03:29 AM

Analytical Report

Work Order: **2105070**
Date Reported: **5/28/2021**

Client: Libby Environmental
Collection Date: 5/5/2021 12:15:00 PM
Project: Hardel Data Gaps Investigation
Lab ID: 2105070-002
Matrix: Water
Client Sample ID: GW-MW103-0521

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 32250		Analyst: IH
Naphthalene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
2-Methylnaphthalene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
1-Methylnaphthalene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Acenaphthylene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Acenaphthene	1.51	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Fluorene	0.200	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Phenanthrene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Anthracene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Fluoranthene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Pyrene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Benz(a)anthracene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Chrysene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Benzo(b)fluoranthene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Benzo(k)fluoranthene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Benzo(a)pyrene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Indeno(1,2,3-cd)pyrene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Dibenz(a,h)anthracene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Benzo(g,h,i)perylene	ND	0.0991		µg/L	1	5/11/2021 1:48:18 PM
Surr: 2-Fluorobiphenyl	81.0	33.2 - 139		%Rec	1	5/11/2021 1:48:18 PM
Surr: Terphenyl-d14	89.5	24.6 - 136		%Rec	1	5/11/2021 1:48:18 PM
Dissolved Metals by EPA Method 200.8				Batch ID: 32239		Analyst: EH
Arsenic	ND	1.00		µg/L	1	5/11/2021 2:08:03 AM
Silver	ND	0.350		µg/L	1	5/11/2021 2:08:03 AM

Analytical Report

Work Order: **2105070**
Date Reported: **5/28/2021**

Client: Libby Environmental
Collection Date: 5/5/2021 10:55:00 AM
Project: Hardel Data Gaps Investigation
Lab ID: 2105070-003
Matrix: Water
Client Sample ID: GW-MW105-0521

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 32250		Analyst: IH
Naphthalene	0.119	0.0997		µg/L	1	5/11/2021 2:09:56 PM
2-Methylnaphthalene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
1-Methylnaphthalene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Acenaphthylene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Acenaphthene	8.05	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Fluorene	3.04	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Phenanthrene	0.557	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Anthracene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Fluoranthene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Pyrene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Benz(a)anthracene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Chrysene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Benzo(b)fluoranthene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Benzo(k)fluoranthene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Benzo(a)pyrene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Indeno(1,2,3-cd)pyrene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Dibenz(a,h)anthracene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Benzo(g,h,i)perylene	ND	0.0997		µg/L	1	5/11/2021 2:09:56 PM
Surr: 2-Fluorobiphenyl	85.7	33.2 - 139		%Rec	1	5/11/2021 2:09:56 PM
Surr: Terphenyl-d14	106	24.6 - 136		%Rec	1	5/11/2021 2:09:56 PM
Dissolved Metals by EPA Method 200.8				Batch ID: 32239		Analyst: EH
Arsenic	ND	1.00		µg/L	1	5/11/2021 2:12:37 AM
Silver	ND	0.350		µg/L	1	5/11/2021 2:12:37 AM

Analytical Report

Work Order: **2105070**
Date Reported: **5/28/2021**

Client: Libby Environmental
Collection Date: 5/5/2021 11:35:00 AM
Project: Hardel Data Gaps Investigation
Lab ID: 2105070-004
Matrix: Water
Client Sample ID: GW-MW106-0521

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 32250		Analyst: IH
Naphthalene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
2-Methylnaphthalene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
1-Methylnaphthalene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Acenaphthylene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Acenaphthene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Fluorene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Phenanthrene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Anthracene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Fluoranthene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Pyrene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Benz(a)anthracene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Chrysene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Benzo(b)fluoranthene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Benzo(k)fluoranthene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Benzo(a)pyrene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Indeno(1,2,3-cd)pyrene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Dibenz(a,h)anthracene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Benzo(g,h,i)perylene	ND	0.0999		µg/L	1	5/11/2021 2:31:32 PM
Surr: 2-Fluorobiphenyl	78.7	33.2 - 139		%Rec	1	5/11/2021 2:31:32 PM
Surr: Terphenyl-d14	89.9	24.6 - 136		%Rec	1	5/11/2021 2:31:32 PM
Dissolved Metals by EPA Method 200.8				Batch ID: 32239		Analyst: EH
Arsenic	ND	1.00		µg/L	1	5/11/2021 2:17:10 AM
Silver	ND	0.350		µg/L	1	5/11/2021 2:17:10 AM

Client: Libby Environmental
Collection Date: 5/5/2021 1:50:00 PM
Project: Hardel Data Gaps Investigation
Lab ID: 2105070-005
Matrix: Water
Client Sample ID: GW-MW107-0521

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 32250		Analyst: IH
Naphthalene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
2-Methylnaphthalene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
1-Methylnaphthalene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Acenaphthylene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Acenaphthene	0.316	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Fluorene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Phenanthrene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Anthracene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Fluoranthene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Pyrene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Benz(a)anthracene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Chrysene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Benzo(b)fluoranthene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Benzo(k)fluoranthene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Benzo(a)pyrene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Indeno(1,2,3-cd)pyrene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Dibenz(a,h)anthracene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Benzo(g,h,i)perylene	ND	0.0984		µg/L	1	5/11/2021 2:53:20 PM
Surr: 2-Fluorobiphenyl	89.4	33.2 - 139		%Rec	1	5/11/2021 2:53:20 PM
Surr: Terphenyl-d14	103	24.6 - 136		%Rec	1	5/11/2021 2:53:20 PM
Dissolved Metals by EPA Method 200.8				Batch ID: 32365		Analyst: EH
Arsenic	ND	1.00		µg/L	1	5/21/2021 11:22:06 PM
Silver	ND	0.350		µg/L	1	5/21/2021 11:22:06 PM

Analytical Report

Work Order: **2105070**
Date Reported: **5/28/2021**

Client: Libby Environmental
Collection Date: 5/5/2021 1:50:00 PM
Project: Hardel Data Gaps Investigation
Lab ID: 2105070-006
Matrix: Water
Client Sample ID: GW-MW107-0521-01

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 32250		Analyst: IH
Naphthalene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
2-Methylnaphthalene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
1-Methylnaphthalene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Acenaphthylene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Acenaphthene	0.317	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Fluorene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Phenanthrene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Anthracene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Fluoranthene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Pyrene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Benz(a)anthracene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Chrysene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Benzo(b)fluoranthene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Benzo(k)fluoranthene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Benzo(a)pyrene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Indeno(1,2,3-cd)pyrene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Dibenz(a,h)anthracene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Benzo(g,h,i)perylene	ND	0.0994		µg/L	1	5/11/2021 3:15:02 PM
Surr: 2-Fluorobiphenyl	84.9	33.2 - 139		%Rec	1	5/11/2021 3:15:02 PM
Surr: Terphenyl-d14	101	24.6 - 136		%Rec	1	5/11/2021 3:15:02 PM
Dissolved Metals by EPA Method 200.8				Batch ID: 32365		Analyst: EH
Arsenic	ND	1.00		µg/L	1	5/21/2021 11:40:19 PM
Silver	ND	0.350		µg/L	1	5/21/2021 11:40:19 PM

Work Order: 2105070
CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: **ICB-32239**	SampType: **ICB**	Units: **µg/L**	Prep Date: **5/10/2021**	RunNo: **67151**
Client ID: **ICB**	Batch ID: **32239**		Analysis Date: **5/10/2021**	SeqNo: **1353206**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

Sample ID: **ICV-32239**	SampType: **ICV**	Units: **µg/L**	Prep Date: **5/10/2021**	RunNo: **67151**
Client ID: **ICV**	Batch ID: **32239**		Analysis Date: **5/10/2021**	SeqNo: **1353208**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	107	1.00	100.0	0	107	90	110				
Silver	4.94	0.350	5.000	0	98.8	90	110				

Sample ID: **CCV-32239A**	SampType: **CCV**	Units: **µg/L**	Prep Date: **5/11/2021**	RunNo: **67151**
Client ID: **CCV**	Batch ID: **32239**		Analysis Date: **5/11/2021**	SeqNo: **1353209**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	119	1.00	100.0	0	119	85	115				S
Silver	5.68	0.350	5.000	0	114	85	115				

NOTES:
S - Outlying spike recovery observed (high bias). Detections will be qualified with a Q.

Sample ID: **CCB-32239A**	SampType: **CCB**	Units: **µg/L**	Prep Date: **5/11/2021**	RunNo: **67151**
Client ID: **CCB**	Batch ID: **32239**		Analysis Date: **5/11/2021**	SeqNo: **1353210**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

Work Order: 2105070
CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: **MB-32239FB** SampType: **MBLK** Units: **µg/L** Prep Date: **5/7/2021** RunNo: **67151**
Client ID: **MBLKW** Batch ID: **32239** Analysis Date: **5/11/2021** SeqNo: **1353211**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

NOTES:
Filter Blank

Sample ID: **MB-32239** SampType: **MBLK** Units: **µg/L** Prep Date: **5/7/2021** RunNo: **67151**
Client ID: **MBLKW** Batch ID: **32239** Analysis Date: **5/11/2021** SeqNo: **1353212**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

Sample ID: **2105045-002CDUP** SampType: **DUP** Units: **µg/L** Prep Date: **5/7/2021** RunNo: **67151**
Client ID: **BATCH** Batch ID: **32239** Analysis Date: **5/11/2021** SeqNo: **1353215**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	ND	0.350						0		30	

Sample ID: **CCV-32239B** SampType: **CCV** Units: **µg/L** Prep Date: **5/11/2021** RunNo: **67151**
Client ID: **CCV** Batch ID: **32239** Analysis Date: **5/11/2021** SeqNo: **1353221**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	125	1.00	100.0	0	125	85	115				S
Silver	6.20	0.350	5.000	0	124	85	115				S

NOTES:
S - Outlying spike recovery observed (high bias). Detections will be qualified with a Q.

Work Order: 2105070
CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: **CCB-32239B**	SampType: **CCB**			Units: **µg/L**		Prep Date: **5/11/2021**		RunNo: **67151**		
Client ID: **CCB**	Batch ID: **32239**					Analysis Date: **5/11/2021**		SeqNo: **1353222**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

Sample ID: **CCV-32239C**	SampType: **CCV**			Units: **µg/L**		Prep Date: **5/11/2021**		RunNo: **67151**		
Client ID: **CCV**	Batch ID: **32239**					Analysis Date: **5/11/2021**		SeqNo: **1353232**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	124	1.00	100.0	0	124	85	115				S
Silver	6.04	0.350	5.000	0	121	85	115				S

NOTES:
S - Outlying spike recovery observed (high bias). Detections will be qualified with a Q.

Sample ID: **CCB-32239C**	SampType: **CCB**			Units: **µg/L**		Prep Date: **5/11/2021**		RunNo: **67151**		
Client ID: **CCB**	Batch ID: **32239**					Analysis Date: **5/11/2021**		SeqNo: **1353233**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

Sample ID: **ICB-32239A**	SampType: **ICB**			Units: **µg/L**		Prep Date: **5/12/2021**		RunNo: **67151**		
Client ID: **ICB**	Batch ID: **32239**					Analysis Date: **5/12/2021**		SeqNo: **1354320**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

Work Order: 2105070
CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: **ICV-32239A**	SampType: **ICV**	Units: **µg/L**	Prep Date: **5/12/2021**	RunNo: **67151**
Client ID: **ICV**	Batch ID: **32239**		Analysis Date: **5/12/2021**	SeqNo: **1354322**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	108	1.00	100.0	0	108	90	110				
Silver	4.79	0.350	5.000	0	95.9	90	110				

Sample ID: **CCV-32239D**	SampType: **CCV**	Units: **µg/L**	Prep Date: **5/12/2021**	RunNo: **67151**
Client ID: **CCV**	Batch ID: **32239**		Analysis Date: **5/12/2021**	SeqNo: **1354323**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	106	1.00	100.0	0	106	85	115				
Silver	5.10	0.350	5.000	0	102	85	115				

Sample ID: **CCB-32239D**	SampType: **CCB**	Units: **µg/L**	Prep Date: **5/12/2021**	RunNo: **67151**
Client ID: **CCB**	Batch ID: **32239**		Analysis Date: **5/12/2021**	SeqNo: **1354324**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

Sample ID: **LCS-32239**	SampType: **LCS**	Units: **µg/L**	Prep Date: **5/7/2021**	RunNo: **67151**
Client ID: **LCSW**	Batch ID: **32239**		Analysis Date: **5/12/2021**	SeqNo: **1354326**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	111	1.00	100.0	0	111	85	115				
Silver	5.29	0.350	5.000	0	106	85	115				

Work Order: 2105070
CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: **2105045-002CDUP** SampType: **DUP** Units: **µg/L** Prep Date: **5/7/2021** RunNo: **67151**
Client ID: **BATCH** Batch ID: **32239** Analysis Date: **5/12/2021** SeqNo: **1354328**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	6.46	1.00						19.22	99.4	30	R

NOTES:
R - High RPD observed.

Sample ID: **2105045-002CMS** SampType: **MS** Units: **µg/L** Prep Date: **5/7/2021** RunNo: **67151**
Client ID: **BATCH** Batch ID: **32239** Analysis Date: **5/12/2021** SeqNo: **1354329**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	550	1.00	500.0	8.022	108	70	130				
Silver	25.4	0.350	25.00	0	102	70	130				

Sample ID: **2105045-002CMSD** SampType: **MSD** Units: **µg/L** Prep Date: **5/7/2021** RunNo: **67151**
Client ID: **BATCH** Batch ID: **32239** Analysis Date: **5/12/2021** SeqNo: **1354330**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	518	1.00	500.0	8.022	102	70	130	633.8	20.1	30	
Silver	26.7	0.350	25.00	0	107	70	130	29.21	8.82	30	

Sample ID: **CCV-32239E** SampType: **CCV** Units: **µg/L** Prep Date: **5/12/2021** RunNo: **67151**
Client ID: **CCV** Batch ID: **32239** Analysis Date: **5/12/2021** SeqNo: **1354333**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	103	1.00	100.0	0	103	85	115				
Silver	4.75	0.350	5.000	0	95.0	85	115				

Work Order: 2105070
CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: **CCB-32239E**	SampType: **CCB**	Units: **µg/L**	Prep Date: **5/12/2021**	RunNo: **67151**
Client ID: **CCB**	Batch ID: **32239**		Analysis Date: **5/12/2021**	SeqNo: **1354334**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

Sample ID: **2105070-005BDUP**	SampType: **DUP**	Units: **µg/L**	Prep Date: **5/7/2021**	RunNo: **67151**
Client ID: **GW-MW107-0521**	Batch ID: **32239**		Analysis Date: **5/12/2021**	SeqNo: **1354338**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	35.1	1.00						20.51	52.6	30	R
Silver	ND	0.350						0		30	

NOTES:
R - High RPD observed.

Sample ID: **CCV-32239F**	SampType: **CCV**	Units: **µg/L**	Prep Date: **5/13/2021**	RunNo: **67151**
Client ID: **CCV**	Batch ID: **32239**		Analysis Date: **5/13/2021**	SeqNo: **1354339**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	107	1.00	100.0	0	107	85	115				
Silver	5.02	0.350	5.000	0	100	85	115				

Sample ID: **CCB-32239F**	SampType: **CCB**	Units: **µg/L**	Prep Date: **5/13/2021**	RunNo: **67151**
Client ID: **CCB**	Batch ID: **32239**		Analysis Date: **5/13/2021**	SeqNo: **1354340**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

Work Order: 2105070
CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: ICB-32365	SampType: ICB	Units: µg/L	Prep Date: 5/21/2021	RunNo: 67425
Client ID: ICB	Batch ID: 32365		Analysis Date: 5/21/2021	SeqNo: 1359607

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

Sample ID: ICV-32365	SampType: ICV	Units: µg/L	Prep Date: 5/21/2021	RunNo: 67425
Client ID: ICV	Batch ID: 32365		Analysis Date: 5/21/2021	SeqNo: 1359609

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	105	1.00	100.0	0	105	90	110				
Silver	5.13	0.350	5.000	0	103	90	110				

Sample ID: CCV-32365A	SampType: CCV	Units: µg/L	Prep Date: 5/21/2021	RunNo: 67425
Client ID: CCV	Batch ID: 32365		Analysis Date: 5/21/2021	SeqNo: 1359610

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	100	1.00	100.0	0	100	85	115				
Silver	5.18	0.350	5.000	0	104	85	115				

Sample ID: CCB-32365A	SampType: CCB	Units: µg/L	Prep Date: 5/21/2021	RunNo: 67425
Client ID: CCB	Batch ID: 32365		Analysis Date: 5/21/2021	SeqNo: 1359611

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

Work Order: 2105070
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QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: MB-32365	SampType: MBLK	Units: µg/L	Prep Date: 5/20/2021	RunNo: 67425
Client ID: MBLKW	Batch ID: 32365		Analysis Date: 5/21/2021	SeqNo: 1359612

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

Sample ID: LCS-32365	SampType: LCS	Units: µg/L	Prep Date: 5/20/2021	RunNo: 67425
Client ID: LCSW	Batch ID: 32365		Analysis Date: 5/21/2021	SeqNo: 1359613

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	103	1.00	100.0	0	103	85	115				
Silver	4.95	0.350	5.000	0	98.9	85	115				

Sample ID: 2105070-005BDUP	SampType: DUP	Units: µg/L	Prep Date: 5/20/2021	RunNo: 67425
Client ID: GW-MW107-0521	Batch ID: 32365		Analysis Date: 5/21/2021	SeqNo: 1359615

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00						0		30	
Silver	ND	0.350						0		30	

Sample ID: 2105070-005BMS	SampType: MS	Units: µg/L	Prep Date: 5/20/2021	RunNo: 67425
Client ID: GW-MW107-0521	Batch ID: 32365		Analysis Date: 5/21/2021	SeqNo: 1359616

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	499	1.00	500.0	0.5810	99.6	70	130				
Silver	23.8	0.350	25.00	0	95.4	70	130				

Work Order: 2105070
CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: **2105070-005BMSD**	SampType: **MSD**	Units: **µg/L**	Prep Date: **5/20/2021**	RunNo: **67425**
Client ID: **GW-MW107-0521**	Batch ID: **32365**		Analysis Date: **5/21/2021**	SeqNo: **1359617**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	508	1.00	500.0	0.5810	102	70	130	498.6	1.92	30	
Silver	24.1	0.350	25.00	0	96.6	70	130	23.84	1.25	30	

Sample ID: **CCV-32365B**	SampType: **CCV**	Units: **µg/L**	Prep Date: **5/21/2021**	RunNo: **67425**
Client ID: **CCV**	Batch ID: **32365**		Analysis Date: **5/21/2021**	SeqNo: **1359620**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	96.6	1.00	100.0	0	96.6	85	115				
Silver	5.16	0.350	5.000	0	103	85	115				

Sample ID: **CCB-32365B**	SampType: **CCB**	Units: **µg/L**	Prep Date: **5/21/2021**	RunNo: **67425**
Client ID: **CCB**	Batch ID: **32365**		Analysis Date: **5/21/2021**	SeqNo: **1359621**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									
Silver	ND	0.350									

Sample ID: **ICB-32446**	SampType: **ICB**	Units: **µg/L**	Prep Date: **5/26/2021**	RunNo: **67575**
Client ID: **ICB**	Batch ID: **32446**		Analysis Date: **5/26/2021**	SeqNo: **1362848**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									

Sample ID: **ICV-32446**	SampType: **ICV**	Units: **µg/L**	Prep Date: **5/26/2021**	RunNo: **67575**
Client ID: **ICV**	Batch ID: **32446**		Analysis Date: **5/26/2021**	SeqNo: **1362850**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	108	1.00	100.0	0	108	90	110				

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QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: **ICV-32446**	SampType: **ICV**			Units: **µg/L**		Prep Date: **5/26/2021**		RunNo: **67575**	
Client ID: **ICV**	Batch ID: **32446**					Analysis Date: **5/26/2021**		SeqNo: **1362850**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **CCV-32446A**	SampType: **CCV**			Units: **µg/L**		Prep Date: **5/26/2021**		RunNo: **67575**	
Client ID: **CCV**	Batch ID: **32446**					Analysis Date: **5/26/2021**		SeqNo: **1362851**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	96.8	1.00	100.0	0	96.8	85	115				

Sample ID: **CCB-32446A**	SampType: **CCB**			Units: **µg/L**		Prep Date: **5/26/2021**		RunNo: **67575**	
Client ID: **CCB**	Batch ID: **32446**					Analysis Date: **5/26/2021**		SeqNo: **1362852**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									

Sample ID: **MB-32446**	SampType: **MBLK**			Units: **µg/L**		Prep Date: **5/26/2021**		RunNo: **67575**	
Client ID: **MBLKW**	Batch ID: **32446**					Analysis Date: **5/26/2021**		SeqNo: **1362853**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									

Sample ID: **LCS-32446**	SampType: **LCS**			Units: **µg/L**		Prep Date: **5/26/2021**		RunNo: **67575**	
Client ID: **LCSW**	Batch ID: **32446**					Analysis Date: **5/26/2021**		SeqNo: **1362854**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	102	1.00	100.0	0	102	85	115				

Work Order: 2105070
CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: 2105070-001BDUP	SampType: DUP	Units: µg/L	Prep Date: 5/26/2021	RunNo: 67575
Client ID: GW-MW102-0521	Batch ID: 32446		Analysis Date: 5/26/2021	SeqNo: 1362856

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.60	1.00						2.912	11.4	30	

Sample ID: 2105070-001BMS	SampType: MS	Units: µg/L	Prep Date: 5/26/2021	RunNo: 67575
Client ID: GW-MW102-0521	Batch ID: 32446		Analysis Date: 5/26/2021	SeqNo: 1362857

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	476	1.00	500.0	2.006	94.8	70	130				

Sample ID: CCV-32446B	SampType: CCV	Units: µg/L	Prep Date: 5/26/2021	RunNo: 67575
Client ID: CCV	Batch ID: 32446		Analysis Date: 5/26/2021	SeqNo: 1362858

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	98.9	1.00	100.0	0	98.9	85	115				

Sample ID: CCB-32446B	SampType: CCB	Units: µg/L	Prep Date: 5/26/2021	RunNo: 67575
Client ID: CCB	Batch ID: 32446		Analysis Date: 5/26/2021	SeqNo: 1362859

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									

Sample ID: 2105070-001BMSD	SampType: MSD	Units: µg/L	Prep Date: 5/26/2021	RunNo: 67575
Client ID: GW-MW102-0521	Batch ID: 32446		Analysis Date: 5/26/2021	SeqNo: 1362860

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	490	1.00	500.0	2.006	97.6	70	130	476.2	2.86	30	

Work Order: 2105070
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QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID: **CCV-32446C** SampType: **CCV** Units: **µg/L** Prep Date: **5/27/2021** RunNo: **67575**
Client ID: **CCV** Batch ID: **32446** Analysis Date: **5/27/2021** SeqNo: **1362865**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	101	1.00	100.0	0	101	85	115				

Sample ID: **CCB-32446C** SampType: **CCB** Units: **µg/L** Prep Date: **5/27/2021** RunNo: **67575**
Client ID: **CCB** Batch ID: **32446** Analysis Date: **5/27/2021** SeqNo: **1362866**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.00									

Work Order: 2105070
CLIENT: Libby Environmental
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QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **PAH ICB**	SampType: **ICB**	Units: **µg/L**	Prep Date: **4/2/2021**	RunNo: **66329**
Client ID: **ICB**	Batch ID: **32250**		Analysis Date: **4/2/2021**	SeqNo: **1356895**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	0.100									
2-Methylnaphthalene	ND	0.100									
1-Methylnaphthalene	ND	0.100									
Acenaphthylene	ND	0.100									
Acenaphthene	ND	0.100									
Fluorene	ND	0.100									
Phenanthrene	ND	0.100									
Anthracene	ND	0.100									
Fluoranthene	ND	0.100									
Pyrene	ND	0.100									
Benz(a)anthracene	ND	0.100									
Chrysene	ND	0.100									
Benzo(b)fluoranthene	ND	0.100									
Benzo(k)fluoranthene	ND	0.100									
Benzo(a)pyrene	ND	0.100									
Indeno(1,2,3-cd)pyrene	ND	0.100									
Dibenz(a,h)anthracene	ND	0.100									
Benzo(g,h,i)perylene	ND	0.100									
Surr: 2-Fluorobiphenyl	495		500.0		99.0	72.7	131				
Surr: Terphenyl-d14	562		500.0		112	74.6	134				

Sample ID: **PAH ICV**	SampType: **ICV**	Units: **µg/L**	Prep Date: **4/2/2021**	RunNo: **66329**
Client ID: **ICV**	Batch ID: **32250**		Analysis Date: **4/2/2021**	SeqNo: **1356896**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,050	0.100	1,000	0	105	70	130				
2-Methylnaphthalene	1,050	0.100	1,000	0	105	70	130				
1-Methylnaphthalene	1,080	0.100	1,000	0	108	70	130				
Acenaphthylene	1,090	0.100	1,000	0	109	70	130				
Acenaphthene	1,050	0.100	1,000	0	105	70	130				

Work Order: 2105070
CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **PAH ICV**	SampType: **ICV**	Units: **µg/L**	Prep Date: **4/2/2021**	RunNo: **66329**
Client ID: **ICV**	Batch ID: **32250**		Analysis Date: **4/2/2021**	SeqNo: **1356896**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	1,090	0.100	1,000	0	109	70	130				
Phenanthrene	1,080	0.100	1,000	0	108	70	130				
Anthracene	1,060	0.100	1,000	0	106	70	130				
Fluoranthene	1,090	0.100	1,000	0	109	70	130				
Pyrene	1,100	0.100	1,000	0	110	70	130				
Benz(a)anthracene	1,070	0.100	1,000	0	107	70	130				
Chrysene	1,080	0.100	1,000	0	108	70	130				
Benzo(b)fluoranthene	1,020	0.100	1,000	0	102	70	130				
Benzo(k)fluoranthene	1,200	0.100	1,000	0	120	70	130				
Benzo(a)pyrene	1,210	0.100	1,000	0	121	70	130				
Indeno(1,2,3-cd)pyrene	1,080	0.100	1,000	0	108	70	130				
Dibenz(a,h)anthracene	1,100	0.100	1,000	0	110	70	130				
Benzo(g,h,i)perylene	1,090	0.100	1,000	0	109	70	130				
Surr: 2-Fluorobiphenyl	524		500.0		105	70.2	145				
Surr: Terphenyl-d14	574		500.0		115	71.3	142				

Sample ID: **CCV-32251B**	SampType: **CCV**	Units: **µg/L**	Prep Date: **5/11/2021**	RunNo: **67194**
Client ID: **CCV**	Batch ID: **32250**		Analysis Date: **5/11/2021**	SeqNo: **1356911**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	849	0.100	1,000	0	84.9	80	120				
2-Methylnaphthalene	859	0.100	1,000	0	85.9	80	120				
1-Methylnaphthalene	895	0.100	1,000	0	89.5	80	120				
Acenaphthylene	873	0.100	1,000	0	87.3	80	120				
Acenaphthene	877	0.100	1,000	0	87.7	80	120				
Fluorene	881	0.100	1,000	0	88.1	80	120				
Phenanthrene	860	0.100	1,000	0	86.0	80	120				
Anthracene	854	0.100	1,000	0	85.4	80	120				
Fluoranthene	874	0.100	1,000	0	87.4	80	120				
Pyrene	846	0.100	1,000	0	84.6	80	120				

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CLIENT: Libby Environmental
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QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **CCV-32251B**	SampType: **CCV**	Units: **µg/L**	Prep Date: **5/11/2021**	RunNo: **67194**
Client ID: **CCV**	Batch ID: **32250**		Analysis Date: **5/11/2021**	SeqNo: **1356911**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	897	0.100	1,000	0	89.7	80	120				
Chrysene	832	0.100	1,000	0	83.2	80	120				
Benzo(b)fluoranthene	914	0.100	1,000	0	91.4	80	120				
Benzo(k)fluoranthene	801	0.100	1,000	0	80.1	80	120				
Benzo(a)pyrene	877	0.100	1,000	0	87.7	80	120				
Indeno(1,2,3-cd)pyrene	913	0.100	1,000	0	91.3	80	120				
Dibenz(a,h)anthracene	934	0.100	1,000	0	93.4	80	120				
Benzo(g,h,i)perylene	842	0.100	1,000	0	84.2	80	120				
Surr: 2-Fluorobiphenyl	425		500.0		85.0	70.2	145				
Surr: Terphenyl-d14	473		500.0		94.7	71.3	142				

Sample ID: **MB-32250**	SampType: **MBLK**	Units: **µg/L**	Prep Date: **5/10/2021**	RunNo: **67194**
Client ID: **MBLKW**	Batch ID: **32250**		Analysis Date: **5/11/2021**	SeqNo: **1353957**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	0.0986									
2-Methylnaphthalene	ND	0.0986									
1-Methylnaphthalene	ND	0.0986									
Acenaphthylene	ND	0.0986									
Acenaphthene	ND	0.0986									
Fluorene	ND	0.0986									
Phenanthrene	ND	0.0986									
Anthracene	ND	0.0986									
Fluoranthene	ND	0.0986									
Pyrene	ND	0.0986									
Benz(a)anthracene	ND	0.0986									
Chrysene	ND	0.0986									
Benzo(b)fluoranthene	ND	0.0986									
Benzo(k)fluoranthene	ND	0.0986									
Benzo(a)pyrene	ND	0.0986									

Work Order: 2105070
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QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **MB-32250**	SampType: **MBLK**	Units: **µg/L**	Prep Date: **5/10/2021**	RunNo: **67194**
Client ID: **MBLKW**	Batch ID: **32250**		Analysis Date: **5/11/2021**	SeqNo: **1353957**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	ND	0.0986									
Dibenz(a,h)anthracene	ND	0.0986									
Benzo(g,h,i)perylene	ND	0.0986									
Surr: 2-Fluorobiphenyl	1.51		1.972		76.7	33.2	139				
Surr: Terphenyl-d14	1.89		1.972		95.7	24.6	136				

Sample ID: **LCS-32250**	SampType: **LCS**	Units: **µg/L**	Prep Date: **5/10/2021**	RunNo: **67194**
Client ID: **LCSW**	Batch ID: **32250**		Analysis Date: **5/11/2021**	SeqNo: **1353958**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2.76	0.0987	3.949	0	69.9	24.1	124				
2-Methylnaphthalene	2.92	0.0987	3.949	0	73.9	32	129				
1-Methylnaphthalene	3.00	0.0987	3.949	0	76.0	30.4	125				
Acenaphthylene	3.02	0.0987	3.949	0	76.4	34.5	130				
Acenaphthene	3.07	0.0987	3.949	0	77.7	33.1	126				
Fluorene	3.37	0.0987	3.949	0	85.2	34.4	134				
Phenanthrene	3.40	0.0987	3.949	0	86.1	41.2	130				
Anthracene	3.29	0.0987	3.949	0	83.4	34.3	127				
Fluoranthene	3.48	0.0987	3.949	0	88.0	42.2	135				
Pyrene	3.33	0.0987	3.949	0	84.4	40.9	133				
Benz(a)anthracene	3.34	0.0987	3.949	0	84.5	33.1	130				
Chrysene	3.07	0.0987	3.949	0	77.7	34.7	113				
Benzo(b)fluoranthene	3.10	0.0987	3.949	0	78.6	24.9	128				
Benzo(k)fluoranthene	2.95	0.0987	3.949	0	74.7	21.3	131				
Benzo(a)pyrene	3.27	0.0987	3.949	0	82.8	23.2	139				
Indeno(1,2,3-cd)pyrene	2.88	0.0987	3.949	0	72.8	14.9	123				
Dibenz(a,h)anthracene	2.96	0.0987	3.949	0	75.0	12.2	125				
Benzo(g,h,i)perylene	2.68	0.0987	3.949	0	67.7	11.8	122				
Surr: 2-Fluorobiphenyl	1.56		1.974		79.1	33.2	139				
Surr: Terphenyl-d14	1.88		1.974		95.0	24.6	136				

Work Order: 2105070
CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **LCS-32250**	SampType: **LCS**			Units: **µg/L**		Prep Date: **5/10/2021**			RunNo: **67194**		
Client ID: **LCSW**	Batch ID: **32250**					Analysis Date: **5/11/2021**			SeqNo: **1353958**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **LCSD-32250**	SampType: **LCSD**			Units: **µg/L**		Prep Date: **5/10/2021**			RunNo: **67194**		
Client ID: **LCSW02**	Batch ID: **32250**					Analysis Date: **5/11/2021**			SeqNo: **1353959**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1.76	0.0990	3.962	0	44.5	24.1	124	2.762	44.2	30	R
2-Methylnaphthalene	1.88	0.0990	3.962	0	47.3	32	129	2.916	43.5	30	R
1-Methylnaphthalene	1.95	0.0990	3.962	0	49.3	30.4	125	3.003	42.4	30	R
Acenaphthylene	1.96	0.0990	3.962	0	49.6	34.5	130	3.016	42.2	30	R
Acenaphthene	2.02	0.0990	3.962	0	51.1	33.1	126	3.067	41.0	30	R
Fluorene	2.21	0.0990	3.962	0	55.7	34.4	134	3.366	41.6	30	R
Phenanthrene	2.30	0.0990	3.962	0	58.1	41.2	130	3.402	38.6	30	R
Anthracene	2.28	0.0990	3.962	0	57.5	34.3	127	3.294	36.5	30	R
Fluoranthene	2.45	0.0990	3.962	0	61.8	42.2	135	3.476	34.7	30	R
Pyrene	2.33	0.0990	3.962	0	58.9	40.9	133	3.335	35.3	30	R
Benz(a)anthracene	2.40	0.0990	3.962	0	60.5	33.1	130	3.338	32.9	30	R
Chrysene	2.18	0.0990	3.962	0	55.0	34.7	113	3.068	33.9	30	R
Benzo(b)fluoranthene	2.24	0.0990	3.962	0	56.6	24.9	128	3.103	32.2	30	R
Benzo(k)fluoranthene	2.10	0.0990	3.962	0	53.1	21.3	131	2.948	33.5	30	R
Benzo(a)pyrene	2.35	0.0990	3.962	0	59.4	23.2	139	3.271	32.7	30	R
Indeno(1,2,3-cd)pyrene	2.08	0.0990	3.962	0	52.6	14.9	123	2.876	32.0	30	R
Dibenz(a,h)anthracene	2.14	0.0990	3.962	0	54.1	12.2	125	2.963	32.1	30	R
Benzo(g,h,i)perylene	1.92	0.0990	3.962	0	48.5	11.8	122	2.675	32.7	30	R
Surr: 2-Fluorobiphenyl	0.998		1.981		50.4	33.2	139		0	0	
Surr: Terphenyl-d14	1.35		1.981		68.0	24.6	136		0	0	

NOTES:
R - High RPD observed, spike recovery is within range.

Work Order: 2105070
CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2105070-001AMS** SampType: **MS** Units: **µg/L** Prep Date: **5/10/2021** RunNo: **67194**
Client ID: **GW-MW102-0521** Batch ID: **32250** Analysis Date: **5/11/2021** SeqNo: **1353961**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	3.92	0.101	4.042	0.9274	74.1	25.1	120				
2-Methylnaphthalene	3.33	0.101	4.042	0.1436	78.9	20.4	134				
1-Methylnaphthalene	3.58	0.101	4.042	0.3296	80.5	31.5	122				
Acenaphthylene	3.22	0.101	4.042	0	79.6	34.9	125				
Acenaphthene	4.19	0.101	4.042	0.9678	79.7	33.2	123				
Fluorene	3.81	0.101	4.042	0.2982	86.8	41.1	127				
Phenanthrene	3.52	0.101	4.042	0.08083	85.1	41.6	126				
Anthracene	3.46	0.101	4.042	0	85.5	34.1	123				
Fluoranthene	3.56	0.101	4.042	0	88.2	50	126				
Pyrene	3.40	0.101	4.042	0	84.2	46.7	125				
Benz(a)anthracene	3.38	0.101	4.042	0	83.6	25.3	122				
Chrysene	3.15	0.101	4.042	0	77.9	22.8	111				
Benzo(b)fluoranthene	3.16	0.101	4.042	0	78.1	8.57	125				
Benzo(k)fluoranthene	3.24	0.101	4.042	0	80.1	7.05	124				
Benzo(a)pyrene	3.50	0.101	4.042	0	86.6	9.61	130				
Indeno(1,2,3-cd)pyrene	3.14	0.101	4.042	0	77.7	5	120				
Dibenz(a,h)anthracene	3.22	0.101	4.042	0	79.7	5	122				
Benzo(g,h,i)perylene	2.93	0.101	4.042	0	72.6	5	114				
Surr: 2-Fluorobiphenyl	1.71		2.021		84.8	33.2	139				
Surr: Terphenyl-d14	1.95		2.021		96.4	24.6	136				

Sample ID: **QCS-32251B** SampType: **QCS** Units: **µg/L** Prep Date: **5/11/2021** RunNo: **67194**
Client ID: **BATCH** Batch ID: **32250** Analysis Date: **5/11/2021** SeqNo: **1356912**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	852	0.100	1,000	0	85.2	50	150				
2-Methylnaphthalene	859	0.100	1,000	0	85.9	50	150				
1-Methylnaphthalene	891	0.100	1,000	0	89.1	50	150				
Acenaphthylene	880	0.100	1,000	0	88.0	50	150				
Acenaphthene	877	0.100	1,000	0	87.7	50	150				

Work Order: 2105070
CLIENT: Libby Environmental
Project: Hardel Data Gaps Investigation

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **QCS-32251B** SampType: **QCS** Units: **µg/L** Prep Date: **5/11/2021** RunNo: **67194**
Client ID: **BATCH** Batch ID: **32250** Analysis Date: **5/11/2021** SeqNo: **1356912**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	876	0.100	1,000	0	87.6	50	150				
Phenanthrene	845	0.100	1,000	0	84.5	50	150				
Anthracene	843	0.100	1,000	0	84.3	50	150				
Fluoranthene	874	0.100	1,000	0	87.4	50	150				
Pyrene	843	0.100	1,000	0	84.3	50	150				
Benz(a)anthracene	901	0.100	1,000	0	90.1	50	150				
Chrysene	809	0.100	1,000	0	80.9	50	150				
Benzo(b)fluoranthene	876	0.100	1,000	0	87.6	50	150				
Benzo(k)fluoranthene	864	0.100	1,000	0	86.4	50	150				
Benzo(a)pyrene	886	0.100	1,000	0	88.6	50	150				
Indeno(1,2,3-cd)pyrene	921	0.100	1,000	0	92.1	50	150				
Dibenz(a,h)anthracene	944	0.100	1,000	0	94.4	50	150				
Benzo(g,h,i)perylene	838	0.100	1,000	0	83.8	50	150				
Surr: 2-Fluorobiphenyl	427		500.0		85.4	50	150				
Surr: Terphenyl-d14	478		500.0		95.5	50	150				

Sample Log-In Check List

Client Name:	**LIBBY**	Work Order Number:	**2105070**
Logged by:	**Gabrielle Coeuille**	Date Received:	**5/6/2021 10:27:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes	☑	No	☐	Not Present ☐
2.	How was the sample delivered?	UPS				

Log In

3.	Coolers are present?	Yes	☑	No	☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes	☑	No	☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes	☐	No	☐	Not Present ☑
6.	Was an attempt made to cool the samples?	Yes	☑	No	☐	NA ☐
7.	Were all items received at a temperature of >2°C to 6°C *	Yes	☑	No	☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes	☑	No	☐	
9.	Sufficient sample volume for indicated test(s)?	Yes	☑	No	☐	
10.	Are samples properly preserved?	Yes	☑	No	☐	
11.	Was preservative added to bottles?	Yes	☐	No	☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes	☐	No	☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes	☑	No	☐	
14.	Does paperwork match bottle labels?	Yes	☑	No	☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes	☑	No	☐	
16.	Is it clear what analyses were requested?	Yes	☑	No	☐	
17.	Were all holding times able to be met?	Yes	☑	No	☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes	☑	No	☐	NA ☐

Person Notified:	Kristina Ikerd	Date:	5/6/2021
By Whom:	Gabrielle Coeuille	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	Which sample should be duplicate?		
Client Instructions:	Please run the duplicate for GW-MW107-0521		

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample 1	1.3

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

L105070

www.LibbyEnvironmental.com

Date: 5-5-2021 Page: 1 of 1

Client: Libby Environmental, Inc.
Address: (see above)
City: State: Zip:
Phone: Fax:
Client Project # L210505-1

Project Manager: Kodey Eley
Project Name: Hardel Data Gaps Investigation
Location: City, State: Olympia, WA
Collector: JH Date of Collection: 5-5-2021
Email: libbyenv@gmail.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Dissolved As, Ag		Field Notes
1 GW-MW102-0521		1300	Water	Amber/Poly										X		X			
2 GW-MW103-0521		1215												X		X			
3 GW-MW105-0521		1055												X		X			
4 GW-MW106-0521		1135												X		X			
5 GW-MW107-0521		1350												X		X			
6 GW-MW107-0521-01		1350												X		X			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			

Relinquished by: Date / Time
Received by: Date / Time 5/6/21@1027

Relinquished by: Date / Time
Received by: Date / Time

Relinquished by: Date / Time
Received by: Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks: If possible, please run internal duplicates from MW107 sample. Metals are field filtered.

TAT: 24HR 48HR (5-DAY)

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

210570

www.LibbyEnvironmental.com

Date: 5-5-2021 Page: 1 of 1

Client: Libby Environmental, Inc.
Address: (see above)
City: State: Zip:
Phone: Fax:
Client Project # LZ10505-1

Project Manager: Kodey Eley
Project Name: Hardel Data Gaps Investigation
Location: City, State: Olympia, WA
Collector: JH Date of Collection: 5-5-2021
Email: libbyenv@gmail.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Dissolved As, Ag	Field Notes
1 GW-MW102-0521		1300	Water	Amber/poly										X		X		
2 GW-MW103-0521		1215												X		X		
3 GW-MW105-0521		1055												X		X		
4 GW-MW106-0521		1135												X		X		
5 GW-MW107-0521		1350												X		X		
6 GW-MW107-0521-01		1350												X		X		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		
17																		

Relinquished by: Kristine Hall Date / Time: 5-6-21 13:34
Received by: Date / Time: 5/6/21 @ 1027

Relinquished by: Date / Time
Received by: Date / Time

Relinquished by: Date / Time
Received by: Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks: If possible, please run internal duplicates from MW107 sample. Metals are field filtered.

TAT: 24HR 48HR (5-DAY)

LEGAL ACTION CLAUSE: In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.

Distribution: White - Lab, Yellow - Originator

DATA SET for Review -- Deliverable Requirements

Dissolved Metals by EPA Method 200.8

Fremont Analytical Work Order No. 2105070

Libby Environmental

Project Name: Hardel Data Gaps Investigation

This Data contains the following:

- Analytical Sequence Summary
- Calibration Information
- Tune Information

Dataset Report

User Name: ICPMS
Computer Name: DT28
Dataset File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\051021eh\
Report Date/Time: Tuesday, May 11, 2021 08:54:06

The Dataset

Batch ID	Sample ID	Date and Time	Read Type	Samp. File Name	Description
	2% 2	10:16:41 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	2% 4	10:22:14 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	2% 5	10:27:48 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	2%	10:34:08 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	2%	10:39:42 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	2%	10:45:16 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	2%	10:52:28 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	2%	11:00:07 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	2%	11:05:41 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	CAL BLK IS 23514	11:11:25 Mon 10-M	Blank	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	Standard 1	11:16:59 Mon 10-M	Standard #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	Standard 2	11:22:32 Mon 10-M	Standard #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	Standard 3	11:28:06 Mon 10-M	Standard #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	Standard 4	11:33:39 Mon 10-M	Standard #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	Standard 5	11:39:13 Mon 10-M	Standard #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	Standard 6	11:44:46 Mon 10-M	Standard #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	Standard 7	11:50:20 Mon 10-M	Standard #7	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	Standard 8	11:55:53 Mon 10-M	Standard #8	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	Standard 9	12:01:27 Mon 10-M	Standard #9	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	Standard 10	12:07:01 Mon 10-M	Standard #10	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	Standard 11	12:12:34 Mon 10-M	Standard #11	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	WASH	12:18:09 Mon 10-M	QC Std #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	ICB	12:23:43 Mon 10-M	QC Std #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	ICV LL	12:29:17 Mon 10-M	QC Std #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	ICV	12:34:51 Mon 10-M	QC Std #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	ICSA	12:49:38 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	ICSAB	12:55:12 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	WASH	13:02:33 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	2105012-001A	13:13:39 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	2105012-002A	13:19:13 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	2105012-003A	13:24:46 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	2105013-001A	13:30:20 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	2105013-002A	13:35:53 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	2105046-001A	13:41:27 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	CCV	13:47:02 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	CCV	13:53:04 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	CCB	14:01:03 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	CCB	14:07:43 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	MB-32245	14:13:18 Mon 10-M	Sample	C:\Users\Public\DocumMBLK,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	LCS-32245	14:18:51 Mon 10-M	Sample	C:\Users\Public\DocumLCS,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	2105102-003A	14:24:25 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	2105102-003ADIL	14:29:58 Mon 10-M	Sample	C:\Users\Public\DocumSD,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	2105102-003AMS	14:35:32 Mon 10-M	Sample	C:\Users\Public\DocumMS,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	2105102-003AMSD	14:41:05 Mon 10-M	Sample	C:\Users\Public\DocumMSD,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	2105102-003APDS	14:46:39 Mon 10-M	Sample	C:\Users\Public\DocumPDS,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	2105102-001A	14:52:12 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	2105102-002A	14:57:46 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	2105102-004A	15:03:20 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
	CCV	15:08:54 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
	CCB	15:14:28 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	

2105102-005A	15:20:03 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105102-006A	15:25:37 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105059-001A	15:31:11 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105059-002A	15:36:45 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105059-003A	15:42:19 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
CCV	15:47:54 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
CCB	15:53:29 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
2105110-001A	16:03:49 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105115-001A	16:09:24 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2104421-005A	16:14:58 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105123-001A	16:20:32 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105123-002A	16:26:06 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105123-004A	16:31:40 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105123-006A	16:37:13 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105013-001A 10X	16:42:48 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105013-002A 10X	16:48:22 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2104185-001A 100X	16:53:57 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
CCV	16:59:32 Mon 10-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
CCB	17:05:06 Mon 10-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
CAL BLK IS 23514	17:13:26 Mon 10-M	Blank	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
Standard 1	17:19:00 Mon 10-M	Standard #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
CAL BLK IS 23514	17:23:23 Mon 10-M	Blank	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
CAL BLK IS 23514	17:47:12 Mon 10-M	Blank	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
Standard 1	17:52:46 Mon 10-M	Standard #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
Standard 2	17:58:20 Mon 10-M	Standard #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
Standard 3	18:03:54 Mon 10-M	Standard #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
Standard 4	18:09:28 Mon 10-M	Standard #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
Standard 5	18:15:02 Mon 10-M	Standard #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
Standard 6	18:20:36 Mon 10-M	Standard #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
Standard 7	18:26:10 Mon 10-M	Standard #7	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
Standard 8	18:31:43 Mon 10-M	Standard #8	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
Standard 9	18:37:17 Mon 10-M	Standard #9	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
Standard 10	18:42:51 Mon 10-M	Standard #10	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
Standard 11	18:48:25 Mon 10-M	Standard #11	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
WASH	18:54:01 Mon 10-M	QC Std #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
ICB	18:59:35 Mon 10-M	QC Std #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
ICV LL	19:05:09 Mon 10-M	QC Std #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
ICV	19:10:44 Mon 10-M	QC Std #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
WASH	19:16:18 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
ICSA	19:21:53 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
ICSAB	19:27:27 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
WASH	19:33:02 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
WASH	19:38:37 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
MB-32245	19:44:12 Mon 10-M	Sample	C:\Users\Public\DocumMBLK,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
LCS-32245	19:49:46 Mon 10-M	Sample	C:\Users\Public\DocumLCS,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105102-003A	19:55:20 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105102-003ADIL	20:00:54 Mon 10-M	Sample	C:\Users\Public\DocumSD,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105102-003AMS	20:06:28 Mon 10-M	Sample	C:\Users\Public\DocumMS,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105102-003AMSD	20:12:01 Mon 10-M	Sample	C:\Users\Public\DocumMSD,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105102-003APDS	20:17:36 Mon 10-M	Sample	C:\Users\Public\DocumPDS,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105102-001A	20:23:10 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105102-002A	20:28:44 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105102-004A	20:34:18 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
CCV	20:39:53 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
CCB	20:45:27 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510	
2105102-005A	20:51:02 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105102-006A	20:56:36 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105110-001A	21:02:10 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105115-001A	21:07:44 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2104421-005A	21:13:18 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510

2105123-001A	21:18:51 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105123-002A	21:24:25 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105123-004A	21:30:00 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
2105123-006A	21:35:34 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
CCV	21:41:09 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Sy	gistix\ICPMS\DataSet\May2021\0510
CCB	21:46:43 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Sy	gistix\ICPMS\DataSet\May2021\0510
WASH	21:52:18 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Sy	gistix\ICPMS\DataSet\May2021\0510
MB-32247	21:57:53 Mon 10-M	Sample	C:\Users\Public\DocumMBLK,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
LCS-32247	22:03:27 Mon 10-M	Sample	C:\Users\Public\DocumLCS,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105117-001A	22:09:01 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105117-001ADUP	22:14:35 Mon 10-M	Sample	C:\Users\Public\DocumDUP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105117-001AMS	22:20:08 Mon 10-M	Sample	C:\Users\Public\DocumMS,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105117-001AMSD	22:25:42 Mon 10-M	Sample	C:\Users\Public\DocumMSD,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105063-001B	22:31:16 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105068-001A	22:36:50 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105068-002A	22:42:23 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
LCS-32245	22:47:58 Mon 10-M	Sample	C:\Users\Public\DocumLCS,M-6020-S	gistix\ICPMS\DataSet\May2021\0510
CCV	22:53:33 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Sy	gistix\ICPMS\DataSet\May2021\0510
CCB	22:59:07 Mon 10-M	Sample	C:\Users\Public\Documents\PerkinElmer Sy	gistix\ICPMS\DataSet\May2021\0510
2105075-001A	23:04:41 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105075-006A	23:10:15 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105083-001A	23:15:48 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105089-001A	23:21:22 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105097-001A	23:26:56 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105097-002A	23:32:30 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105097-003A	23:38:04 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105097-004A	23:43:37 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105097-005A	23:49:11 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105097-006A	23:54:45 Mon 10-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
CCV	00:00:20 Tue 11-M	Sample	C:\Users\Public\Documents\PerkinElmer Sy	gistix\ICPMS\DataSet\May2021\0510
CCB	00:05:54 Tue 11-M	Sample	C:\Users\Public\Documents\PerkinElmer Sy	gistix\ICPMS\DataSet\May2021\0510
2105097-007A	00:11:28 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105099-001A	00:17:02 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105101-001A	00:22:36 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105107-001A	00:28:10 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105107-002A	00:33:43 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105112-001B	00:39:17 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105074-001A DRUM	00:44:51 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
2105074-002A DRUM	00:50:25 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0510
WASH	00:55:00 Tue 11-M	Sample	C:\Users\Public\Documents\PerkinElmer Sy	gistix\ICPMS\DataSet\May2021\0510
CCV	00:59:34 Tue 11-M	Sample	C:\Users\Public\Documents\PerkinElmer Sy	gistix\ICPMS\DataSet\May2021\0510
CCB	01:04:08 Tue 11-M	Sample	C:\Users\Public\Documents\PerkinElmer Sy	gistix\ICPMS\DataSet\May2021\0510
MB-32239FB	01:08:43 Tue 11-M	Sample	C:\Users\Public\DocumMBLK,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
MB-32239	01:13:16 Tue 11-M	Sample	C:\Users\Public\DocumMBLK,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
LCS-32239	01:17:50 Tue 11-M	Sample	C:\Users\Public\DocumLCS,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
2105045-002C	01:22:24 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
2105045-002CDUP	01:26:58 Tue 11-M	Sample	C:\Users\Public\DocumDUP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
2105045-002CMS	01:31:31 Tue 11-M	Sample	C:\Users\Public\DocumMS,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
2105045-002CMSD	01:36:05 Tue 11-M	Sample	C:\Users\Public\DocumMSD,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
2105045-001C	01:40:39 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
2105045-003C	01:45:13 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
2105045-004C	01:49:46 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
CCV	01:54:21 Tue 11-M	Sample	C:\Users\Public\Documents\PerkinElmer Sy	gistix\ICPMS\DataSet\May2021\0510
CCB	01:58:55 Tue 11-M	Sample	C:\Users\Public\Documents\PerkinElmer Sy	gistix\ICPMS\DataSet\May2021\0510
2105070-001B	02:03:29 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
2105070-002B	02:08:03 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
2105070-003B	02:12:37 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
2105070-004B	02:17:10 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
2105070-005B	02:21:44 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510
2105070-006B	02:26:18 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0510

2105050-016E	02:30:51 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D gistix\ICPMS\DataSet\May2021\0510
2105050-017E	02:35:25 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D gistix\ICPMS\DataSet\May2021\0510
2105050-018E	02:39:59 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D gistix\ICPMS\DataSet\May2021\0510
CCV	02:44:34 Tue 11-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510
CCB	02:49:08 Tue 11-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510
WASH	02:53:42 Tue 11-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510
MB-32237	06:59:15 Tue 11-M	Sample	C:\Users\Public\DocumMBLK,M-200.8-DW gistix\ICPMS\DataSet\May2021\0510
LCS-32237	07:04:49 Tue 11-M	Sample	C:\Users\Public\DocumLCS,M-200.8-DW gistix\ICPMS\DataSet\May2021\0510
2105047-001A	07:10:22 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\May2021\0510
2105047-001ADUP	07:15:56 Tue 11-M	Sample	C:\Users\Public\DocumDUP,M-200.8-DW gistix\ICPMS\DataSet\May2021\0510
2105047-001AMS	07:21:30 Tue 11-M	Sample	C:\Users\Public\DocumMS,M-200.8-DW gistix\ICPMS\DataSet\May2021\0510
2105047-001AMSD	07:27:03 Tue 11-M	Sample	C:\Users\Public\DocumMSD,M-200.8-DW gistix\ICPMS\DataSet\May2021\0510
2105047-002A	07:32:37 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\May2021\0510
2105047-003A	07:38:11 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\May2021\0510
2105073-001A	07:43:45 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\May2021\0510
2105073-002A	07:49:18 Tue 11-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\May2021\0510
CCV	07:54:53 Tue 11-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510
CCB	08:00:27 Tue 11-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0510

SEQ for 5/12/21 EH 5/13

2105123-004A	16:06:45 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-006A	16:12:19 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105126-001A	16:17:53 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105131-001A	16:23:27 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
WASH	16:29:02 Tue 11-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
MB-32261	16:34:37 Tue 11-M	Sample C:\Users\Public\DocumMBLK,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
CCV	16:40:12 Tue 11-M	QC Std #4 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCB	16:45:47 Tue 11-M	QC Std #5 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
LCS-32261	16:51:22 Tue 11-M	Sample C:\Users\Public\DocumLCS,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105103-001A	16:56:56 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105103-001ADUP	17:02:31 Tue 11-M	Sample C:\Users\Public\DocumDUP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105103-001AMS	17:08:05 Tue 11-M	Sample C:\Users\Public\DocumMS,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105103-001AMSD	17:13:39 Tue 11-M	Sample C:\Users\Public\DocumMSD,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105094-001D	17:19:13 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105113-001B	17:24:47 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105122-002C	17:30:21 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105127-001A	17:35:56 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105128-001A	17:41:30 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
CCV	17:47:05 Tue 11-M	QC Std #4 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCB	17:52:40 Tue 11-M	QC Std #5 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
2105130-001C	17:58:15 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105132-001A	18:03:49 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105132-002A	18:09:23 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105138-001D	18:14:57 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105142-001A	18:20:31 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105047-003A	18:26:06 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105099-001A	18:31:40 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105101-001A	18:37:15 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105107-001A	18:42:50 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105107-002A	18:48:25 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
CCV	18:54:00 Tue 11-M	QC Std #4 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCB	18:59:34 Tue 11-M	QC Std #5 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
2105112-001B	19:05:09 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105074-002A DRUM	19:10:43 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105074-003A DRUM	19:16:18 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
WASH	19:21:52 Tue 11-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
MB-32239	19:27:27 Tue 11-M	Sample C:\Users\Public\DocumMBLK,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
LCS-32239	19:33:01 Tue 11-M	Sample C:\Users\Public\DocumLCS,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105045-002C	19:38:34 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105045-002CDUP	19:44:08 Tue 11-M	Sample C:\Users\Public\DocumDUP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105045-002CMS	19:49:42 Tue 11-M	Sample C:\Users\Public\DocumMS,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105045-002CMSD	19:55:16 Tue 11-M	Sample C:\Users\Public\DocumMSD,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
CCV	20:00:50 Tue 11-M	QC Std #4 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCB	20:06:24 Tue 11-M	QC Std #5 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
2105045-001C	20:11:59 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105045-003C	20:17:33 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105045-004C	20:23:07 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105070-001B	20:28:41 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
NEW 2% #6	20:34:15 Tue 11-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
2105070-005B	20:39:50 Tue 11-M	Sample C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105070-005BDUP	20:45:23 Tue 11-M	Sample C:\Users\Public\DocumDUP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
CCV	20:50:58 Tue 11-M	QC Std #4 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCB	20:56:32 Tue 11-M	QC Std #5 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
2%	21:02:07 Tue 11-M	QC Std #7 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
DI	21:07:41 Tue 11-M	QC Std #8 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CAL BLK IS 23514	10:20:20 Wed 12-M	Blank C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 1	10:25:54 Wed 12-M	Standard #1 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 2	10:31:27 Wed 12-M	Standard #2 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 3	10:37:01 Wed 12-M	Standard #3 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 4	10:42:35 Wed 12-M	Standard #4 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511

EH 5/13/21

SEQ for 5/12/21 EH 5/13

Standard 5	10:48:09 Wed 12-N	Standard #5 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 6	10:53:42 Wed 12-N	Standard #6 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 7	10:59:16 Wed 12-N	Standard #7 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 8	11:04:50 Wed 12-N	Standard #8 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 9	11:10:24 Wed 12-N	Standard #9 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 10	11:15:58 Wed 12-N	Standard #10 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 11	11:21:31 Wed 12-N	Standard #11 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
WASH	11:27:07 Wed 12-N	QC Std #1 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
ICB	11:32:41 Wed 12-N	QC Std #2 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
ICV LL	11:38:15 Wed 12-N	QC Std #3 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
ICV	11:43:50 Wed 12-N	QC Std #6 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
ICV LL	11:55:29 Wed 12-N	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
ICSA	12:46:09 Wed 12-N	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
ICSAB	12:51:42 Wed 12-N	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
WASH	12:57:17 Wed 12-N	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
NEW 2%	13:02:51 Wed 12-N	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
2105115-001A	13:09:37 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-001A	13:15:11 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-001A 10X	13:20:45 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-002A	13:26:18 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-002A 10X	13:31:52 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-004A	13:37:26 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-006A	13:42:59 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-006A 10X	13:48:33 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105122-002C	13:54:08 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105138-001D	13:59:42 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
CCV	14:05:17 Wed 12-N	QC Std #4 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCB	14:10:51 Wed 12-N	QC Std #5 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
WASH	14:16:25 Wed 12-N	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
MB-32237	14:22:00 Wed 12-N	Sample C:\Users\Public\DocumMBLK,M-200.8-DW gistix\ICPMS\DataSet\May2021\0511
LCS-32237	14:27:34 Wed 12-N	Sample C:\Users\Public\DocumLCS,M-200.8-DW . gistix\ICPMS\DataSet\May2021\0511
2105047-001A	14:33:07 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\May2021\0511
2105047-001ADUP	14:38:41 Wed 12-N	Sample C:\Users\Public\DocumDUP,M-200.8-DW . gistix\ICPMS\DataSet\May2021\0511
2105047-001AMS	14:44:14 Wed 12-N	Sample C:\Users\Public\DocumMS,M-200.8-DW . gistix\ICPMS\DataSet\May2021\0511
2105047-001AMSD	14:49:48 Wed 12-N	Sample C:\Users\Public\DocumMSD,M-200.8-DW . gistix\ICPMS\DataSet\May2021\0511
2105047-002A	14:55:22 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\May2021\0511
CCV	15:03:28 Wed 12-N	QC Std #4 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCB	15:09:07 Wed 12-N	QC Std #5 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
LCS-32261	15:14:41 Wed 12-N	Sample C:\Users\Public\DocumLCS,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
MB-32272	15:20:15 Wed 12-N	Sample C:\Users\Public\DocumMBLK,M-TCLP . gistix\ICPMS\DataSet\May2021\0511
LCS-32272	15:25:50 Wed 12-N	Sample C:\Users\Public\DocumLCS,M-TCLP . gistix\ICPMS\DataSet\May2021\0511
2105116-001A	15:31:24 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-TCLP . gistix\ICPMS\DataSet\May2021\0511
2105116-001ADUP	15:36:58 Wed 12-N	Sample C:\Users\Public\DocumDUP,M-TCLP . gistix\ICPMS\DataSet\May2021\0511
2105116-001AMS	15:42:32 Wed 12-N	Sample C:\Users\Public\DocumMS,M-TCLP . gistix\ICPMS\DataSet\May2021\0511
2105116-001AMSD	15:48:06 Wed 12-N	Sample C:\Users\Public\DocumMSD,M-TCLP . gistix\ICPMS\DataSet\May2021\0511
2105120-001A	15:53:40 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-TCLP . gistix\ICPMS\DataSet\May2021\0511
2105120-002A	15:59:14 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-TCLP . gistix\ICPMS\DataSet\May2021\0511
2105121-001A	16:04:48 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-TCLP . gistix\ICPMS\DataSet\May2021\0511
CCV	16:10:23 Wed 12-N	QC Std #4 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCB	16:15:57 Wed 12-N	QC Std #5 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
2105121-002A	16:21:32 Wed 12-N	Sample C:\Users\Public\DocumSAMP,M-TCLP . gistix\ICPMS\DataSet\May2021\0511
CCV	16:28:18 Wed 12-N	QC Std #4 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCB	16:33:52 Wed 12-N	QC Std #5 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
WASH	17:08:07 Wed 12-N	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
WASH	17:13:42 Wed 12-N	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CAL BLK IS 23514	17:19:16 Wed 12-N	Blank C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 1	17:24:51 Wed 12-N	Standard #1 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 2	17:30:25 Wed 12-N	Standard #2 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 3	17:35:59 Wed 12-N	Standard #3 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 4	17:41:33 Wed 12-N	Standard #4 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511

SEQ for 5/12/21 EH 5/13

Standard 5	17:47:07 Wed 12-M	Standard #5 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 6	17:52:41 Wed 12-M	Standard #6 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 7	17:58:15 Wed 12-M	Standard #7 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 8	18:03:49 Wed 12-M	Standard #8 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 9	18:09:22 Wed 12-M	Standard #9 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 10	20:12:58 Wed 12-M	Standard #10 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
Standard 11	20:18:32 Wed 12-M	Standard #11 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
WASH	20:24:07 Wed 12-M	QC Std #1 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
ICB	20:29:41 Wed 12-M	QC Std #2 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
ICV LL	20:35:16 Wed 12-M	QC Std #3 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
ICV	20:40:50 Wed 12-M	QC Std #6 C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
WASH	20:45:40 Wed 12-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
ICV LL	20:50:29 Wed 12-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
ICSA	20:55:18 Wed 12-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
ICSAB	21:00:52 Wed 12-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
WASH	21:06:27 Wed 12-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
WASH	21:12:00 Wed 12-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
2105123-001A	21:17:35 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-001A 10X	21:23:09 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-002A	21:28:43 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-002A 10X	21:34:17 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-004A	21:39:51 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-006A	21:45:26 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105123-006A 10X	21:51:00 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105126-001A	21:56:34 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
2105131-001A	22:02:08 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
CCV	22:07:43 Wed 12-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCB	22:13:16 Wed 12-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
2105131-001A 10X	22:18:51 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0511
WASH	22:24:25 Wed 12-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
MB-32239	22:30:00 Wed 12-M	Sample C:\Users\Public\DocumMBLK,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
LCS-32239	22:35:34 Wed 12-M	Sample C:\Users\Public\DocumLCS,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105045-002C	22:41:08 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105045-002CDUP	22:46:42 Wed 12-M	Sample C:\Users\Public\DocumDUP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105045-002CMS	22:52:16 Wed 12-M	Sample C:\Users\Public\DocumMS,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105045-002CMSD	22:57:50 Wed 12-M	Sample C:\Users\Public\DocumMSD,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105045-001C	23:03:24 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105045-003C	23:08:58 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
CCV	23:14:34 Wed 12-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCB	23:20:08 Wed 12-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
2105045-004C	23:25:43 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105070-001B	23:31:17 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105070-005B	23:36:50 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
2105070-005BDUP	23:42:24 Wed 12-M	Sample C:\Users\Public\DocumDUP,M-200.8-D . gistix\ICPMS\DataSet\May2021\0511
WASH	23:47:58 Wed 12-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
LCS-32261	23:53:32 Wed 12-M	Sample C:\Users\Public\DocumLCS,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105103-001A	23:59:06 Wed 12-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105103-001ADUP	00:04:40 Thu 13-M	Sample C:\Users\Public\DocumDUP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105094-001D	00:10:13 Thu 13-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105113-001B	00:15:47 Thu 13-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
CCV	00:21:22 Thu 13-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCB	00:26:56 Thu 13-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
2105127-001A	00:32:31 Thu 13-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105128-001A	00:38:04 Thu 13-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105130-001C	00:43:38 Thu 13-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105132-001A	00:49:12 Thu 13-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105132-002A	00:54:45 Thu 13-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105142-001A	01:00:19 Thu 13-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
2105074-004A DRUM	01:05:54 Thu 13-M	Sample C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0511
CCV	01:11:28 Thu 13-M	Sample C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511

SEQ for 5/12/21 EH 5/15

CCB	01:17:02 Thu 13-MSample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
LCS-32237	01:22:36 Thu 13-MSample	C:\Users\Public\DocumLCS,M-200.8-DW . gistix\ICPMS\DataSet\May2021\0511
2105073-001A	01:28:11 Thu 13-MSample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\May2021\0511
2105073-002A	01:33:45 Thu 13-MSample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\May2021\0511
2105073-003A	01:39:19 Thu 13-MSample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\May2021\0511
2105082-001A	01:44:52 Thu 13-MSample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\May2021\0511
2105082-002A	01:50:26 Thu 13-MSample	C:\Users\Public\DocumSAMP,M-200.8-DW gistix\ICPMS\DataSet\May2021\0511
NEW 2% #5	01:56:01 Thu 13-MSample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCV	02:01:35 Thu 13-MSample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
CCB	02:07:09 Thu 13-MSample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
2%	02:12:43 Thu 13-MQC Std #7	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511
DI	02:18:17 Thu 13-MQC Std #8	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0511

Dataset Report

User Name: icpms
Computer Name: FA-DT28
Dataset File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\052121eh\
Report Date/Time: Monday, May 24, 2021 08:58:39

The Dataset

Batch ID	Sample ID	Date and Time	Read Type	Samp. File Name	Description
	new 2% 5	10:19:29 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	new 2% 6	10:25:02 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	carrier soln	10:30:36 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	carrier soln	10:37:21 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	NEW 2% 6	10:43:21 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	CAL BLK IS 23514	10:49:38 Fri 21-Ma	Blank	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	Standard 1	10:55:12 Fri 21-Ma	Standard #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	Standard 2	11:00:45 Fri 21-Ma	Standard #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	Standard 3	11:06:18 Fri 21-Ma	Standard #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	Standard 4	11:11:51 Fri 21-Ma	Standard #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	Standard 5	11:17:24 Fri 21-Ma	Standard #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	Standard 6	11:22:57 Fri 21-Ma	Standard #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	Standard 7	11:28:31 Fri 21-Ma	Standard #7	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	Standard 8	11:34:04 Fri 21-Ma	Standard #8	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	Standard 9	11:39:37 Fri 21-Ma	Standard #9	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	Standard 10	11:45:10 Fri 21-Ma	Standard #10	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	Standard 11	11:50:43 Fri 21-Ma	Standard #11	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	WASH	11:56:17 Fri 21-Ma	QC Std #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	ICB	12:01:51 Fri 21-Ma	QC Std #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	ICV LL	12:07:25 Fri 21-Ma	QC Std #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	ICV	12:12:59 Fri 21-Ma	QC Std #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	ICSA	12:29:12 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	ICSAB	12:34:45 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	WASH	12:42:49 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	MB-32385FB	12:56:52 Fri 21-Ma	Sample	C:\Users\Public\DocumMBLK,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
	MB-32386	13:02:25 Fri 21-Ma	Sample	C:\Users\Public\DocumMBLK,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
	LCS-32386	13:07:58 Fri 21-Ma	Sample	C:\Users\Public\DocumLCS,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
	2105221-001C	13:13:31 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
	2105221-001CDUP	13:19:04 Fri 21-Ma	Sample	C:\Users\Public\DocumDUP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
	2105221-001CMS	13:24:38 Fri 21-Ma	Sample	C:\Users\Public\DocumMS,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
	2105221-001CMSD	13:30:11 Fri 21-Ma	Sample	C:\Users\Public\DocumMSD,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
	2105221-002C	13:35:44 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
	2105226-001D	13:41:18 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0521
	CCV	13:46:52 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	CCB	13:52:25 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	MB-32359	13:57:59 Fri 21-Ma	Sample	C:\Users\Public\DocumMBLK,M-6020-S	gistix\ICPMS\DataSet\May2021\0521
	LCS-32359	14:03:33 Fri 21-Ma	Sample	C:\Users\Public\DocumLCS,M-6020-S	gistix\ICPMS\DataSet\May2021\0521
	2105216-025A	14:09:06 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0521
	2105216-025ADIL	14:46:17 Fri 21-Ma	Sample	C:\Users\Public\DocumSD,M-6020-S	gistix\ICPMS\DataSet\May2021\0521
	2105276-003A	14:51:48 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0521
	2105276-006A	14:57:19 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0521
	2105276-008A	15:02:50 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0521
	2105276-009A	15:10:32 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0521
	2105276-010A	15:16:28 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0521
	2105276-010A 10X	15:21:59 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\May2021\0521
	CCV	15:27:31 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	CCB	15:33:03 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	MB-32326	15:39:14 Fri 21-Ma	Sample	C:\Users\Public\DocumMBLK,M-200.8-T	gistix\ICPMS\DataSet\May2021\0521
	CCV	15:44:45 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	
	CCB	15:50:16 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521	

CCB	16:13:56 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
2105276-011A	16:19:40 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105276-011A 10X	16:25:13 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105276-013A	16:30:47 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105276-13A 10X	16:36:20 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105276-015A	16:41:53 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105276-015A 10X	16:47:26 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105228-001A	16:52:59 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105228-002A	16:58:51 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105222-001A	17:04:25 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
CCV	17:09:59 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
CCB	17:15:32 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
CCV	17:22:11 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
CCB	17:27:45 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
MB-32347	17:59:04 Fri 21-Ma	Sample	C:\Users\Public\DocumMBLK,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
LCS-32347	18:04:37 Fri 21-Ma	Sample	C:\Users\Public\DocumLCS,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105160-003A 5X	18:10:10 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105160-003ADIL	18:15:43 Fri 21-Ma	Sample	C:\Users\Public\DocumSD,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105160-001A 5X	18:21:17 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2104433-043A	18:26:50 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
CCV	18:32:24 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
CCB	18:37:58 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
CCV	18:50:18 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
CCB	18:55:52 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
2105216-006A	19:05:49 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-007A	19:11:22 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-008A 10X	19:16:55 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-009A 10X	19:22:28 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-010A	19:28:01 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-011A	19:33:35 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-012A	19:39:08 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-013A	19:43:56 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-014A 10X	19:48:45 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-015A	19:53:33 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
CCV	19:58:22 Fri 21-Ma	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
CCB	20:03:11 Fri 21-Ma	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
2105216-016A	20:08:00 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-017A	20:12:48 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-018A	20:17:37 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-019A	20:22:25 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-020A 10X	20:27:13 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-021A	20:32:02 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-022A	20:36:50 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-023A	20:41:38 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-024A	20:46:26 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-026A	20:51:15 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
CCV	20:56:04 Fri 21-Ma	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
CCB	21:00:52 Fri 21-Ma	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
2105216-027A	21:05:41 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-028A	21:10:30 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105216-029A	21:15:18 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105290-001A	21:20:06 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
2105290-002A	21:24:54 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\May2021\0521
WASH	21:29:43 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
MB-32346	21:34:33 Fri 21-Ma	Sample	C:\Users\Public\DocumMBLK,M-200.8-T . gistix\ICPMS\DataSet\May2021\0521
LCS-32346	21:39:21 Fri 21-Ma	Sample	C:\Users\Public\DocumLCS,M-200.8-T . gistix\ICPMS\DataSet\May2021\0521
2105258-001E	21:44:09 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0521
2105258-001EDUP	21:48:58 Fri 21-Ma	Sample	C:\Users\Public\DocumDUP,M-200.8-T . gistix\ICPMS\DataSet\May2021\0521
CCV	21:53:47 Fri 21-Ma	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521
CCB	21:58:36 Fri 21-Ma	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\May2021\0521

2105258-001EMS	22:04:10 Fri 21-Ma	Sample	C:\Users\Public\DocumMS,M-200.8-T	gistix\ICPMS\DataSet\May2021\0521
2105258-001EMSD	22:09:43 Fri 21-Ma	Sample	C:\Users\Public\DocumMSD,M-200.8-T	gistix\ICPMS\DataSet\May2021\0521
2105239-001E	22:15:16 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0521
2105242-004C	22:20:49 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0521
2105246-001C	22:26:22 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0521
2105246-002C	22:31:56 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0521
2105248-001E	22:36:29 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0521
2105248-002E	22:41:02 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0521
2105249-001E	22:45:36 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0521
2105251-001A	22:50:09 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0521
CCV	22:54:43 Fri 21-Ma	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\May2021\0521
CCB	22:59:17 Fri 21-Ma	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\May2021\0521
2105224-003A DRUM	23:03:52 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\May2021\0521
WASH	23:08:25 Fri 21-Ma	Sample	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\May2021\0521
MB-32365	23:12:59 Fri 21-Ma	Sample	C:\Users\Public\DocumMBLK,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
LCS-32365	23:17:33 Fri 21-Ma	Sample	C:\Users\Public\DocumLCS,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
2105070-005B	23:22:06 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
2105070-005BDUP	23:26:39 Fri 21-Ma	Sample	C:\Users\Public\DocumDUP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
2105070-005BMS	23:31:12 Fri 21-Ma	Sample	C:\Users\Public\DocumMS,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
2105070-005BMSD	23:35:46 Fri 21-Ma	Sample	C:\Users\Public\DocumMSD,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
2105070-006B	23:40:19 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
2105264-011B	23:44:53 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
CCV	23:49:27 Fri 21-Ma	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\May2021\0521
CCB	23:54:01 Fri 21-Ma	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\May2021\0521
2105264-012B	23:58:35 Fri 21-Ma	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
2105264-013B	00:03:08 Sat 22-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
2105273-019E	00:07:41 Sat 22-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\May2021\0521
WASH	00:12:15 Sat 22-M	Sample	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\May2021\0521
MB-32384	00:16:49 Sat 22-M	Sample	C:\Users\Public\DocumMBLK,M-TCLP	gistix\ICPMS\DataSet\May2021\0521
LCS-32384	00:21:23 Sat 22-M	Sample	C:\Users\Public\DocumLCS,M-TCLP	gistix\ICPMS\DataSet\May2021\0521
2105290-001A	00:25:56 Sat 22-M	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\May2021\0521
2105290-001ADUP	00:30:29 Sat 22-M	Sample	C:\Users\Public\DocumDUP,M-TCLP	gistix\ICPMS\DataSet\May2021\0521
2105290-001AMS	00:35:03 Sat 22-M	Sample	C:\Users\Public\DocumMS,M-TCLP	gistix\ICPMS\DataSet\May2021\0521
2105290-001AMSD	00:39:36 Sat 22-M	Sample	C:\Users\Public\DocumMSD,M-TCLP	gistix\ICPMS\DataSet\May2021\0521
CCV	00:44:10 Sat 22-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\May2021\0521
CCB	00:48:44 Sat 22-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\May2021\0521
2105290-002A	00:53:18 Sat 22-M	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\May2021\0521
LDR	00:57:52 Sat 22-M	Sample	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\May2021\0521
CCV	01:02:25 Sat 22-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\May2021\0521
CCB	01:06:59 Sat 22-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\May2021\0521
2%	01:11:32 Sat 22-M	QC Std #7	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\May2021\0521
DI	01:16:06 Sat 22-M	QC Std #8	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\May2021\0521

Dataset Report

User Name: icpms
Computer Name: FA-DT28
Dataset File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\
Report Date/Time: Thursday, May 27, 2021 08:38:46

The Dataset

Batch ID	Sample ID	Date and Time	Read Type	Samp. File Name	Description
	WASH	09:18:38 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\WAS	
	WASH	09:24:11 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\WAS	
	WASH	09:29:45 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\WAS	
	WASH	09:35:20 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\WAS	
	WASH	09:40:53 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\WAS	
	CAL BLK IS 23514	09:47:29 Wed 26-M	Blank	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CAL	
	Standard 1	09:53:02 Wed 26-M	Standard #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\Star	
	Standard 2	09:58:35 Wed 26-M	Standard #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\Star	
	Standard 3	10:04:09 Wed 26-M	Standard #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\Star	
	Standard 4	10:09:42 Wed 26-M	Standard #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\Star	
	Standard 5	10:15:15 Wed 26-M	Standard #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\Star	
	Standard 6	10:20:48 Wed 26-M	Standard #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\Star	
	Standard 7	10:26:22 Wed 26-M	Standard #7	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\Star	
	Standard 8	10:31:55 Wed 26-M	Standard #8	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\Star	
	Standard 9	10:37:29 Wed 26-M	Standard #9	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\Star	
	Standard 10	10:43:02 Wed 26-M	Standard #10	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\Star	
	Standard 11	10:48:35 Wed 26-M	Standard #11	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\Star	
	WASH	10:54:09 Wed 26-M	QC Std #1	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\WAS	
	ICB	10:59:43 Wed 26-M	QC Std #2	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\ICB.	
	ICV LL	11:05:17 Wed 26-M	QC Std #3	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\ICV	
	ICV	11:10:51 Wed 26-M	QC Std #6	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\ICV.	
	WASH	11:16:24 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\WAS	
	ICSA	11:39:05 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\ICSA	
	ICSAB	11:44:39 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\ICSA	
	WASH	11:50:13 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\WAS	
	WASH	11:55:46 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\WAS	
	2105305-002C 10X	12:06:47 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
	2105282-001 T	12:12:20 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
	2105282-001 D	12:17:53 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
	2105282-002 T	12:23:26 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
	2105282-002 D	12:29:00 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
	2105282-006 T	12:34:33 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
	2105282-006 D	12:40:06 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
	2105282-007 T	12:45:39 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
	2105282-007 D	12:51:12 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
	WASH	12:56:46 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\WAS	
	CCV	13:02:19 Wed 26-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCV	
	CCB	13:07:53 Wed 26-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCB	
	MB-32445	13:13:27 Wed 26-M	Sample	C:\Users\Public\DocumMBLK,M-200.8-T	gistix\ICPMS\DataSet\052621eh\MB-
	LCS-32445	13:19:00 Wed 26-M	Sample	C:\Users\Public\DocumLCS,M-200.8-T	gistix\ICPMS\DataSet\052621eh\LCS
	2105370-001A	13:24:33 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
	2105370-001ADUP	13:30:07 Wed 26-M	Sample	C:\Users\Public\DocumDUP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
	2105370-001AMS	13:35:40 Wed 26-M	Sample	C:\Users\Public\DocumMS,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
	2105370-001AMSD	13:41:13 Wed 26-M	Sample	C:\Users\Public\DocumMSD,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
	2105380-001A	13:46:46 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
	2105393-001C	13:52:19 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
	CCV	13:57:53 Wed 26-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCV	
	CCB	14:03:27 Wed 26-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCB	
	CCV	14:10:05 Wed 26-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCV	
	CCB	14:15:38 Wed 26-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCB	

2105282-006C	14:24:57 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\2105
2105282-007C	14:33:31 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\2105
WASH	14:39:05 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\WAS
MB-32455	14:44:39 Wed 26-M	Sample	C:\Users\Public\DocumMBLK,M-6020-TW . gistix\ICPMS\DataSet\052621eh\MB-
LCS-32455	14:50:12 Wed 26-M	Sample	C:\Users\Public\DocumLCS,M-6020-TW . gistix\ICPMS\DataSet\052621eh\LCS
2105317-001D	14:55:45 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2105
2105317-001DDUP	15:01:18 Wed 26-M	Sample	C:\Users\Public\DocumDUP,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2105
2105317-001DDIL	15:06:51 Wed 26-M	Sample	C:\Users\Public\DocumSD,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2105
2105317-001DMS	15:12:25 Wed 26-M	Sample	C:\Users\Public\DocumMS,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2105
2105317-001DMSD	15:17:58 Wed 26-M	Sample	C:\Users\Public\DocumMSD,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2105
CCV	15:23:32 Wed 26-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCV
CCB	15:29:05 Wed 26-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCB
2105317-001DPDS	15:43:58 Wed 26-M	Sample	C:\Users\Public\DocumPDS,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2105
2105317-002D	15:49:31 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2105
2105317-003D	15:55:05 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2105
2105317-004D	16:00:38 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2105
2105317-005D	16:06:11 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2105
2105317-006D	16:11:44 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2105
2105317-007D	16:17:17 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2105
2104011-033A	16:22:51 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2104
2104011-033A	16:28:24 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-TW . gistix\ICPMS\DataSet\052621eh\2104
CCV	16:33:58 Wed 26-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCV
CCB	16:39:32 Wed 26-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCB
MB-32447	16:49:33 Wed 26-M	Sample	C:\Users\Public\DocumMBLK,M-6020-D . gistix\ICPMS\DataSet\052621eh\MB-
LCS-32447	16:55:05 Wed 26-M	Sample	C:\Users\Public\DocumLCS,M-6020-D . gistix\ICPMS\DataSet\052621eh\LCS
2105317-003C	17:00:39 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-D . gistix\ICPMS\DataSet\052621eh\2105
2105317-003CDUP	17:06:12 Wed 26-M	Sample	C:\Users\Public\DocumDUP,M-6020-D . gistix\ICPMS\DataSet\052621eh\2105
2105317-003CDIL	17:11:45 Wed 26-M	Sample	C:\Users\Public\DocumSD,M-6020-D . gistix\ICPMS\DataSet\052621eh\2105
2105317-003CMS	17:17:18 Wed 26-M	Sample	C:\Users\Public\DocumMS,M-6020-D . gistix\ICPMS\DataSet\052621eh\2105
2105317-003CMSD	17:22:52 Wed 26-M	Sample	C:\Users\Public\DocumMSD,M-6020-D . gistix\ICPMS\DataSet\052621eh\2105
2105317-001C	17:28:25 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-D . gistix\ICPMS\DataSet\052621eh\2105
2105317-002C	17:33:58 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-D . gistix\ICPMS\DataSet\052621eh\2105
2105317-004C	17:39:31 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-D . gistix\ICPMS\DataSet\052621eh\2105
CCV	17:45:06 Wed 26-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCV
CCB	17:50:39 Wed 26-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCB
2105317-005C	17:56:13 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-D . gistix\ICPMS\DataSet\052621eh\2105
2105317-006C	18:01:47 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-D . gistix\ICPMS\DataSet\052621eh\2105
2105317-007C	18:07:20 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-D . gistix\ICPMS\DataSet\052621eh\2105
WASH	18:12:54 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\WAS
MB-32448	18:18:28 Wed 26-M	Sample	C:\Users\Public\DocumMBLK,M-6020-S . gistix\ICPMS\DataSet\052621eh\MB-
LCS-32448	18:24:01 Wed 26-M	Sample	C:\Users\Public\DocumLCS,M-6020-S . gistix\ICPMS\DataSet\052621eh\LCS
2105343-003A	18:29:34 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
2105343-003ADIL	18:35:08 Wed 26-M	Sample	C:\Users\Public\DocumSD,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
2105343-003AMS	18:40:41 Wed 26-M	Sample	C:\Users\Public\DocumMS,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
2105343-003AMSD	18:46:14 Wed 26-M	Sample	C:\Users\Public\DocumMSD,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
CCV	18:51:48 Wed 26-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCV
CCB	18:57:22 Wed 26-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCB
2105343-003APDS	19:02:56 Wed 26-M	Sample	C:\Users\Public\DocumPDS,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
2105340-001A	19:08:29 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
2105343-004A	19:14:02 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
2105343-007A	19:19:35 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
2105343-008A	19:25:08 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
2105343-009A	19:30:42 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
2105391-001A	19:36:15 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
2105396-003A	19:41:48 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
2105396-004A	19:47:22 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
2105396-005A	19:52:55 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105
CCV	19:58:29 Wed 26-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCV
CCB	20:04:03 Wed 26-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\052621eh\CCB
2105396-006A	20:09:37 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S . gistix\ICPMS\DataSet\052621eh\2105

2105396-007A	20:15:10 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\052621eh\2105
2105396-008A	20:20:43 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\052621eh\2105
2105396-009A	20:26:16 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\052621eh\2105
2105398-001A	20:31:49 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\052621eh\2105
2104421-001A	20:37:22 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-6020-S	gistix\ICPMS\DataSet\052621eh\2104
WASH	20:42:56 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\WAS
2105368-001A	20:48:30 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105373-001A	20:54:03 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105375-001A	20:59:36 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
CCV	21:05:10 Wed 26-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\CCV
CCB	21:10:44 Wed 26-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\CCB
2105375-002A	21:16:18 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105376-001C	21:21:51 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105377-001B	21:27:24 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105377-002B	21:32:58 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105378-001B	21:38:31 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105379-001B	21:44:04 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105381-001B	21:49:37 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105384-001A	21:55:11 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105386-001A	22:00:44 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105386-002A	22:06:17 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
CCV	22:11:51 Wed 26-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\CCV
CCB	22:17:25 Wed 26-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\CCB
2105387-001A	22:22:59 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105390-001A	22:28:32 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105390-002A	22:34:05 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
2105382-002A DRUM	22:39:39 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-T	gistix\ICPMS\DataSet\052621eh\2105
WASH	22:45:13 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\WAS
MB-32446	22:50:47 Wed 26-M	Sample	C:\Users\Public\DocumMBLK,M-200.8-D	gistix\ICPMS\DataSet\052621eh\MB-
LCS-32446	22:56:20 Wed 26-M	Sample	C:\Users\Public\DocumLCS,M-200.8-D	gistix\ICPMS\DataSet\052621eh\LCS
2105070-001B	23:01:53 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
2105070-001BDUP	23:07:27 Wed 26-M	Sample	C:\Users\Public\DocumDUP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
2105070-001BMS	23:13:00 Wed 26-M	Sample	C:\Users\Public\DocumMS,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
CCV	23:18:34 Wed 26-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\CCV
CCB	23:24:08 Wed 26-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\CCB
2105070-001BMSD	23:29:42 Wed 26-M	Sample	C:\Users\Public\DocumMSD,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
2105345-001B	23:35:15 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
2105345-002B	23:40:49 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
2105345-003B	23:46:22 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
2105345-004B	23:51:55 Wed 26-M	Sample	C:\Users\Public\DocumSAMP,M-200.8-D	gistix\ICPMS\DataSet\052621eh\2105
WASH	23:57:29 Wed 26-M	Sample	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\WAS
MB-32444	00:03:03 Thu 27-M	Sample	C:\Users\Public\DocumMBLK,M-TCLP	gistix\ICPMS\DataSet\052621eh\MB-
LCS-32444	00:08:36 Thu 27-M	Sample	C:\Users\Public\DocumLCS,M-TCLP	gistix\ICPMS\DataSet\052621eh\LCS
2104037-004A	00:14:10 Thu 27-M	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\052621eh\2104
2104037-004ADUP	00:19:43 Thu 27-M	Sample	C:\Users\Public\DocumDUP,M-TCLP	gistix\ICPMS\DataSet\052621eh\2104
CCV	00:25:17 Thu 27-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\CCV
CCB	00:30:51 Thu 27-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\CCB
2104037-004AMS	00:36:25 Thu 27-M	Sample	C:\Users\Public\DocumMS,M-TCLP	gistix\ICPMS\DataSet\052621eh\2104
2104037-004AMSD	00:41:58 Thu 27-M	Sample	C:\Users\Public\DocumMSD,M-TCLP	gistix\ICPMS\DataSet\052621eh\2104
2104037-003A	00:47:31 Thu 27-M	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\052621eh\2104
2104037-007A	00:53:05 Thu 27-M	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\052621eh\2104
2104037-009A	00:58:38 Thu 27-M	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\052621eh\2104
2104037-011A	01:04:11 Thu 27-M	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\052621eh\2104
2104037-012A	01:09:44 Thu 27-M	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\052621eh\2104
2104037-013A	01:15:18 Thu 27-M	Sample	C:\Users\Public\DocumSAMP,M-TCLP	gistix\ICPMS\DataSet\052621eh\2104
LDR	01:20:52 Thu 27-M	Sample	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\LDR
CCV	01:26:25 Thu 27-M	QC Std #4	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\CCV
CCB	01:31:59 Thu 27-M	QC Std #5	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\CCB
2%	01:37:33 Thu 27-M	QC Std #7	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\2%.1
DI	01:43:07 Thu 27-M	QC Std #8	C:\Users\Public\Documents\PerkinElmer Syng	istix\ICPMS\DataSet\052621eh\DI.1

Calibration

Quantitative Analysis Calibration Report

File Name: 051021eh-1.cal
File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051021eh-1.cal
Calibration Type: External Calibration

Analyte	Mass	Curve Type	Slope	Intercept	Corr. Coeff.
Li	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be	9.012	Linear Thru Zero	0.01	0.00	0.999794
B	11.009	Linear Thru Zero	0.01	0.00	0.999904
Na	22.990	Linear Thru Zero	0.00	0.00	0.999893
Mg	24.986	Linear Thru Zero	0.00	0.00	0.999925
Al	26.982	Linear Thru Zero	0.00	0.00	0.999515
K	38.964	Linear Thru Zero	0.00	0.00	0.999762
Fe	56.935	Linear Thru Zero	0.00	0.00	0.999482
Ca	43.956	Linear Thru Zero	0.00	0.00	0.999589
P	30.994	Linear Thru Zero	0.00	0.00	0.999844
Sc-5	44.956	Linear Thru Zero	0.00	0.00	0.000000
Ti	46.952	Linear Thru Zero	0.00	0.00	0.999811
V	50.944	Linear Thru Zero	0.02	0.00	0.999127
Mn	54.938	Linear Thru Zero	0.02	0.00	0.999566
Be-2	9.012	Linear Thru Zero	0.01	0.00	0.999764
Co	58.933	Linear Thru Zero	0.02	0.00	0.999480
Ni	59.933	Linear Thru Zero	0.00	0.00	0.999468
Cr-1	51.941	Linear Thru Zero	0.02	0.00	0.999790
Cu	62.930	Linear Thru Zero	0.01	0.00	0.999767
Cu-2	64.928	Linear Thru Zero	0.00	0.00	0.999695
Zn	65.926	Weighted Linear	0.00	-0.00	0.998218
As	74.922	Weighted Linear	0.00	-0.00	0.998841
Se	81.917	Linear Thru Zero	0.00	0.00	0.999534
Kr	82.914	Linear Thru Zero	0.00	0.00	0.000000
Sr	87.906	Linear Thru Zero	0.02	0.00	0.999713
Mo	96.906	Linear Thru Zero	0.00	0.00	0.999838
Rh-3	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag	106.905	Linear Thru Zero	0.01	0.00	0.999861
Sb-1	120.904	Linear Thru Zero	0.01	0.00	0.999692
Ag-2	108.905	Linear Thru Zero	0.01	0.00	0.999926
Cd	110.904	Linear Thru Zero	0.00	0.00	0.999793
Sn	117.902	Weighted Linear	0.01	-0.00	0.999326
In	114.904	Linear Thru Zero	0.00	0.00	0.000000
Sb	120.904	Linear Thru Zero	0.01	0.00	0.999993
Sb-1	122.904	Linear Thru Zero	0.01	0.00	0.999986
Ba	136.904	Linear Thru Zero	0.00	0.00	0.999993
Tb	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho	164.930	Linear Thru Zero	0.00	0.00	0.000000
Tl	204.975	Linear Thru Zero	0.02	0.00	0.999992
Pb	207.977	Linear Thru Zero	0.03	0.00	0.999980
U	238.050	Linear Thru Zero	0.02	0.00	0.999988
Li-1	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be-1	9.012	Linear Thru Zero	0.01	0.00	0.999636
B-1	11.009	Linear Thru Zero	0.00	0.00	0.999888
Se-2	77.917	Simple Linear	0.00	0.00	0.995017
Sb-3	120.904	Linear Thru Zero	0.00	0.00	0.999930
Mo-1	97.906	Linear Thru Zero	0.00	0.00	0.999805
Rh-1	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag-1	106.905	Linear Thru Zero	0.01	0.00	0.999727
Na-1	22.990	Linear Thru Zero	0.00	0.00	0.999964
Ca-1	43.956	Linear Thru Zero	0.00	0.00	0.869177
Mg-1	23.985	Linear Thru Zero	0.00	0.00	0.999976
Al-1	26.982	Linear Thru Zero	0.00	0.00	0.999995
Ba-1	137.905	Linear Thru Zero	0.01	0.00	0.999949
Cd-1	110.904	Simple Linear	0.00	0.00	0.999851

K-1	38.964	Linear Thru Zero	0.00	0.00	0.999937
Sc-6	44.956	Linear Thru Zero	0.00	0.00	0.000000
V-1	50.944	Linear Thru Zero	0.00	0.00	0.999873
Cr-2	51.941	Linear Thru Zero	0.00	0.00	0.999904
Fe-1	56.935	Linear Thru Zero	0.00	0.00	0.999970
Ni-1	59.933	Linear Thru Zero	0.00	0.00	0.999919
Cu-1	62.930	Linear Thru Zero	0.01	0.00	0.999784
Zn-2	65.926	Linear Thru Zero	0.00	0.00	0.999925
As-3	74.922	Weighted Linear	0.00	0.00	0.999848
Rh-2	102.905	Linear Thru Zero	0.00	0.00	0.000000
In-1	114.904	Linear Thru Zero	0.00	0.00	0.000000
Tb-1	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho-1	164.930	Linear Thru Zero	0.00	0.00	0.000000
Pb-1	207.977	Linear Thru Zero	0.03	0.00	0.999859

Quantitative Analysis Calibration Report

File Name: 051221eh-1.cal
File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051221eh-1.cal
Calibration Type: External Calibration

Analyte	Mass	Curve Type	Slope	Intercept	Corr. Coeff.
Li	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be	9.012	Linear Thru Zero	0.01	0.00	0.999745
B	11.009	Linear Thru Zero	0.01	0.00	0.999517
Na	22.990	Linear Thru Zero	0.00	0.00	0.998709
Mg	24.986	Weighted Linear	0.00	-0.01	0.999615
Al	26.982	Linear Thru Zero	0.00	0.00	0.999973
K	38.964	Linear Thru Zero	0.00	0.00	0.999676
Fe	56.935	Linear Thru Zero	0.00	0.00	0.999972
Ca	43.956	Linear Thru Zero	0.00	0.00	0.999584
P	30.994	Weighted Linear	0.00	-0.00	0.999842
Sc-5	44.956	Linear Thru Zero	0.00	0.00	0.000000
Ti	46.952	Linear Thru Zero	0.00	0.00	0.999968
V	50.944	Linear Thru Zero	0.03	0.00	0.998755
Mn	54.938	Linear Thru Zero	0.03	0.00	0.999920
Be-2	9.012	Linear Thru Zero	0.01	0.00	0.999992
Co	58.933	Weighted Linear	0.02	-0.00	0.999428
Ni	59.933	Weighted Linear	0.01	0.00	0.998142
Cr-1	51.941	Linear Thru Zero	0.02	0.00	0.999908
Cu	62.930	Weighted Linear	0.01	-0.00	0.998514
Cu-2	64.928	Weighted Linear	0.01	0.00	0.998423
Zn	65.926	Weighted Linear	0.00	-0.00	0.998233
As	74.922	Weighted Linear	0.00	-0.00	0.998689
Se	81.917	Linear Thru Zero	0.00	0.00	0.999967
Kr	82.914	Linear Thru Zero	0.00	0.00	0.000000
Sr	87.906	Weighted Linear	0.03	0.00	0.999346
Mo	96.906	Weighted Linear	0.00	-0.00	0.999311
Rh-3	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag	106.905	Linear Thru Zero	0.02	0.00	0.999884
Sb-1	120.904	Linear Thru Zero	0.01	0.00	0.999987
Ag-2	108.905	Linear Thru Zero	0.02	0.00	0.999888
Cd	110.904	Linear Thru Zero	0.00	0.00	0.999999
Sn	117.902	Linear Thru Zero	0.01	0.00	0.999959
In	114.904	Linear Thru Zero	0.00	0.00	0.000000
Sb	120.904	Linear Thru Zero	0.01	0.00	0.999883
Sb-1	122.904	Linear Thru Zero	0.01	0.00	0.999872
Ba	136.904	Linear Thru Zero	0.00	0.00	0.999504
Tb	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho	164.930	Linear Thru Zero	0.00	0.00	0.000000
Tl	204.975	Linear Thru Zero	0.03	0.00	0.999969
Pb	207.977	Weighted Linear	0.04	0.00	0.999801
U	238.050	Linear Thru Zero	0.03	0.00	0.999881
Li-1	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be-1	9.012	Linear Thru Zero	0.01	0.00	0.999748
B-1	11.009	Linear Thru Zero	0.00	0.00	0.999568
Se-2	77.917	Linear Thru Zero	0.00	0.00	0.998252
Sb-3	120.904	Weighted Linear	0.00	0.00	0.999452
Mo-1	97.906	Linear Thru Zero	0.01	0.00	0.999951
Rh-1	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag-1	106.905	Linear Thru Zero	0.01	0.00	0.999951
Na-1	22.990	Linear Thru Zero	0.00	0.00	0.999874
Ca-1	43.956	Linear Thru Zero	0.00	0.00	0.869886
Mg-1	23.985	Linear Thru Zero	0.00	0.00	0.999677
Al-1	26.982	Linear Thru Zero	0.00	0.00	0.998324
Ba-1	137.905	Linear Thru Zero	0.01	0.00	0.999991
Cd-1	110.904	Linear Thru Zero	0.00	0.00	0.999609

K-1	38.964	Linear Thru Zero	0.00	0.00	0.999786
Sc-6	44.956	Linear Thru Zero	0.00	0.00	0.000000
V-1	50.944	Linear Thru Zero	0.00	0.00	0.999958
Cr-2	51.941	Linear Thru Zero	0.00	0.00	0.999914
Fe-1	56.935	Linear Thru Zero	0.00	0.00	0.999065
Ni-1	59.933	Linear Thru Zero	0.00	0.00	0.999991
Cu-1	62.930	Linear Thru Zero	0.01	0.00	0.999879
Zn-2	65.926	Weighted Linear	0.00	0.00	0.999935
As-3	74.922	Weighted Linear	0.00	0.00	0.999866
Rh-2	102.905	Linear Thru Zero	0.00	0.00	0.000000
In-1	114.904	Linear Thru Zero	0.00	0.00	0.000000
Tb-1	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho-1	164.930	Linear Thru Zero	0.00	0.00	0.000000
Pb-1	207.977	Linear Thru Zero	0.03	0.00	0.999968

Quantitative Analysis Calibration Report

File Name: 052121eh.cal
File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\052121eh.cal
Calibration Type: External Calibration

Analyte	Mass	Curve Type	Slope	Intercept	Corr. Coeff.
Li	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be	9.012	Weighted Linear	0.01	0.00	0.999081
B	11.009	Linear Thru Zero	0.01	0.00	0.999855
Na	22.990	Linear Thru Zero	0.00	0.00	0.999861
Mg	24.986	Weighted Linear	0.00	0.01	0.999316
Al	26.982	Linear Thru Zero	0.00	0.00	0.999823
K	38.964	Simple Linear	0.00	-0.02	0.998667
Fe	56.935	Weighted Linear	0.00	0.00	0.999758
Ca	43.956	Linear Thru Zero	0.00	0.00	0.999757
P	30.994	Weighted Linear	0.00	0.01	0.999380
Sc-5	44.956	Linear Thru Zero	0.00	0.00	0.000000
Ti	46.952	Linear Thru Zero	0.00	0.00	0.999948
V	50.944	Linear Thru Zero	0.03	0.00	0.999608
Mn	54.938	Linear Thru Zero	0.03	0.00	0.999979
Be-2	9.012	Linear Thru Zero	0.01	0.00	0.999979
Co	58.933	Linear Thru Zero	0.02	0.00	0.999996
Ni	59.933	Linear Thru Zero	0.01	0.00	0.999841
Cr-1	51.941	Linear Thru Zero	0.02	0.00	0.999703
Cu	62.930	Linear Thru Zero	0.01	0.00	0.999868
Cu-2	64.928	Linear Thru Zero	0.01	0.00	0.999979
Zn	65.926	Linear Thru Zero	0.00	0.00	0.999951
As	74.922	Linear Thru Zero	0.00	0.00	0.999973
Se	81.917	Linear Thru Zero	0.00	0.00	0.999960
Kr	82.914	Linear Thru Zero	0.00	0.00	0.000000
Sr	87.906	Linear Thru Zero	0.03	0.00	0.999934
Mo	96.906	Linear Thru Zero	0.00	0.00	0.999964
Rh-3	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag	106.905	Linear Thru Zero	0.02	0.00	0.999680
Sb-1	120.904	Linear Thru Zero	0.01	0.00	0.999812
Ag-2	108.905	Linear Thru Zero	0.02	0.00	0.999667
Cd	110.904	Linear Thru Zero	0.00	0.00	0.999612
Sn	117.902	Linear Thru Zero	0.01	0.00	0.999833
In	114.904	Linear Thru Zero	0.00	0.00	0.000000
Sb	120.904	Weighted Linear	0.01	0.00	0.999717
Sb-1	122.904	Linear Thru Zero	0.01	0.00	0.999856
Ba	136.904	Linear Thru Zero	0.00	0.00	0.999779
Tb	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho	164.930	Linear Thru Zero	0.00	0.00	0.000000
Tl	204.975	Linear Thru Zero	0.03	0.00	0.999865
Pb	207.977	Linear Thru Zero	0.04	0.00	0.999584
U	238.050	Linear Thru Zero	0.04	0.00	0.999954
Li-1	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be-1	9.012	Linear Thru Zero	0.01	0.00	0.999631
B-1	11.009	Linear Thru Zero	0.00	0.00	0.999216
Se-2	77.917	Weighted Linear	0.00	0.00	0.999481
Sb-3	120.904	Weighted Linear	0.00	0.00	0.999883
Mo-1	97.906	Linear Thru Zero	0.01	0.00	0.999971
Rh-1	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag-1	106.905	Linear Thru Zero	0.02	0.00	0.999964
Na-1	22.990	Linear Thru Zero	0.00	0.00	0.999668
Ca-1	43.956	Linear Thru Zero	0.00	0.00	0.870762
Mg-1	23.985	Linear Thru Zero	0.00	0.00	0.999735
Al-1	26.982	Linear Thru Zero	0.00	0.00	0.999934
Ba-1	137.905	Linear Thru Zero	0.01	0.00	0.999745
Cd-1	110.904	Linear Thru Zero	0.00	0.00	0.999755

K-1	38.964	Linear Thru Zero	0.00	0.00	0.999930
Sc-6	44.956	Linear Thru Zero	0.00	0.00	0.000000
V-1	50.944	Linear Thru Zero	0.00	0.00	0.999454
Cr-2	51.941	Linear Thru Zero	0.00	0.00	0.999640
Fe-1	56.935	Linear Thru Zero	0.00	0.00	0.999984
Ni-1	59.933	Linear Thru Zero	0.00	0.00	0.999604
Cu-1	62.930	Weighted Linear	0.01	0.00	0.999415
Zn-2	65.926	Weighted Linear	0.00	0.00	0.999325
As-3	74.922	Weighted Linear	0.00	0.00	0.999476
Rh-2	102.905	Linear Thru Zero	0.00	0.00	0.000000
In-1	114.904	Linear Thru Zero	0.00	0.00	0.000000
Tb-1	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho-1	164.930	Linear Thru Zero	0.00	0.00	0.000000
Pb-1	207.977	Linear Thru Zero	0.04	0.00	0.999984

Quantitative Analysis Calibration Report

File Name: 052621eh.cal
File Path: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\052621eh.cal
Calibration Type: External Calibration

Analyte	Mass	Curve Type	Slope	Intercept	Corr. Coeff.
Li	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be	9.012	Linear Thru Zero	0.01	0.00	0.999964
B	11.009	Linear Thru Zero	0.01	0.00	0.999985
Na	22.990	Linear Thru Zero	0.00	0.00	0.998585
Mg	24.986	Linear Thru Zero	0.00	0.00	0.999950
Al	26.982	Linear Thru Zero	0.00	0.00	0.999972
K	38.964	Weighted Linear	0.00	0.00	0.999808
Fe	56.935	Linear Thru Zero	0.00	0.00	0.999977
Ca	43.956	Linear Thru Zero	0.00	0.00	0.999810
P	30.994	Linear Thru Zero	0.00	0.00	0.999975
Sc-5	44.956	Linear Thru Zero	0.00	0.00	0.000000
Ti	46.952	Weighted Linear	0.00	-0.00	0.999476
V	50.944	Linear Thru Zero	0.03	0.00	0.999974
Mn	54.938	Linear Thru Zero	0.04	0.00	0.999921
Be-2	9.012	Linear Thru Zero	0.01	0.00	0.999957
Co	58.933	Linear Thru Zero	0.03	0.00	0.999963
Ni	59.933	Linear Thru Zero	0.01	0.00	0.999927
Cr-1	51.941	Linear Thru Zero	0.03	0.00	0.999989
Cu	62.930	Linear Thru Zero	0.01	0.00	0.999860
Cu-2	64.928	Linear Thru Zero	0.01	0.00	0.999936
Zn	65.926	Weighted Linear	0.00	0.00	0.999780
As	74.922	Linear Thru Zero	0.00	0.00	0.999982
Se	81.917	Linear Thru Zero	0.00	0.00	0.999852
Kr	82.914	Linear Thru Zero	0.00	0.00	0.000000
Sr	87.906	Linear Thru Zero	0.03	0.00	0.999917
Mo	96.906	Linear Thru Zero	0.00	0.00	0.999971
Rh-3	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag	106.905	Linear Thru Zero	0.02	0.00	0.999991
Sb-1	120.904	Linear Thru Zero	0.01	0.00	0.999986
Ag-2	108.905	Linear Thru Zero	0.02	0.00	0.999897
Cd	110.904	Linear Thru Zero	0.00	0.00	0.999982
Sn	117.902	Linear Thru Zero	0.01	0.00	0.999954
In	114.904	Linear Thru Zero	0.00	0.00	0.000000
Sb	120.904	Weighted Linear	0.01	0.00	0.999456
Sb-1	122.904	Linear Thru Zero	0.01	0.00	0.999983
Ba	136.904	Linear Thru Zero	0.00	0.00	0.999989
Tb	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho	164.930	Linear Thru Zero	0.00	0.00	0.000000
Tl	204.975	Linear Thru Zero	0.03	0.00	0.999968
Pb	207.977	Linear Thru Zero	0.04	0.00	0.999997
U	238.050	Linear Thru Zero	0.04	0.00	0.999965
Li-1	6.015	Linear Thru Zero	0.00	0.00	0.000000
Be-1	9.012	Linear Thru Zero	0.01	0.00	0.999596
B-1	11.009	Linear Thru Zero	0.00	0.00	0.999709
Se-2	77.917	Simple Linear	0.00	0.00	0.999978
Sb-3	120.904	Weighted Linear	0.00	0.00	0.999726
Mo-1	97.906	Linear Thru Zero	0.01	0.00	0.999984
Rh-1	102.905	Linear Thru Zero	0.00	0.00	0.000000
Ag-1	106.905	Linear Thru Zero	0.02	0.00	0.999966
Na-1	22.990	Linear Thru Zero	0.00	0.00	0.999839
Ca-1	43.956	Linear Thru Zero	0.00	0.00	0.889647
Mg-1	23.985	Linear Thru Zero	0.00	0.00	0.999975
Al-1	26.982	Linear Thru Zero	0.00	0.00	0.999972
Ba-1	137.905	Linear Thru Zero	0.01	0.00	0.999992
Cd-1	110.904	Simple Linear	0.00	0.00	0.999987

K-1	38.964	Linear Thru Zero	0.00	0.00	0.999711
Sc-6	44.956	Linear Thru Zero	0.00	0.00	0.000000
V-1	50.944	Linear Thru Zero	0.00	0.00	0.999930
Cr-2	51.941	Weighted Linear	0.00	0.00	0.998514
Fe-1	56.935	Linear Thru Zero	0.00	0.00	0.999936
Ni-1	59.933	Linear Thru Zero	0.00	0.00	0.999974
Cu-1	62.930	Linear Thru Zero	0.01	0.00	0.999950
Zn-2	65.926	Weighted Linear	0.00	0.00	0.998956
As-3	74.922	Weighted Linear	0.00	-0.00	0.998131
Rh-2	102.905	Linear Thru Zero	0.00	0.00	0.000000
In-1	114.904	Linear Thru Zero	0.00	0.00	0.000000
Tb-1	158.925	Linear Thru Zero	0.00	0.00	0.000000
Ho-1	164.930	Linear Thru Zero	0.00	0.00	0.000000
Pb-1	207.977	Linear Thru Zero	0.04	0.00	0.999971

Tunes

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.705)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.673)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.706)
Target/Obtained mass (207.977/207.975), Target/Obtained resolution (0.7/0.719)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.688)

Acq. Date/Time: 5/10/2021 9:51:33 AM

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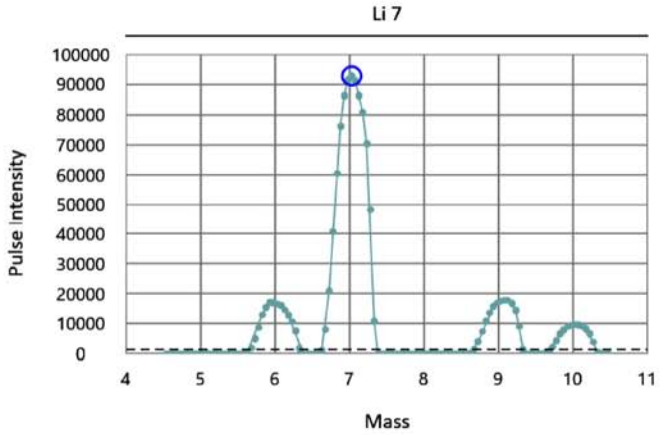
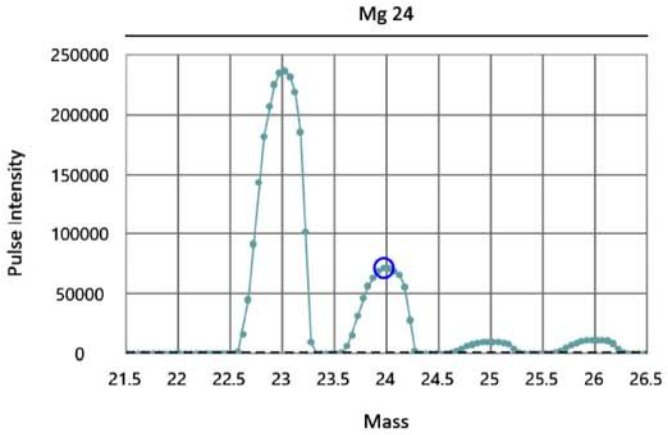
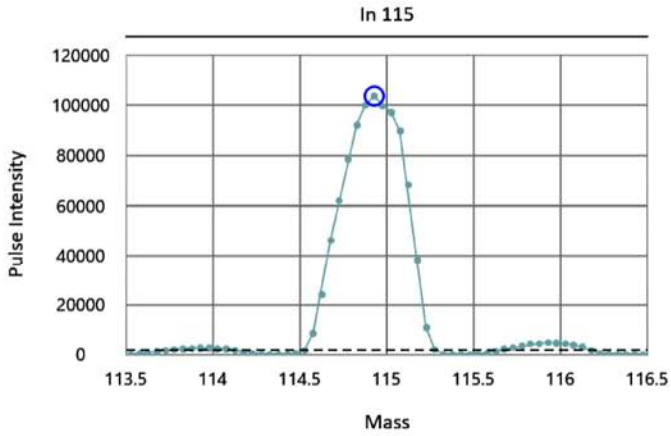
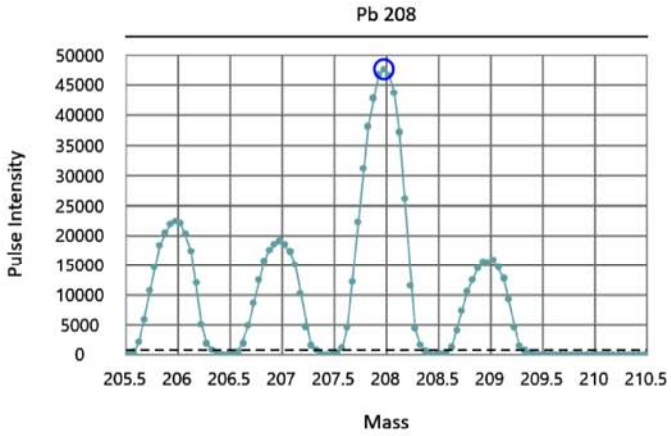
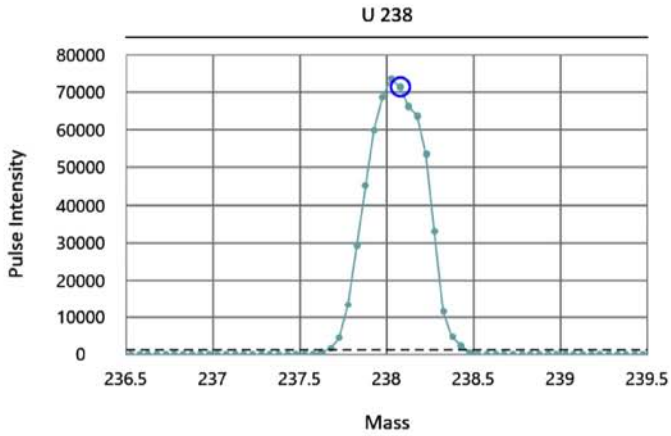
Analyte	Exact Mass	Meas. Mass	Mass DAC	Res DAC	Meas. Peak Width	Custom Res
Li	7.016	7.025	1325	2021	0.705	
Mg	23.985	23.975	4714	2023	0.673	
In	114.904	114.925	22852	2039	0.706	
Pb	207.977	207.975	41424	2061	0.719	
U	238.05	238.075	47427	2073	0.688	









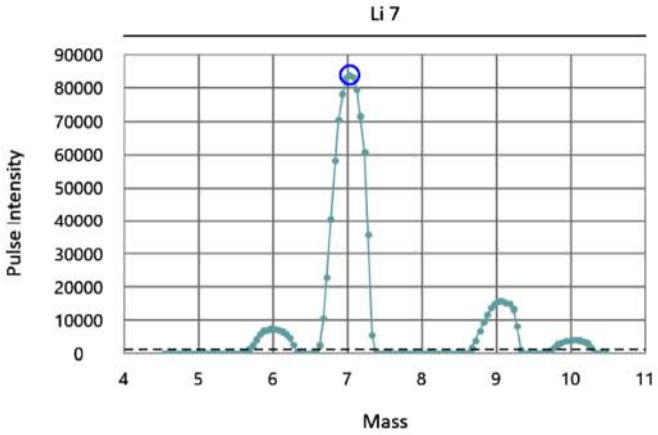


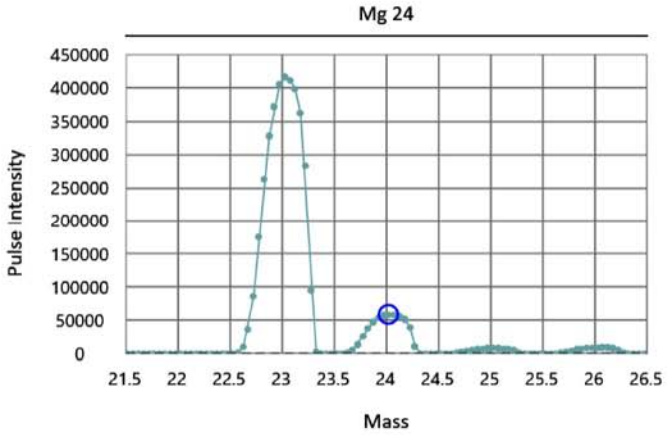
Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.701)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.671)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.705)
Target/Obtained mass (207.977/207.975), Target/Obtained resolution (0.7/0.727)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.700)

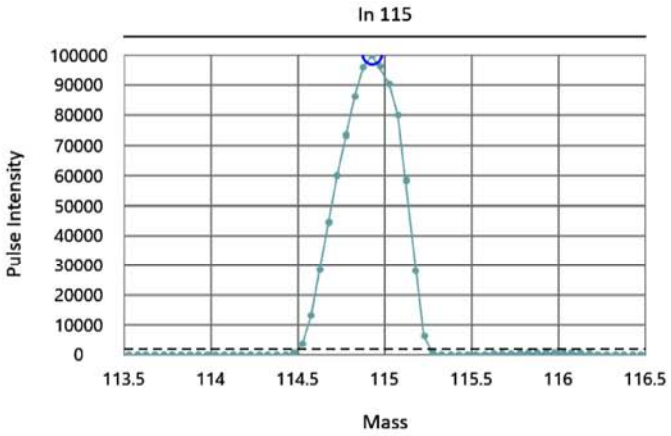
Acq. Date/Time: 5/12/2021 4:44:17 PM

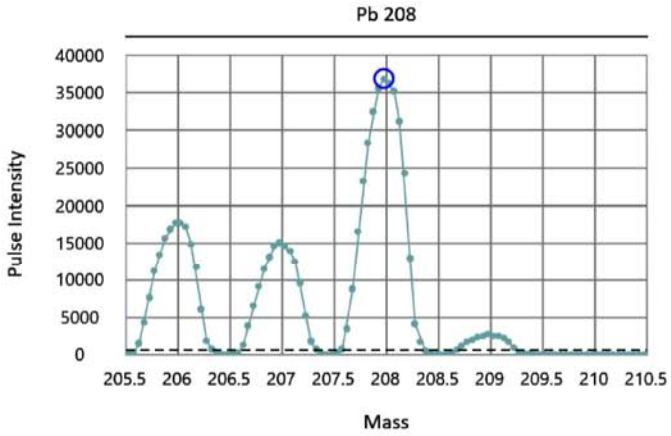
Sent to file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

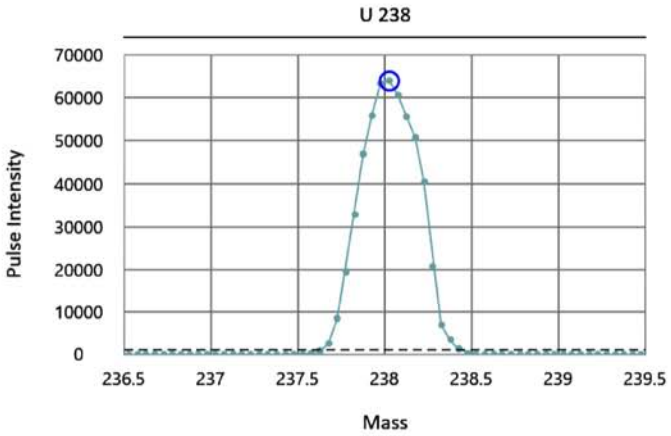
Analyte	Exact Mass	Meas. Mass	Mass DAC	Res DAC	Meas. Peak Width	Custom Res
Li	7.016	7.025	1328	2021	0.701	
Mg	23.985	24.025	4717	2023	0.671	
In	114.904	114.925	22854	2039	0.705	
Pb	207.977	207.975	41421	2061	0.727	
U	238.05	238.025	47421	2073	0.700	









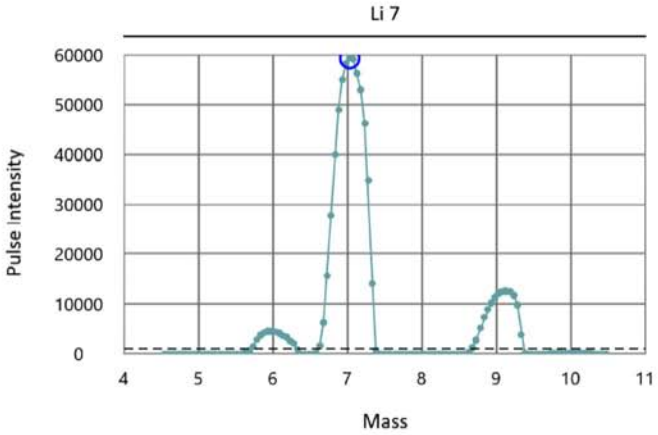


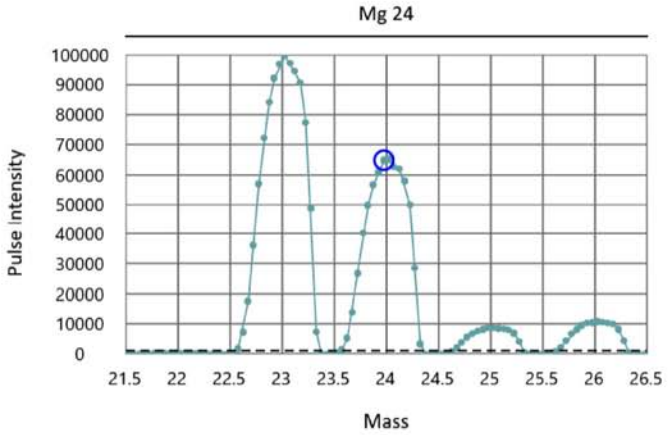
Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.728)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.729)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.669)
Target/Obtained mass (207.977/207.975), Target/Obtained resolution (0.7/0.769)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.750)

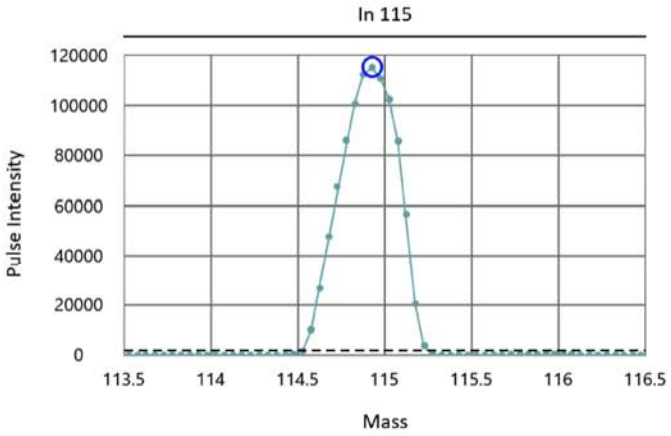
Acq. Date/Time: 5/21/2021 9:15:32 AM

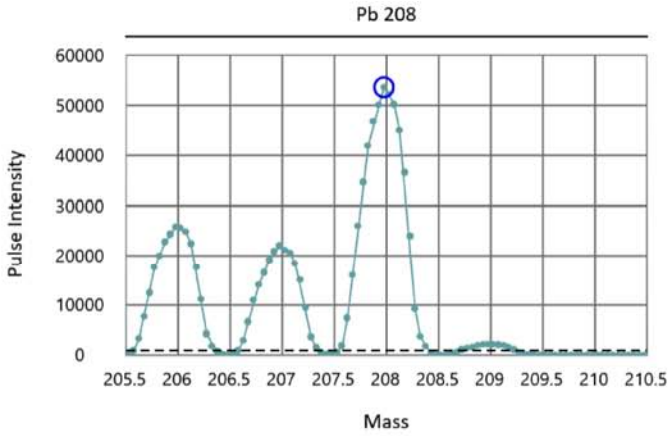
Sent to file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

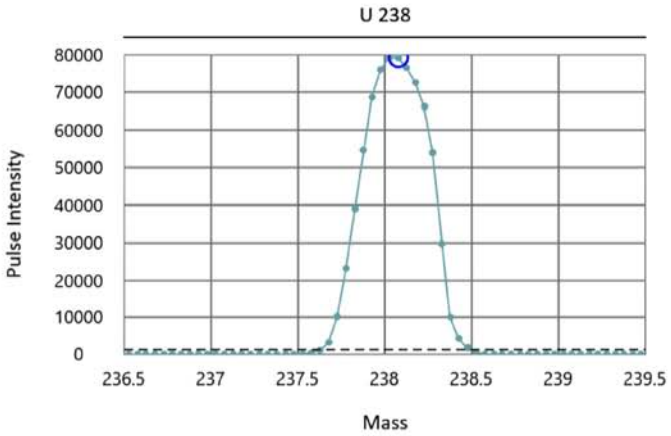
Analyte	Exact Mass	Meas. Mass	Mass DAC	Res DAC	Meas. Peak Width	Custom Res
Li	7.016	7.025	1321	2019	0.728	
Mg	23.985	23.975	4704	2018	0.729	
In	114.904	114.925	22856	2042	0.669	
Pb	207.977	207.975	41418	2057	0.769	
U	238.05	238.075	47420	2067	0.750	









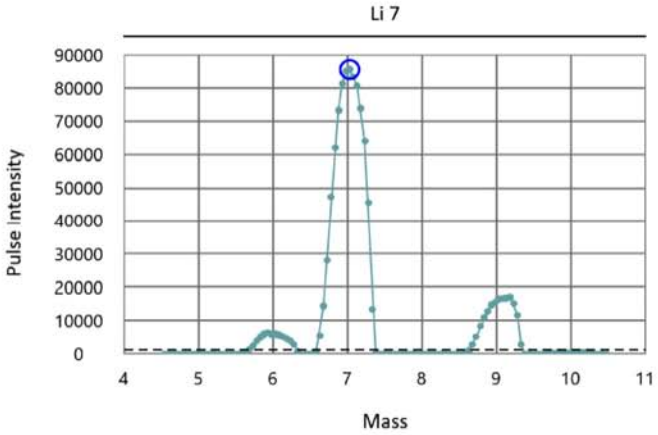


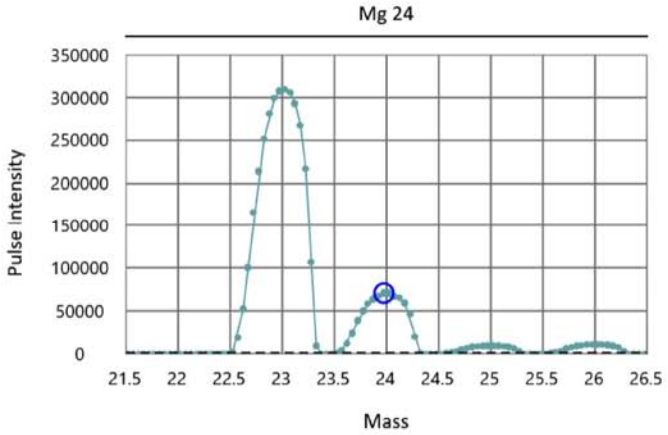
Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.748)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.759)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.671)
Target/Obtained mass (207.977/207.975), Target/Obtained resolution (0.7/0.761)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.751)

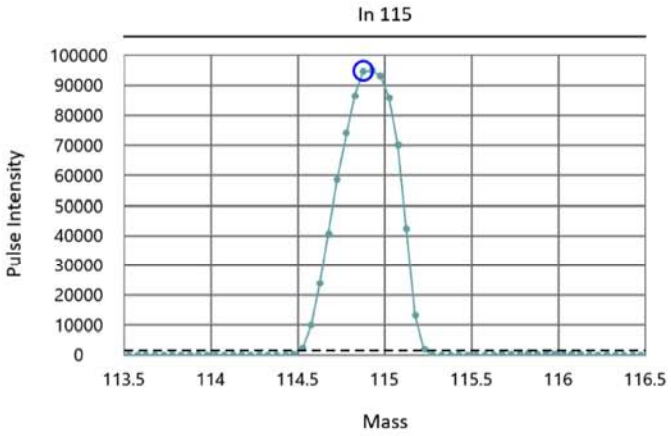
Acq. Date/Time: 5/26/2021 8:54:04 AM

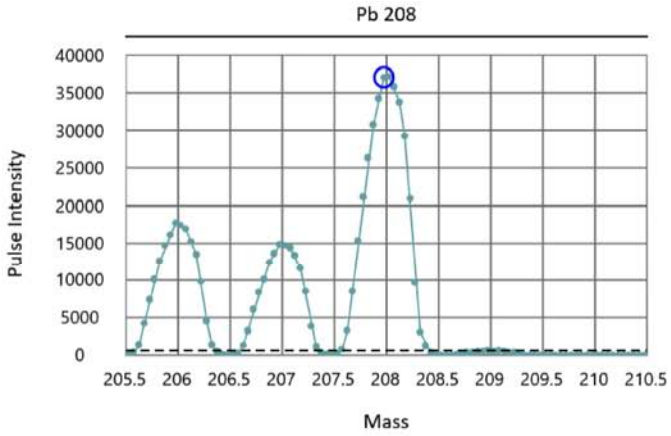
Sent to file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

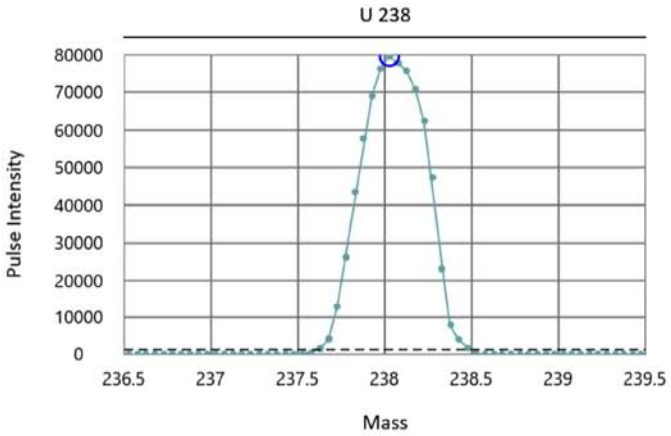
Analyte	Exact Mass	Meas. Mass	Mass DAC	Res DAC	Meas. Peak Width	Custom Res
Li	7.016	7.025	1324	2019	0.748	
Mg	23.985	23.975	4707	2018	0.759	
In	114.904	114.875	22848	2042	0.671	
Pb	207.977	207.975	41415	2057	0.761	
U	238.05	238.025	47414	2067	0.751	











DATA SET for Review -- Deliverable Requirements

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Fremont Analytical Work Order No. 2105070

Libby Environmental

Project Name: Hardel Data Gaps Investigation

This Data contains the following:

- Analytical Sequence Summary
- Calibration Information
- Tune Information

Injection Log

Data Directory: C:\GC-14\Data\2021\051021\

SampleName	MiscInfo	Vial	Multiplier	Injection Time
1) 051001.D	PAH-SIM.M			
CO		2	1.000	10 May 2021 09:15 am
2) 051002.D	SEMI9.M			
TUNE		1	1.000	10 May 2021 09:36 am
3) 051003.D	PAH-SIM.M			
CCV-32233B		2	1.000	10 May 2021 09:58 am
4) 051004.D	PAH-SIM.M			
2105012-004A		54	1.000	10 May 2021 10:20 am
5) 051005.D	PAH-SIM.M			
CO		2	1.000	10 May 2021 10:56 am
6) 051006.D	PAH-SIM.M			
CCV-32233B		2	1.000	10 May 2021 11:18 am
7) 051007.D	PAH-SIM.M			
2105012-004A		54	1.000	10 May 2021 11:39 am
8) 051008.D	PAH-SIM.M			
QCS-32233B		2	1.000	10 May 2021 12:01 pm
9) 051009.D	PAH-SIM.M			
CCV-32203B		2	1.000	10 May 2021 12:22 pm
10) 051010.D	PAH-SIM.M			
MB-32203		46	1.000	10 May 2021 12:43 pm
11) 051011.D	PAH-SIM.M			
LCS-32203		47	1.000	10 May 2021 01:05 pm
12) 051012.D	PAH-SIM.M			
2105013-001A		48	1.000	10 May 2021 01:26 pm
13) 051013.D	PAH-SIM.M			
2105013-002A		49	1.000	10 May 2021 01:48 pm
14) 051014.D	PAH-SIM.M			
2104421-010A 10X		50	1.000	10 May 2021 02:09 pm
15) 051015.D	PAH-SIM.M			
QCS-32203B		2	1.000	10 May 2021 02:31 pm
16) 051016.D	PAH-SIM.M			
CO		2	1.000	10 May 2021 03:49 pm
17) 051017.D	PAH-SIM.M			
CO		2	1.000	10 May 2021 04:11 pm
18) 051018.D	PAH-SIM.M			
CO		2	1.000	10 May 2021 04:33 pm
19) 051019.D	PAH-SIM.M			
CO		2	1.000	10 May 2021 06:36 pm
20) 051020.D	PAH-SIM.M			
CCV-32251	O-PAH-S-SIM	2	1.000	10 May 2021 06:58 pm
21) 051021.D	PAH-SIM.M			
MB-32251	O-PAH-S-SIM	51	1.000	10 May 2021 07:19 pm

22) 051022.D	PAH-SIM.M				
LCS-32251	O-PAH-S-SIM	52	1.000	10 May 2021	07:41 pm
23) 051023.D	PAH-SIM.M				
2105123-001A	O-PAH-S-SIM	53	1.000	10 May 2021	08:02 pm
24) 051024.D	PAH-SIM.M				
2105123-001AMS	O-PAH-S-SIM	54	1.000	10 May 2021	08:24 pm
25) 051025.D	PAH-SIM.M				
2105123-001AMSD	O-PAH-S-SIM	55	1.000	10 May 2021	08:46 pm
26) 051026.D	PAH-SIM.M				
2105123-002A	O-PAH-S-SIM	56	1.000	10 May 2021	09:07 pm
27) 051027.D	PAH-SIM.M				
2105123-003A	O-PAH-S-SIM	57	1.000	10 May 2021	09:28 pm
28) 051028.D	PAH-SIM.M				
2105123-004A	O-PAH-S-SIM	58	1.000	10 May 2021	09:50 pm
29) 051029.D	PAH-SIM.M				
2105123-005A	O-PAH-S-SIM	59	1.000	10 May 2021	10:11 pm
30) 051030.D	PAH-SIM.M				
2105123-006A	O-PAH-S-SIM	60	1.000	10 May 2021	10:33 pm
31) 051031.D	PAH-SIM.M				
2105123-007A	O-PAH-S-SIM	61	1.000	10 May 2021	10:54 pm
32) 051032.D	PAH-SIM.M				
QCS-32251	O-PAH-S-SIM	2	1.000	10 May 2021	11:16 pm

Calibration

Injection Log

Data Directory: C:\GC-14\Data\2021\040221\

	SampleName	MiscInfo	Vial	Multiplier	Injection Time
1)	040201.D	PAH+021021.M			
CO			2	1.000	02 Apr 2021 07:51 am
2)	040202.D	PAH+021021.M			
pah sim check			2	1.000	02 Apr 2021 08:12 am
3)	040203.D	SEMI9.M			
TUNE			1	1.000	02 Apr 2021 08:44 am
4)	040204.D	PAH-SIM.M			
PAH UPDATED SIM			2	1.000	02 Apr 2021 09:06 am
5)	040205.D	PAH-SIM.M			
CO			2	1.000	02 Apr 2021 09:46 am
6)	040206.D	PAH-SIM.M			
PAH 10			12	1.000	02 Apr 2021 10:07 am
7)	040207.D	PAH-SIM.M			
PAH 20			13	1.000	02 Apr 2021 10:28 am
8)	040208.D	PAH-SIM.M			
PAH 40			14	1.000	02 Apr 2021 10:50 am
9)	040209.D	SEMI9.M			
TUNE			1	1.000	02 Apr 2021 11:11 am
10)	040210.D	PAH-SIM.M			
CO			2	1.000	02 Apr 2021 12:43 pm
11)	040211.D	PAH-SIM.M			
CO			2	1.000	02 Apr 2021 01:04 pm
12)	040212.D	SEMI9.M			
TUNE			1	1.000	02 Apr 2021 01:25 pm
13)	040213.D	PAH-SIM.M			
CO			2	1.000	02 Apr 2021 01:52 pm
14)	040214.D	PAH-SIM.M			
PAH 10			12	1.000	02 Apr 2021 02:13 pm
15)	040215.D	PAH-SIM.M			
PAH 20			13	1.000	02 Apr 2021 02:34 pm
16)	040216.D	PAH-SIM.M			
PAH 40			14	1.000	02 Apr 2021 02:56 pm
17)	040217.D	PAH-SIM.M			
PAH 100			15	1.000	02 Apr 2021 03:17 pm
18)	040218.D	PAH-SIM.M			
PAH 200			16	1.000	02 Apr 2021 03:39 pm
19)	040219.D	PAH-SIM.M			
PAH 500			17	1.000	02 Apr 2021 04:00 pm
20)	040220.D	PAH-SIM.M			
PAH 750			18	1.000	02 Apr 2021 04:22 pm
21)	040221.D	PAH-SIM.M			
PAH 1000			19	1.000	02 Apr 2021 04:43 pm

22) 040222.D PAH-SIM.M
PAH 2000 20 1.000 02 Apr 2021 05:04 pm
---
23) 040223.D PAH-SIM.M
PAH 5000 21 1.000 02 Apr 2021 05:26 pm
---
24) 040224.D PAH-SIM.M
PAH ICB 22 1.000 02 Apr 2021 05:47 pm
---
25) 040225.D PAH-SIM.M
PAH ICV 23 1.000 02 Apr 2021 06:09 pm
---
26) 040226.D PAH-LOWLEVEL.M
PAH LL 2 11 1.000 02 Apr 2021 06:30 pm
---
27) 040227.D PAH-LOWLEVEL.M
PAH LL 10 12 1.000 02 Apr 2021 06:51 pm
---
28) 040228.D PAH-LOWLEVEL.M
PAH LL 20 13 1.000 02 Apr 2021 07:13 pm
---
29) 040229.D PAH-LOWLEVEL.M
PAH LL 40 14 1.000 02 Apr 2021 07:34 pm
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30) 040230.D PAH-LOWLEVEL.M
PAH LL 100 15 1.000 02 Apr 2021 07:55 pm
---
31) 040231.D PAH-LOWLEVEL.M
PAH LL 200 16 1.000 02 Apr 2021 08:16 pm
---
32) 040232.D PAH-LOWLEVEL.M
PAH LL 500 17 1.000 02 Apr 2021 08:38 pm
---
33) 040233.D PAH-LOWLEVEL.M
PAH LL 750 18 1.000 02 Apr 2021 08:59 pm
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34) 040234.D PAH-LOWLEVEL.M
PAH LL 1000 19 1.000 02 Apr 2021 09:20 pm
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35) 040235.D PAH-LOWLEVEL.M
PAH LL 2000 20 1.000 02 Apr 2021 09:41 pm
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36) 040236.D PAH-LOWLEVEL.M
PAH LL 5000 21 1.000 02 Apr 2021 10:02 pm
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37) 040237.D PAH-LOWLEVEL.M
PAH LL ICV 23 1.000 02 Apr 2021 10:23 pm
---
38) 040238.D PAH-LOWLEVEL.M
PAH LL ICB 22 1.000 02 Apr 2021 10:45 pm
---
39) 040239.D PAH-LOWLEVEL.M
CCV-LL-31823 2 1.000 02 Apr 2021 11:06 pm
---
40) 040240.D PAH-LOWLEVEL.M
MB-31823 31 1.000 02 Apr 2021 11:27 pm
---
41) 040241.D PAH-LOWLEVEL.M
LCS-31823 32 1.000 02 Apr 2021 11:48 pm
---
42) 040242.D PAH-LOWLEVEL.M
LCSD-31823 33 1.000 03 Apr 2021 12:09 am
---
43) 040243.D PAH-LOWLEVEL.M
2103405-001C 34 1.000 03 Apr 2021 12:30 am
---
44) 040244.D PAH-LOWLEVEL.M
2103406-001A 35 1.000 03 Apr 2021 12:51 am
---
45) 040245.D PAH-LOWLEVEL.M

2103406-001AMS 36 1.000 03 Apr 2021 01:12 am

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46) 040246.D PAH-LOWLEVEL.M
2103423-001B 37 1.000 03 Apr 2021 01:33 am

---

47) 040247.D PAH-LOWLEVEL.M
2103423-002B 38 1.000 03 Apr 2021 01:54 am

---

48) 040248.D PAH-LOWLEVEL.M
2103423-003B 39 1.000 03 Apr 2021 02:15 am

---

49) 040249.D PAH-LOWLEVEL.M
2103473-001A 40 1.000 03 Apr 2021 02:36 am

---

50) 040250.D PAH-LOWLEVEL.M
2103473-002A 41 1.000 03 Apr 2021 02:57 am

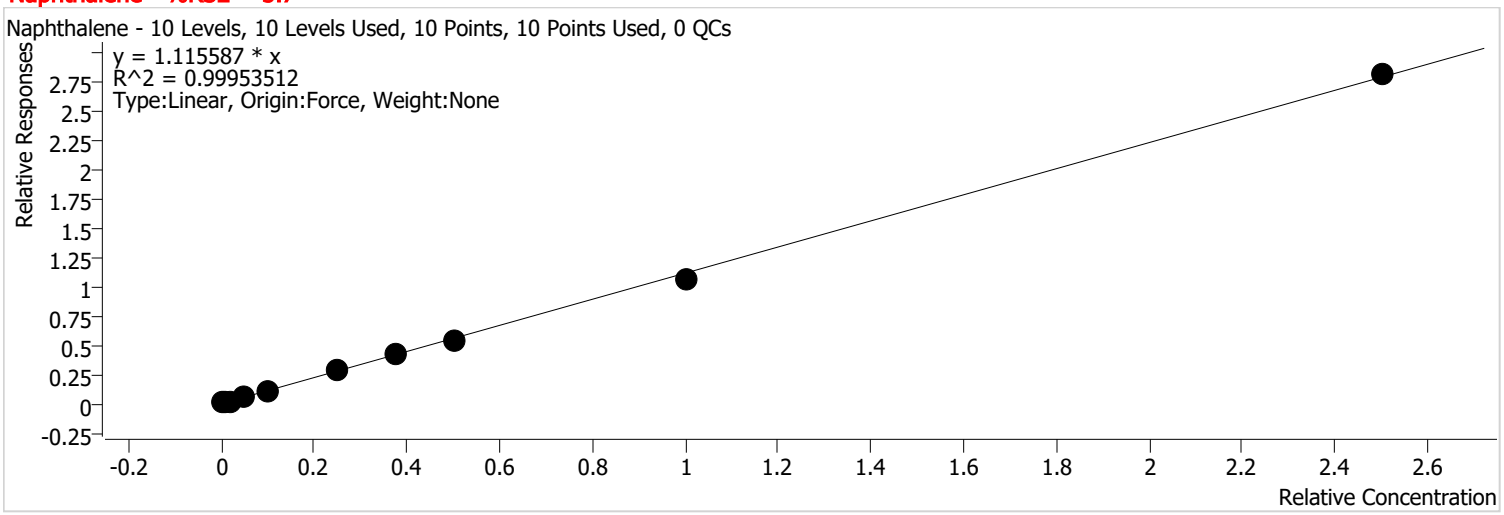
---

51) 040251.D PAH-LOWLEVEL.M
QCS-LL-31823 2 1.000 03 Apr 2021 03:18 am

Calibration Report

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:22 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

Naphthalene %RSE = 3.7

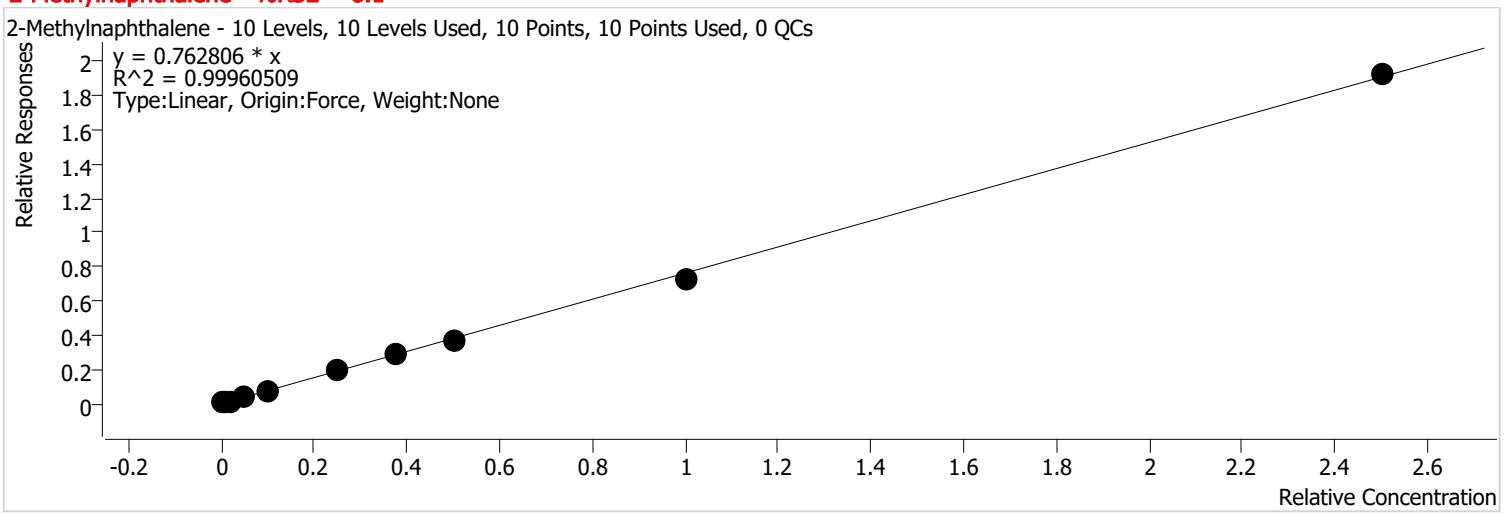


Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	1239	10.0000	1.0894	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	2636	20.0000	1.1819	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	5067	40.0000	1.1142	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	11916	100.0000	1.0567	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	25326	200.0000	1.1318	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	65107	500.0000	1.1394	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	97405	750.0000	1.1349	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	130618	1000.0000	1.0763	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	265310	2000.0000	1.0685	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	650191	5000.0000	1.1240	

Calibration Report

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

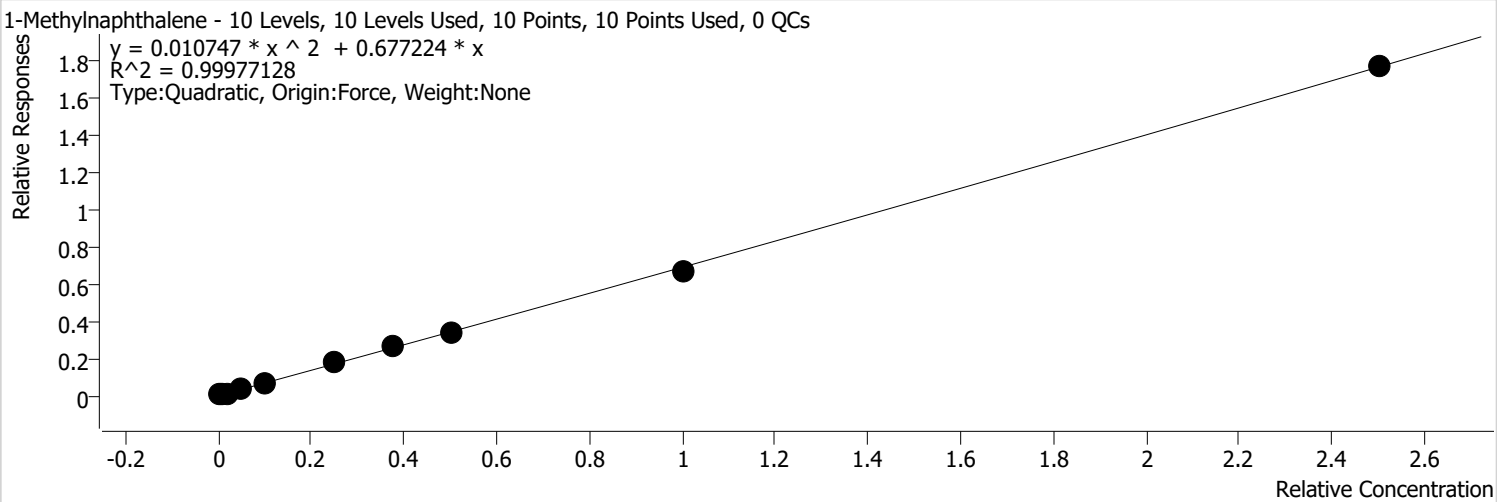
2-Methylnaphthalene %RSE = 8.1



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	729	10.0000	0.6407	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	1620	20.0000	0.7262	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	3126	40.0000	0.6875	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	7666	100.0000	0.6798	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	16796	200.0000	0.7506	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	44674	500.0000	0.7818	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	66022	750.0000	0.7692	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	89931	1000.0000	0.7411	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	181953	2000.0000	0.7328	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	444370	5000.0000	0.7682	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

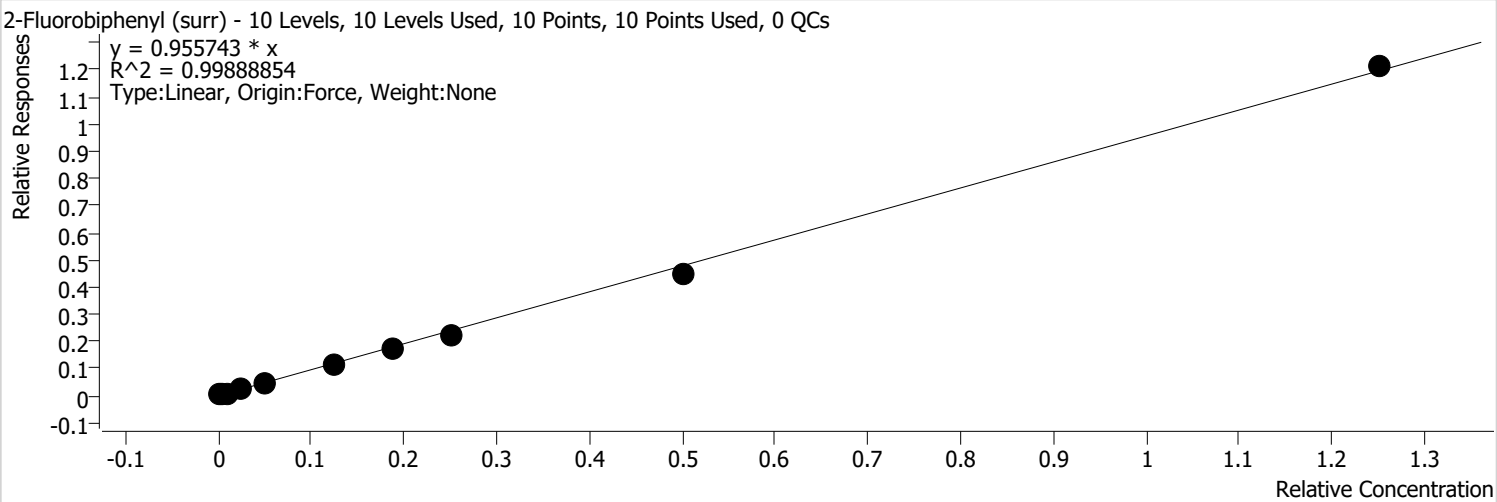
1-Methylnaphthalene %RSE = 4.9



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	749	10.0000	0.6584	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	1570	20.0000	0.7039	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	3170	40.0000	0.6971	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	7496	100.0000	0.6647	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	16115	200.0000	0.7202	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	41768	500.0000	0.7310	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	61868	750.0000	0.7208	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	83161	1000.0000	0.6853	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	167295	2000.0000	0.6738	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	407691	5000.0000	0.7048	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

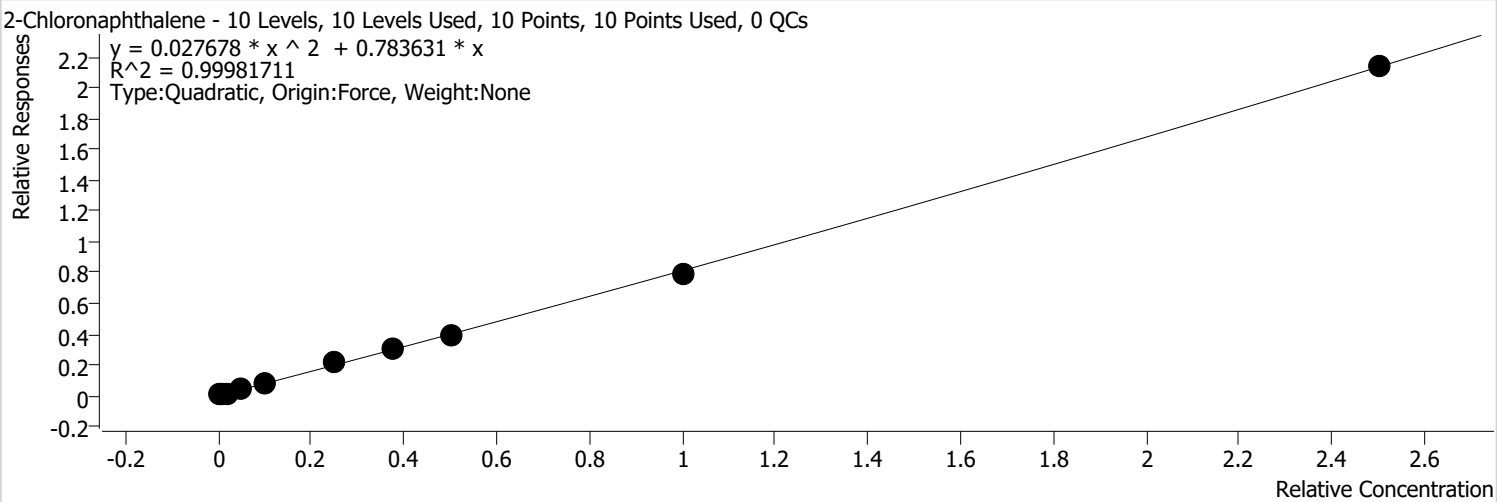
2-Fluorobiphenyl (surr) %RSE =



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	491	5.0000	0.8637	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	1055	10.0000	0.9458	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	2045	20.0000	0.8995	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	4869	50.0000	0.8636	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	10509	100.0000	0.9393	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	27101	250.0000	0.9486	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	40221	375.0000	0.9373	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	54547	500.0000	0.8990	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	111103	1000.0000	0.8949	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	280059	2500.0000	0.9683	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

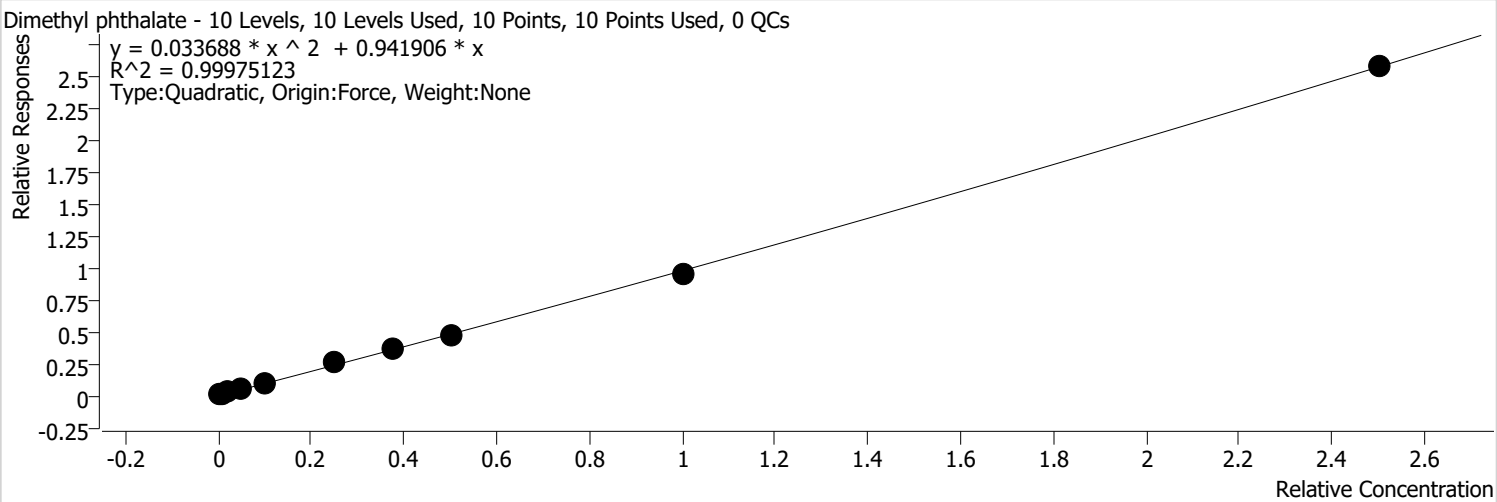
2-Chloronaphthalene %RSE = 4.7



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	871	10.0000	0.7657	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	1849	20.0000	0.8289	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	3578	40.0000	0.7868	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	8592	100.0000	0.7619	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	18511	200.0000	0.8272	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	48350	500.0000	0.8462	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	71907	750.0000	0.8378	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	96978	1000.0000	0.7991	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	197705	2000.0000	0.7962	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	493753	5000.0000	0.8536	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

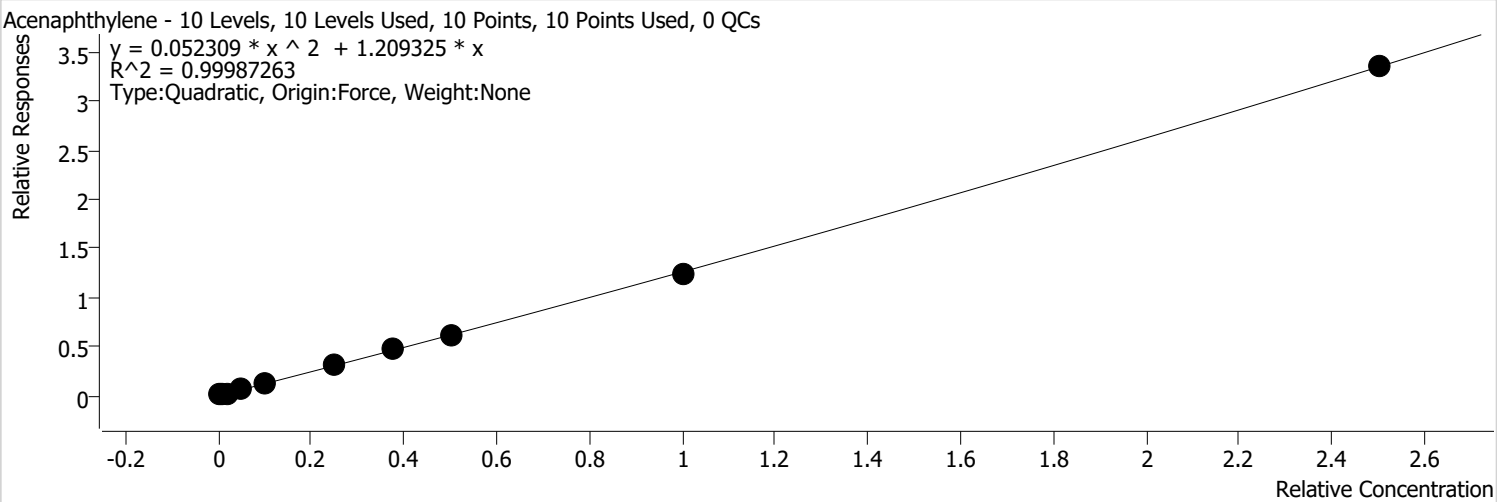
Dimethyl phthalate %RSE = 101.6



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	3510	10.0000	3.0857	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	4820	20.0000	2.1611	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	6764	40.0000	1.4875	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	12283	100.0000	1.0892	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	23531	200.0000	1.0515	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	58017	500.0000	1.0154	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	85898	750.0000	1.0008	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	115633	1000.0000	0.9529	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	238189	2000.0000	0.9593	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	594067	5000.0000	1.0270	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

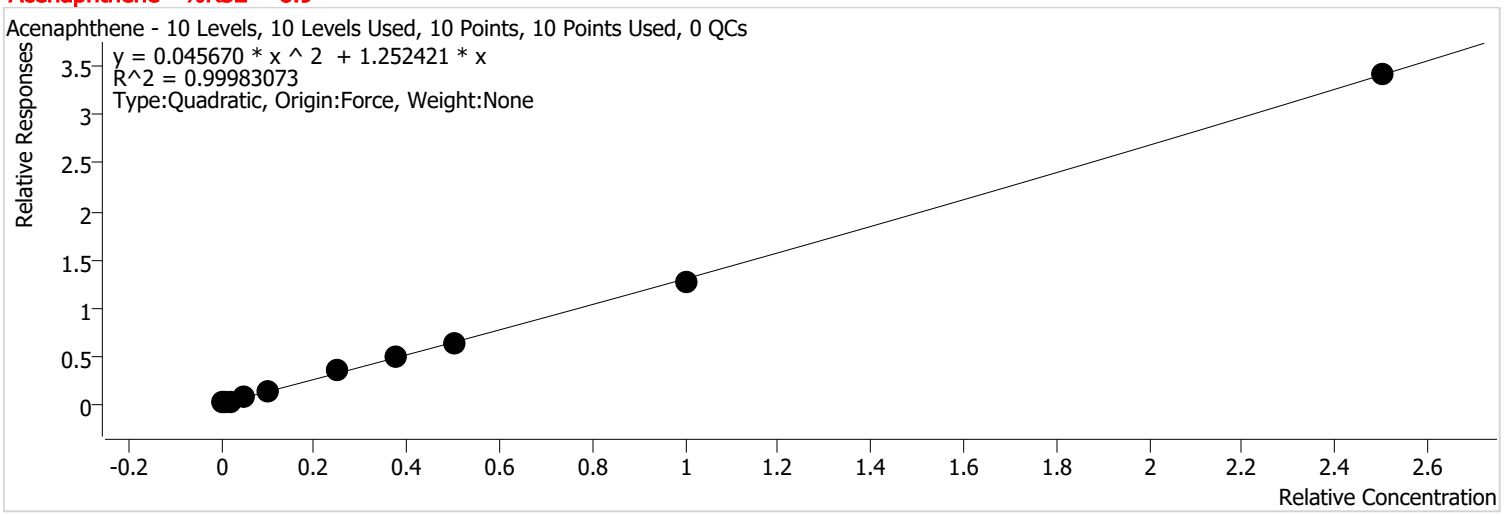
Acenaphthylene %RSE = 5.0



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	1372	10.0000	1.2058	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	2943	20.0000	1.3196	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	5663	40.0000	1.2453	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	13291	100.0000	1.1785	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	28533	200.0000	1.2751	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	73516	500.0000	1.2866	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	110934	750.0000	1.2925	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	149626	1000.0000	1.2330	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	308610	2000.0000	1.2429	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	775729	5000.0000	1.3410	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

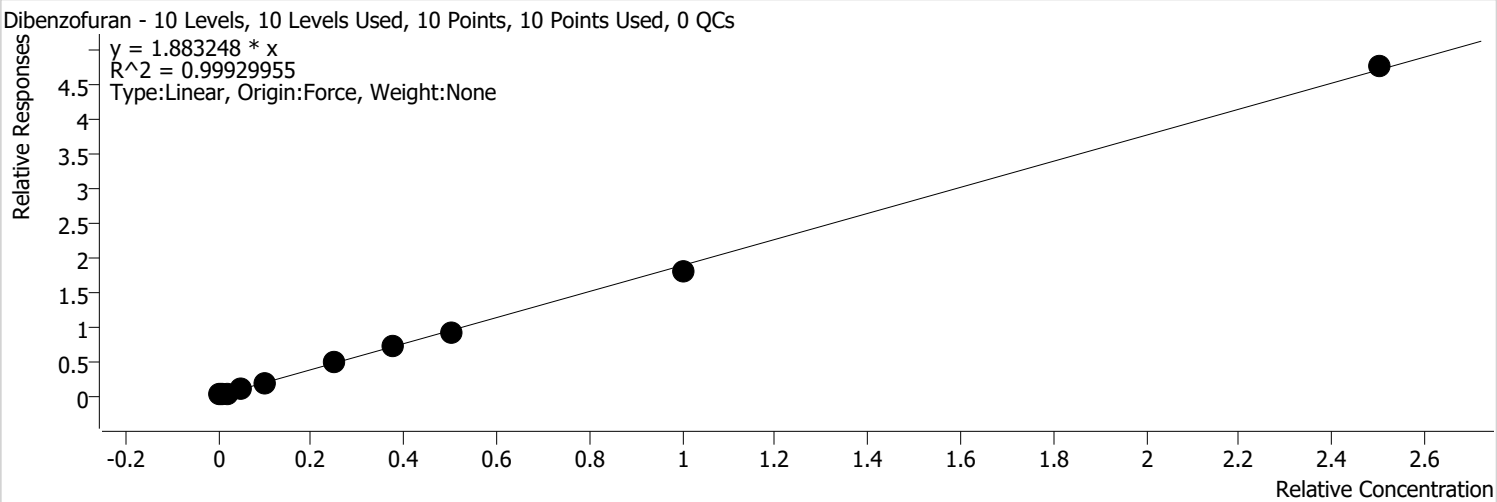
Acenaphthene %RSE = 8.9



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	969	10.0000	1.3698	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	2040	20.0000	1.4693	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	3749	40.0000	1.3359	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	8692	100.0000	1.2369	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	18490	200.0000	1.3423	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	47554	500.0000	1.3575	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	70652	750.0000	1.3302	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	95283	1000.0000	1.2779	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	195588	2000.0000	1.2749	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	495706	5000.0000	1.3678	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

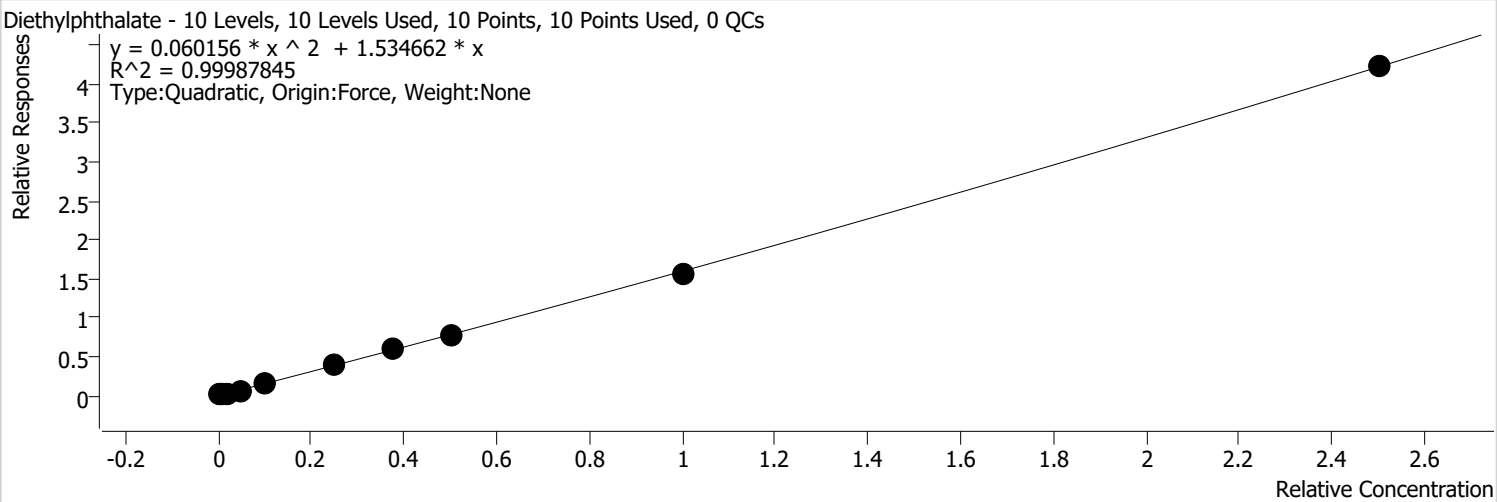
Dibenzofuran %RSE = 4.3



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	1253	10.0000	1.7717	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	2634	20.0000	1.8966	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	5156	40.0000	1.8371	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	12275	100.0000	1.7467	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	25574	200.0000	1.8567	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	66998	500.0000	1.9126	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	99472	750.0000	1.8728	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	134403	1000.0000	1.8026	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	273899	2000.0000	1.7854	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	689391	5000.0000	1.9022	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

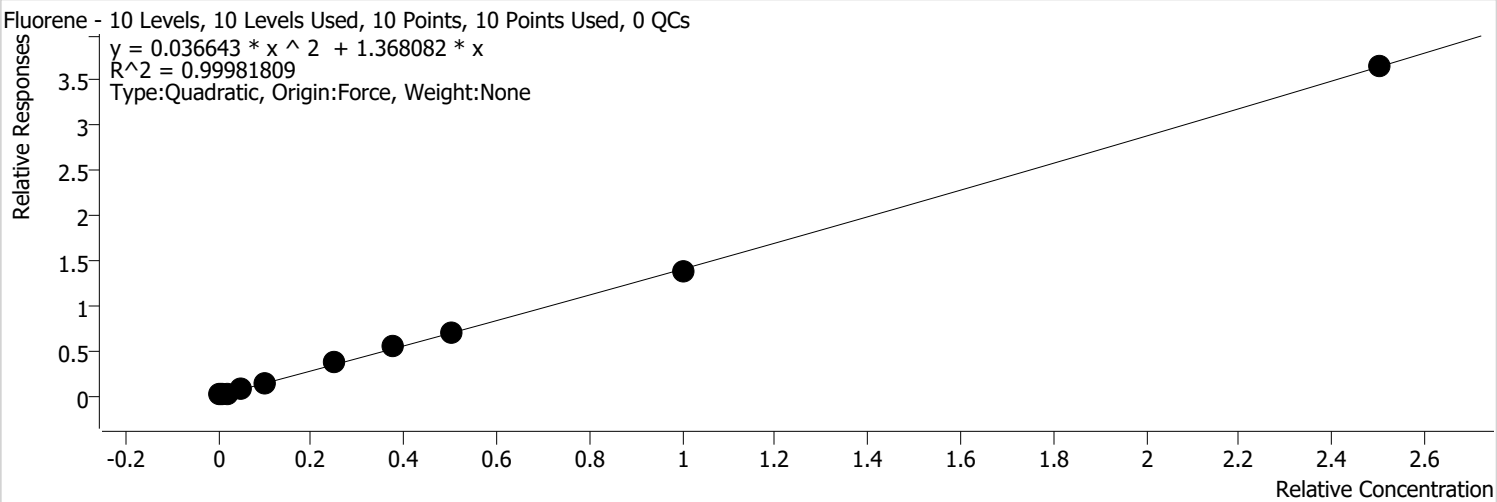
Diethylphthalate %RSE = 7.5



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	1225	10.0000	1.7316	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	2369	20.0000	1.7062	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	4410	40.0000	1.5712	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	10219	100.0000	1.4542	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	21859	200.0000	1.5869	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	57673	500.0000	1.6464	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	86201	750.0000	1.6229	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	117083	1000.0000	1.5703	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	240904	2000.0000	1.5703	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	611138	5000.0000	1.6863	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

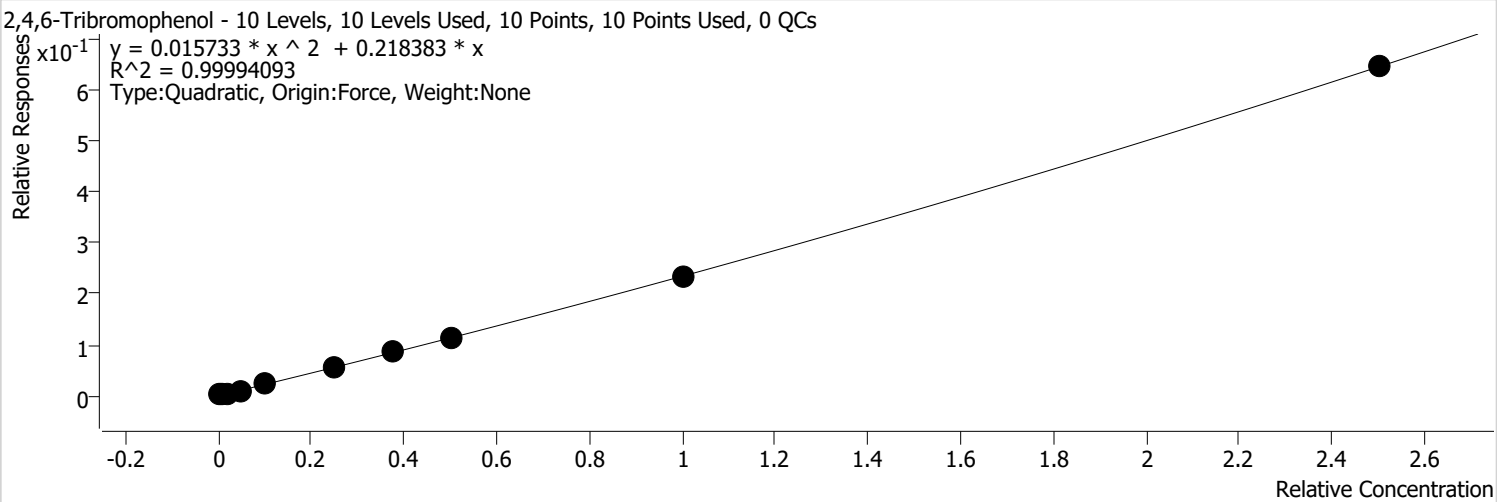
Fluorene %RSE = 5.2



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	960	10.0000	1.3570	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	2028	20.0000	1.4603	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	3937	40.0000	1.4027	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	9211	100.0000	1.3107	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	20032	200.0000	1.4543	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	51970	500.0000	1.4835	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	76909	750.0000	1.4480	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	103702	1000.0000	1.3909	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	211547	2000.0000	1.3790	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	529489	5000.0000	1.4610	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

2,4,6-Tribromophenol %RSE =



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
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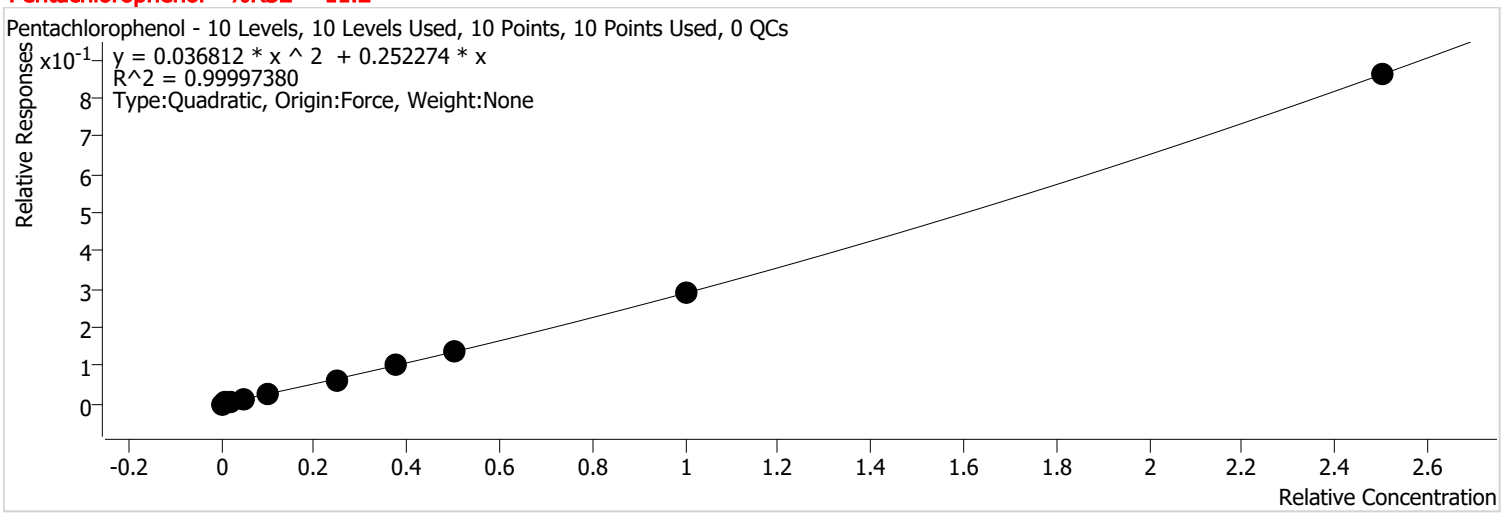
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	620	40.0000	0.2208	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	1440	100.0000	0.2049	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	3038	200.0000	0.2206	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	8137	500.0000	0.2323	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	12291	750.0000	0.2314	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	16936	1000.0000	0.2272	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	35515	2000.0000	0.2315	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	93448	5000.0000	0.2578	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

Pentachlorophenol %RSE = 11.2



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
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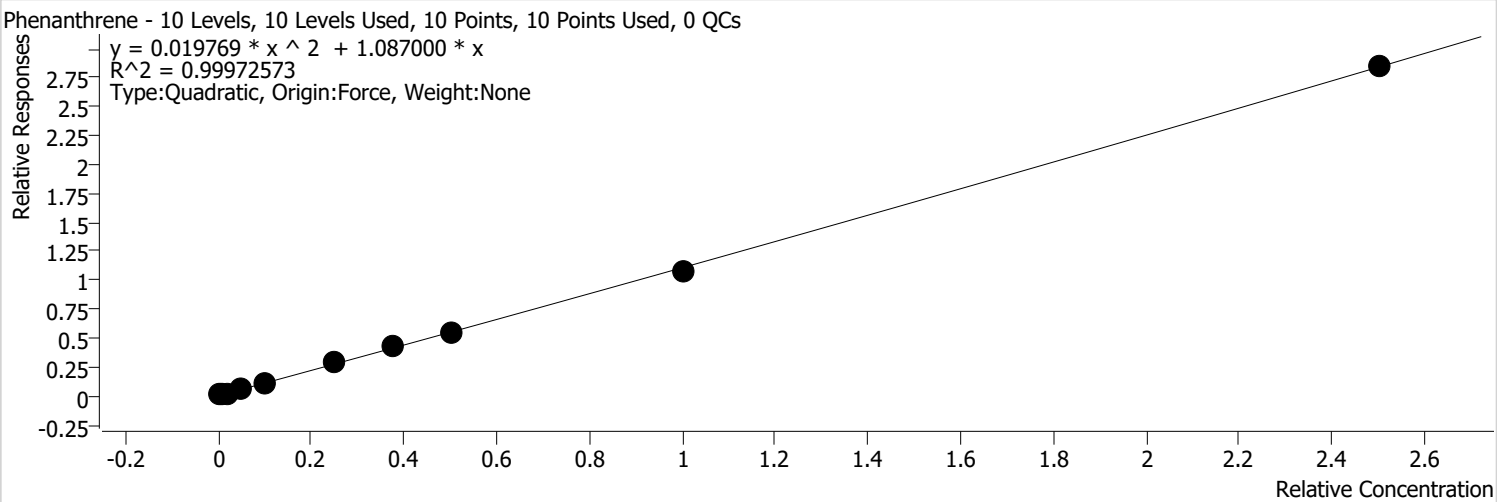
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	324	20.0000	0.2333	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	623	40.0000	0.2218	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	1526	100.0000	0.2172	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	3266	200.0000	0.2371	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	8961	500.0000	0.2558	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	14020	750.0000	0.2640	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	20001	1000.0000	0.2683	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	44692	2000.0000	0.2913	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	124745	5000.0000	0.3442	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

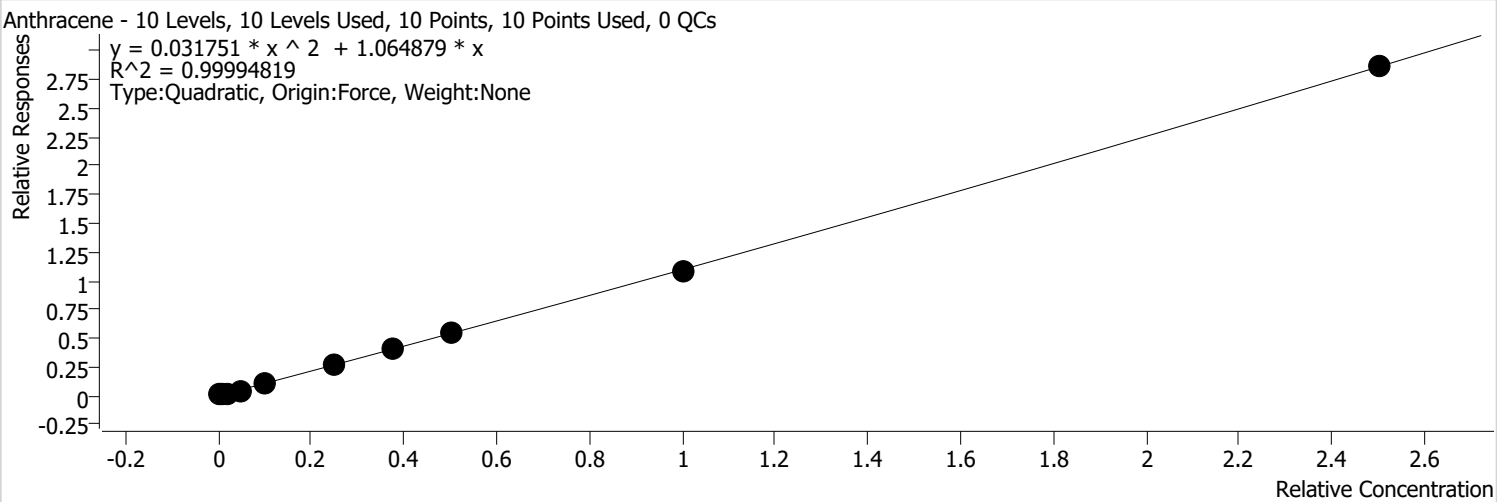
Phenanthrene %RSE = 10.7



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	1652	10.0000	1.2688	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	3310	20.0000	1.2845	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	6187	40.0000	1.1681	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	14087	100.0000	1.0574	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	29800	200.0000	1.1515	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	77366	500.0000	1.1712	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	115271	750.0000	1.1673	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	156682	1000.0000	1.1062	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	316127	2000.0000	1.0807	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	797632	5000.0000	1.1377	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

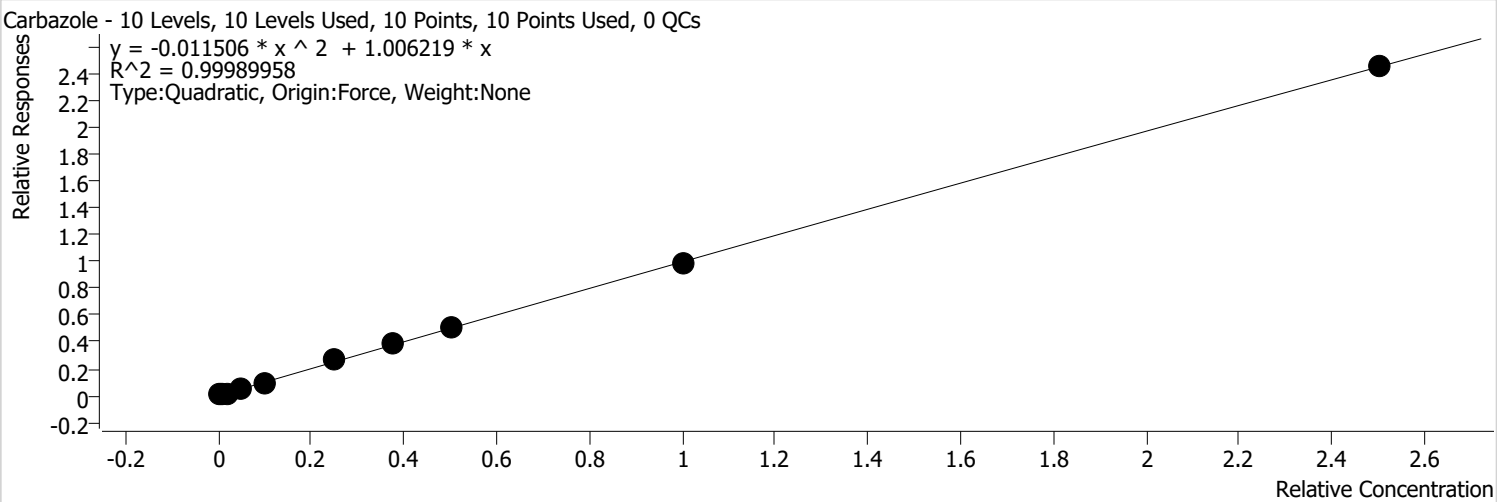
Anthracene %RSE = 4.8



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	1411	10.0000	1.0835	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	2977	20.0000	1.1550	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	5664	40.0000	1.0695	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	13096	100.0000	0.9831	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	28280	200.0000	1.0927	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	73049	500.0000	1.1058	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	109933	750.0000	1.1133	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	152400	1000.0000	1.0760	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	318189	2000.0000	1.0878	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	802553	5000.0000	1.1447	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

Carbazole %RSE = 5.0



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
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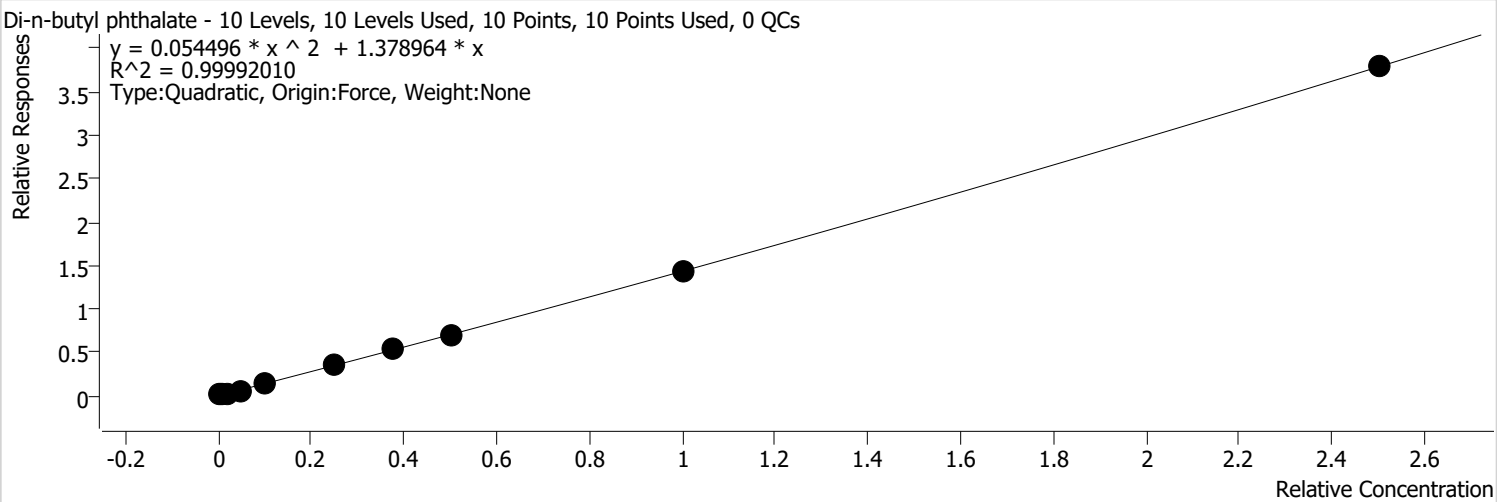
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	2718	20.0000	1.0547	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	5224	40.0000	0.9862	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	12126	100.0000	0.9103	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	25948	200.0000	1.0026	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	69032	500.0000	1.0450	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	103027	750.0000	1.0433	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	141804	1000.0000	1.0012	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	287466	2000.0000	0.9827	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	685700	5000.0000	0.9780	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

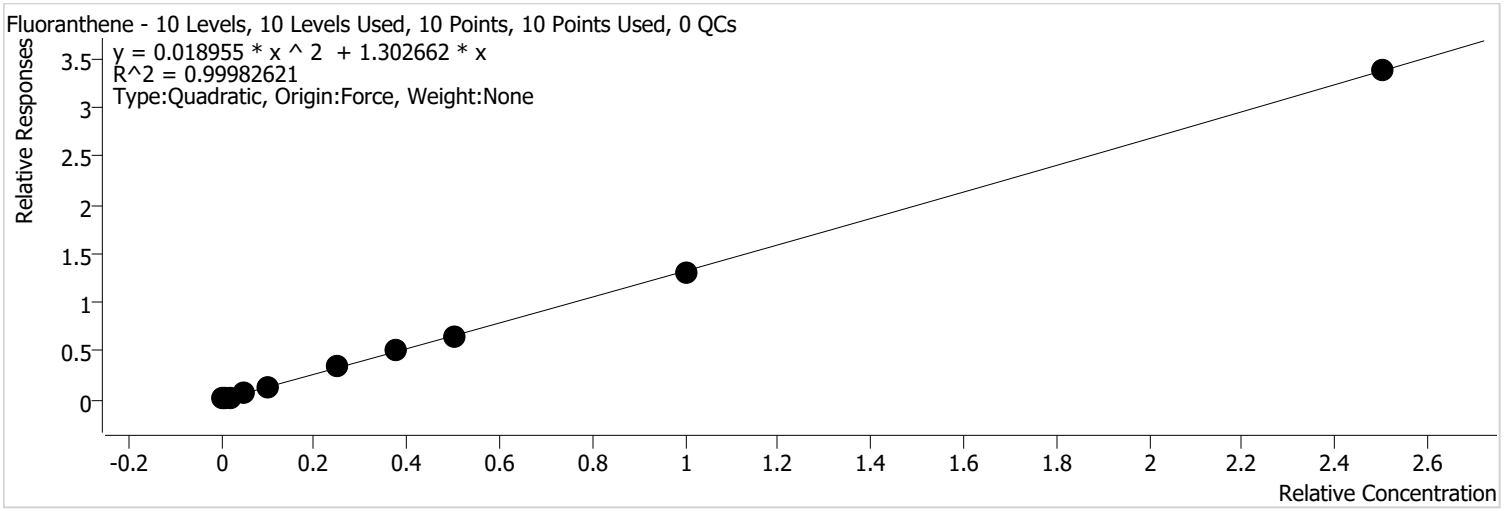
Di-n-butyl phthalate %RSE = 5.0



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	1803	10.0000	1.3847	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	3688	20.0000	1.4312	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	7068	40.0000	1.3345	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	16412	100.0000	1.2320	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	35750	200.0000	1.3814	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	95312	500.0000	1.4428	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	144341	750.0000	1.4617	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	198393	1000.0000	1.4007	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	415029	2000.0000	1.4188	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	1062816	5000.0000	1.5159	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

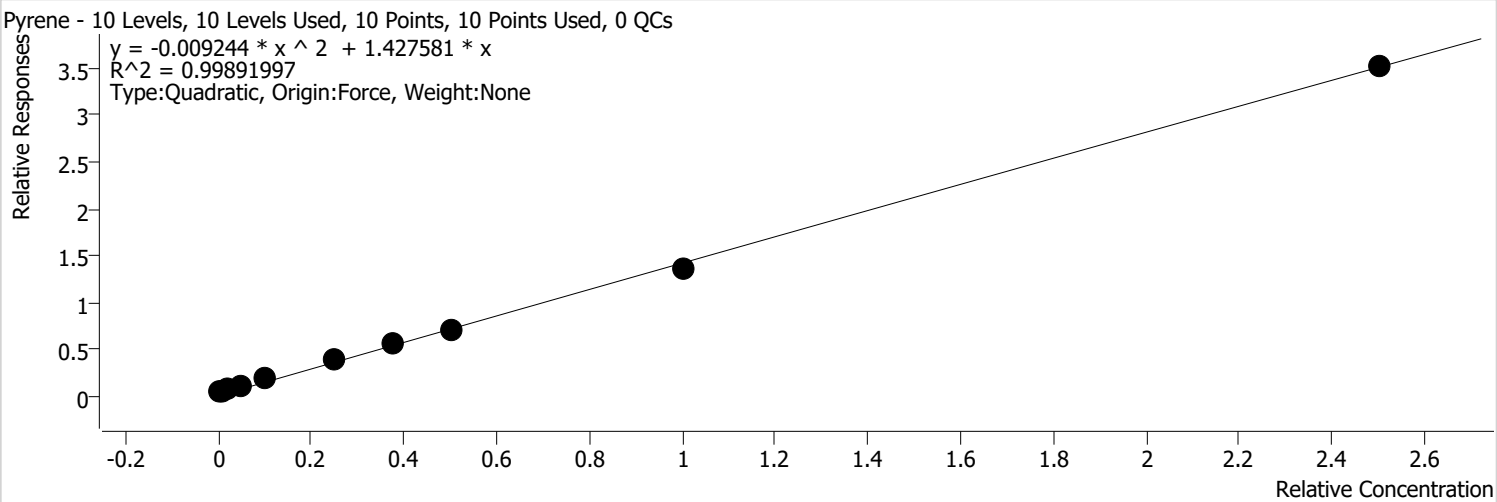
Fluoranthene %RSE = 5.6



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	1777	10.0000	1.3645	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	3652	20.0000	1.4171	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	7016	40.0000	1.3247	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	16312	100.0000	1.2244	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	34947	200.0000	1.3503	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	91445	500.0000	1.3843	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	136428	750.0000	1.3816	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	186524	1000.0000	1.3169	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	379699	2000.0000	1.2981	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	947326	5000.0000	1.3512	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

Pyrene %RSE = 221.3



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
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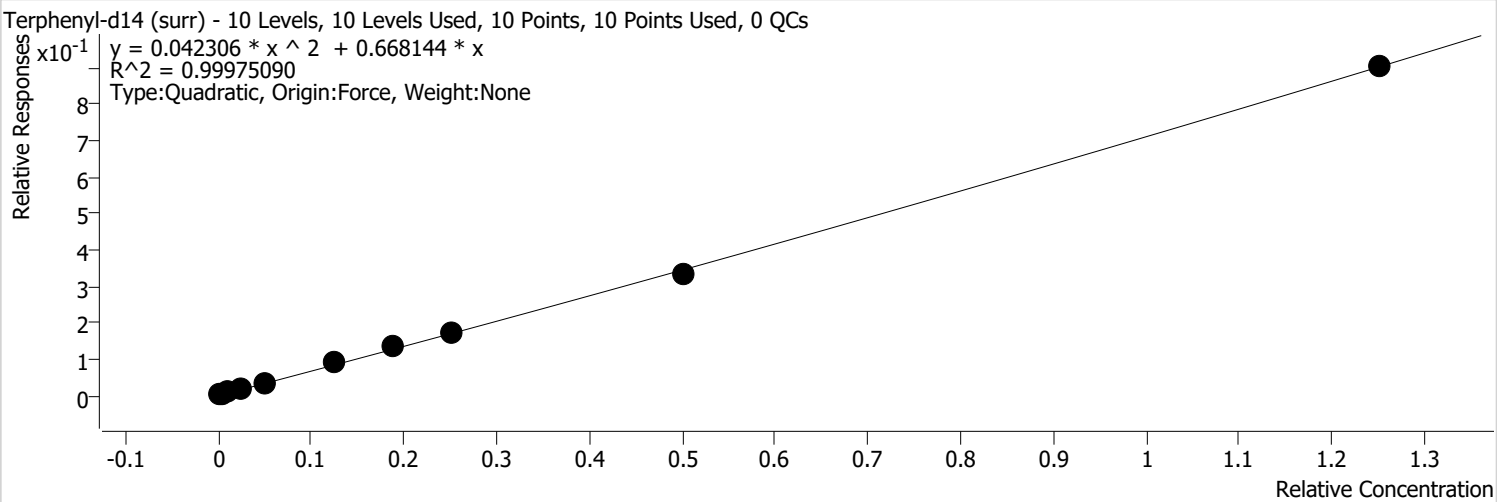
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	13136	20.0000	5.0975	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	17047	40.0000	3.2185	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	26408	100.0000	1.9823	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	45940	200.0000	1.7751	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	104653	500.0000	1.5842	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	150418	750.0000	1.5232	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	202822	1000.0000	1.4320	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	400956	2000.0000	1.3707	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	986396	5000.0000	1.4069	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

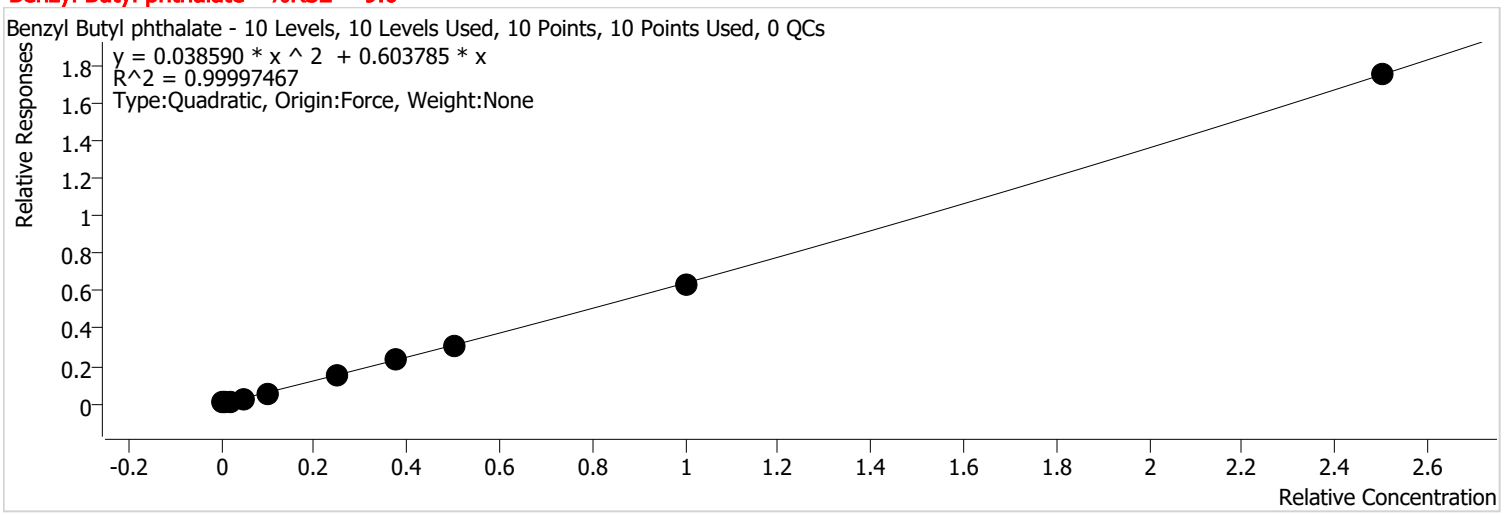
Terphenyl-d14 (surr) %RSE =



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	949	5.0000	1.4572	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	1431	10.0000	1.1108	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	2331	20.0000	0.8804	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	4672	50.0000	0.7015	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	9428	100.0000	0.7286	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	23793	250.0000	0.7203	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	35373	375.0000	0.7164	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	48348	500.0000	0.6827	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	98609	1000.0000	0.6742	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	253018	2500.0000	0.7218	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

Benzyl Butyl phthalate %RSE = 9.0



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
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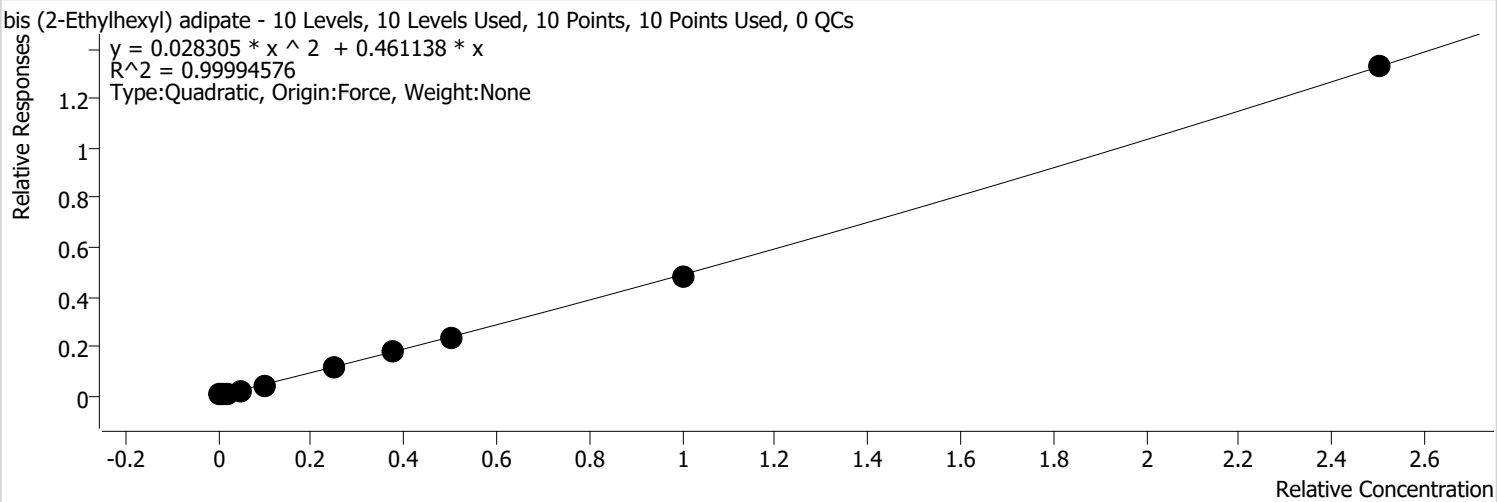
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	1741	20.0000	0.6755	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	3132	40.0000	0.5913	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	7096	100.0000	0.5327	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	15214	200.0000	0.5879	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	41291	500.0000	0.6251	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	62493	750.0000	0.6328	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	88147	1000.0000	0.6224	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	186982	2000.0000	0.6392	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	491057	5000.0000	0.7004	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

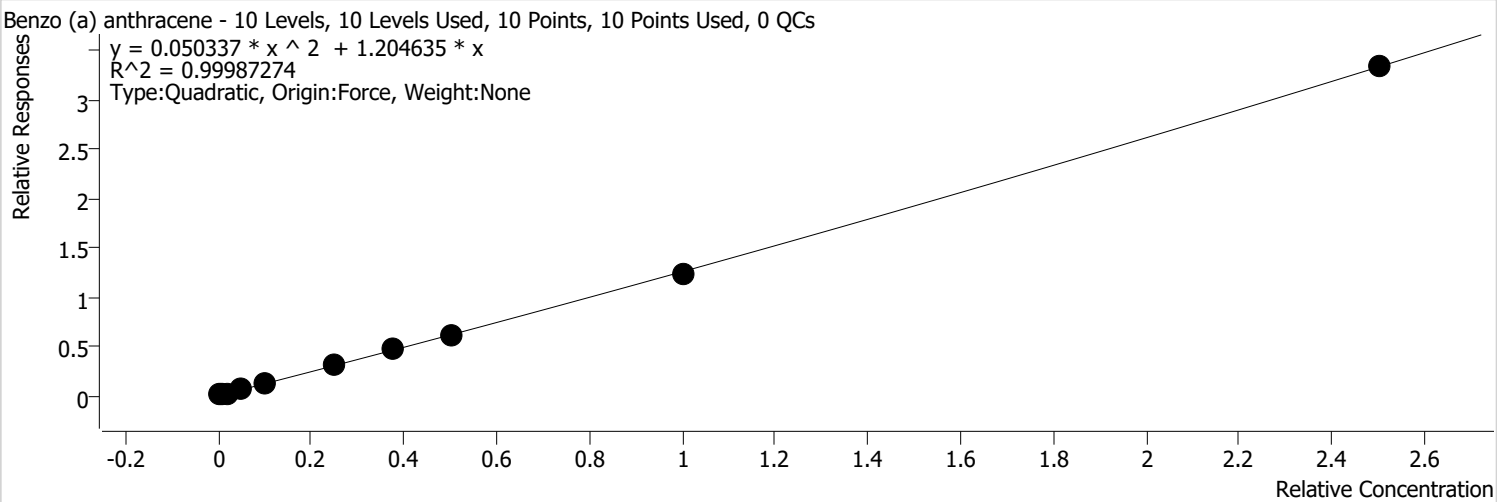
bis (2-Ethylhexyl) adipate %RSE = 9.1



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	709	10.0000	0.5443	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	1223	20.0000	0.4745	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	2346	40.0000	0.4429	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	5306	100.0000	0.3983	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	11471	200.0000	0.4432	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	31717	500.0000	0.4801	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	48146	750.0000	0.4876	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	67714	1000.0000	0.4781	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	141823	2000.0000	0.4848	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	373063	5000.0000	0.5321	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

Benzo (a) anthracene %RSE = 25.1



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
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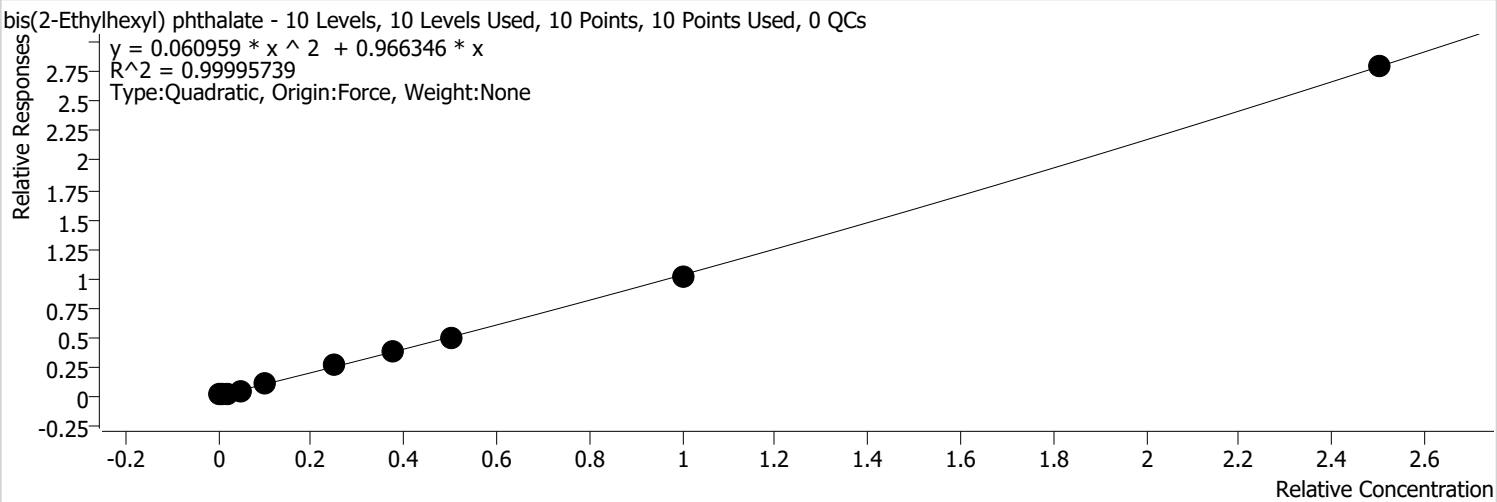
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	4192	20.0000	1.6267	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	7054	40.0000	1.3318	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	15635	100.0000	1.1736	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	32341	200.0000	1.2497	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	85238	500.0000	1.2903	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	125583	750.0000	1.2717	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	175887	1000.0000	1.2418	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	360906	2000.0000	1.2338	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	933515	5000.0000	1.3315	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

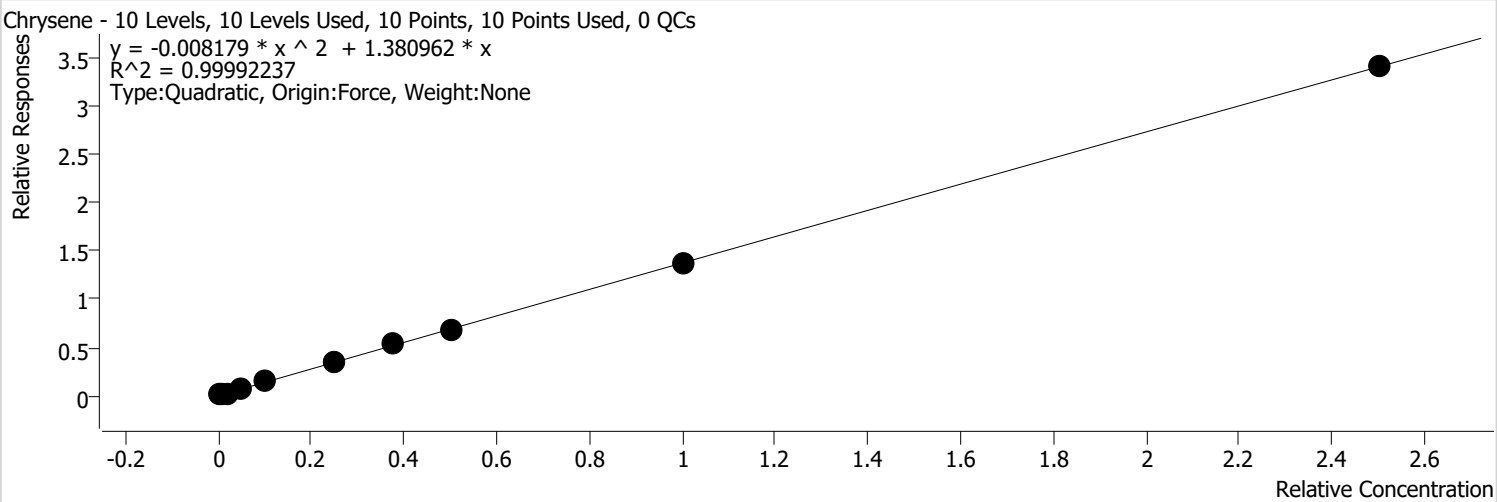
bis(2-Ethylhexyl) phthalate %RSE = 5.5



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	1131	10.0000	0.9770	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	2255	20.0000	0.9776	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	4415	40.0000	0.9294	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	10108	100.0000	0.8437	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	22176	200.0000	0.9636	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	60600	500.0000	1.0243	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	90142	750.0000	1.0135	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	127235	1000.0000	0.9870	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	267605	2000.0000	1.0224	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	692570	5000.0000	1.1190	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

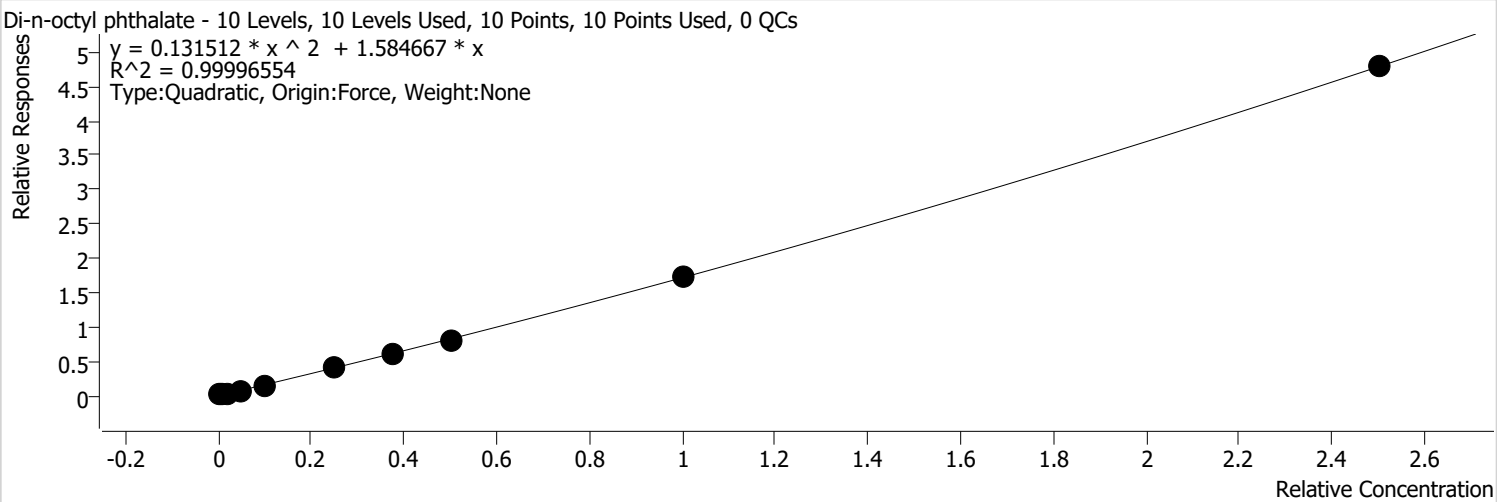
Chrysene %RSE = 4.9



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	1591	10.0000	1.3738	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	3308	20.0000	1.4343	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	6983	40.0000	1.4700	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	15330	100.0000	1.2796	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	33372	200.0000	1.4501	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	84739	500.0000	1.4324	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	126897	750.0000	1.4267	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	174783	1000.0000	1.3559	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	357084	2000.0000	1.3643	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	842343	5000.0000	1.3610	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

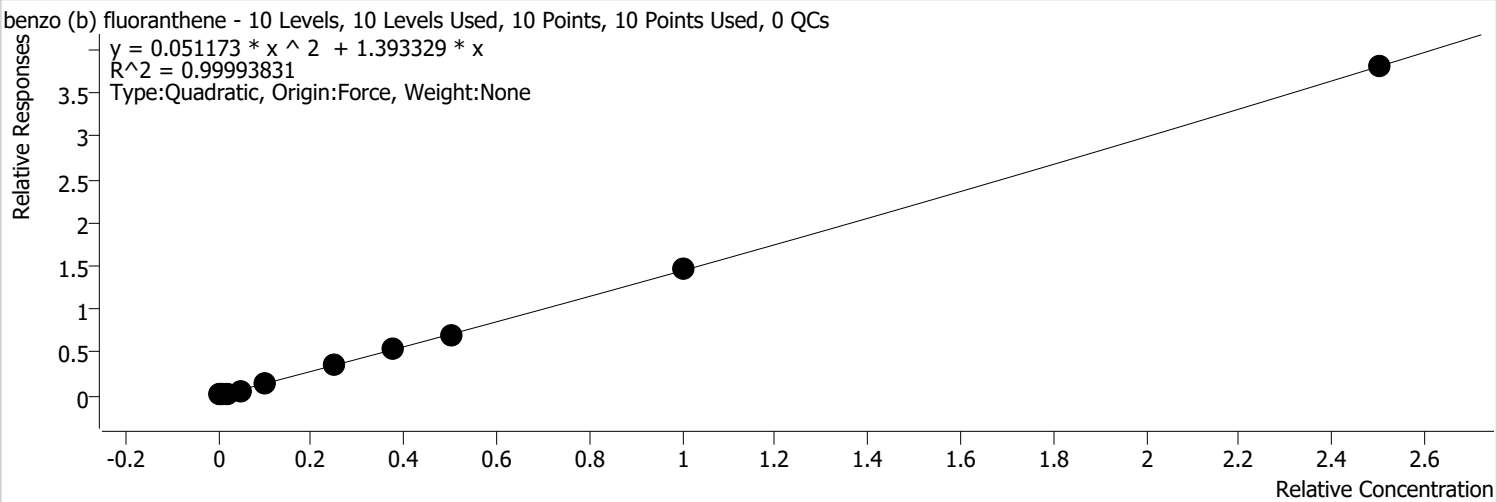
Di-n-octyl phthalate %RSE = 8.1



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	1725	10.0000	1.4894	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	3474	20.0000	1.5065	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	6735	40.0000	1.4178	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	15929	100.0000	1.3296	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	36027	200.0000	1.5655	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	98215	500.0000	1.6601	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	148562	750.0000	1.6703	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	209250	1000.0000	1.6233	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	449073	2000.0000	1.7157	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	1184308	5000.0000	1.9135	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

benzo (b) fluoranthene %RSE = 3.5



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
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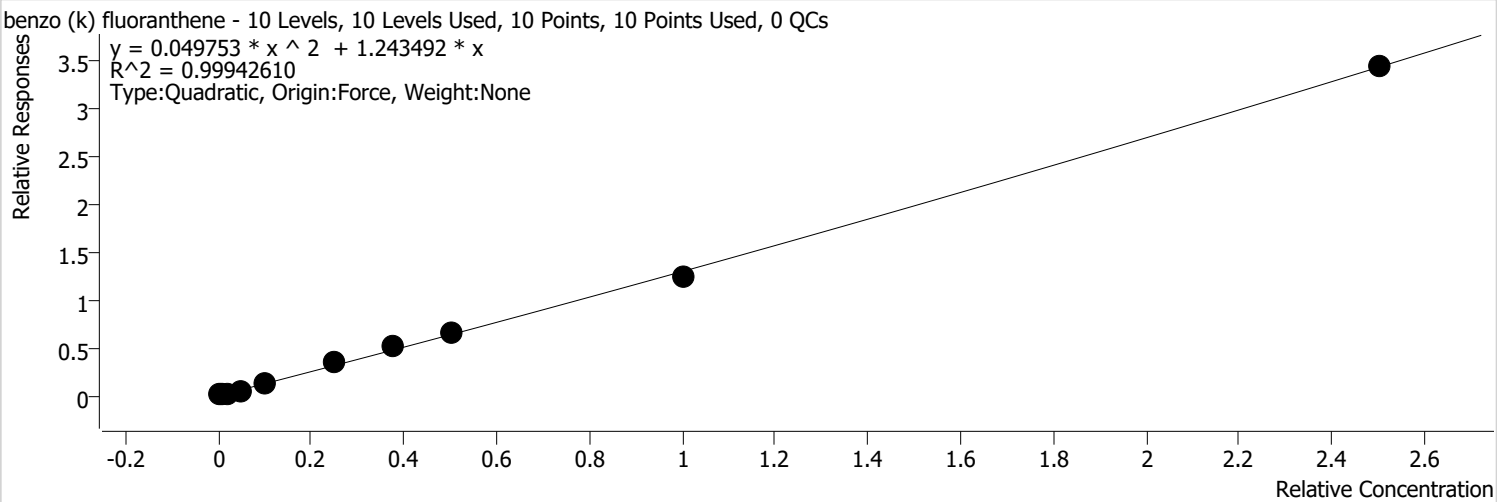
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	3133	20.0000	1.3585	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	6454	40.0000	1.3587	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	15721	100.0000	1.3123	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	31825	200.0000	1.3829	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	83163	500.0000	1.4057	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	126526	750.0000	1.4225	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	176946	1000.0000	1.3727	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	381770	2000.0000	1.4586	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	941179	5000.0000	1.5207	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

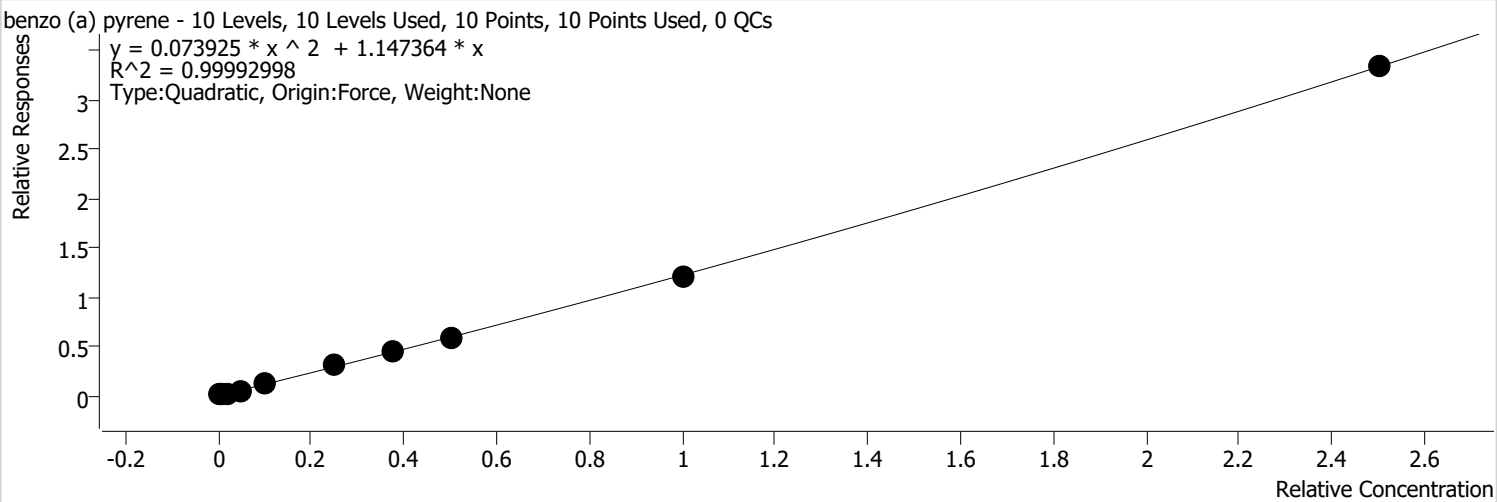
benzo (k) fluoranthene %RSE = 9.3



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	1401	10.0000	1.2097	
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	3238	20.0000	1.4040	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	6154	40.0000	1.2955	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	13727	100.0000	1.1459	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	31489	200.0000	1.3683	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	84597	500.0000	1.4300	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	120752	750.0000	1.3576	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	167166	1000.0000	1.2968	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	326355	2000.0000	1.2469	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	847978	5000.0000	1.3701	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

benzo (a) pyrene %RSE = 4.5



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
C:\GC-14\Data\2021\040221\040214.D	Calibration	1	x	1308	10.0000	1.1297	
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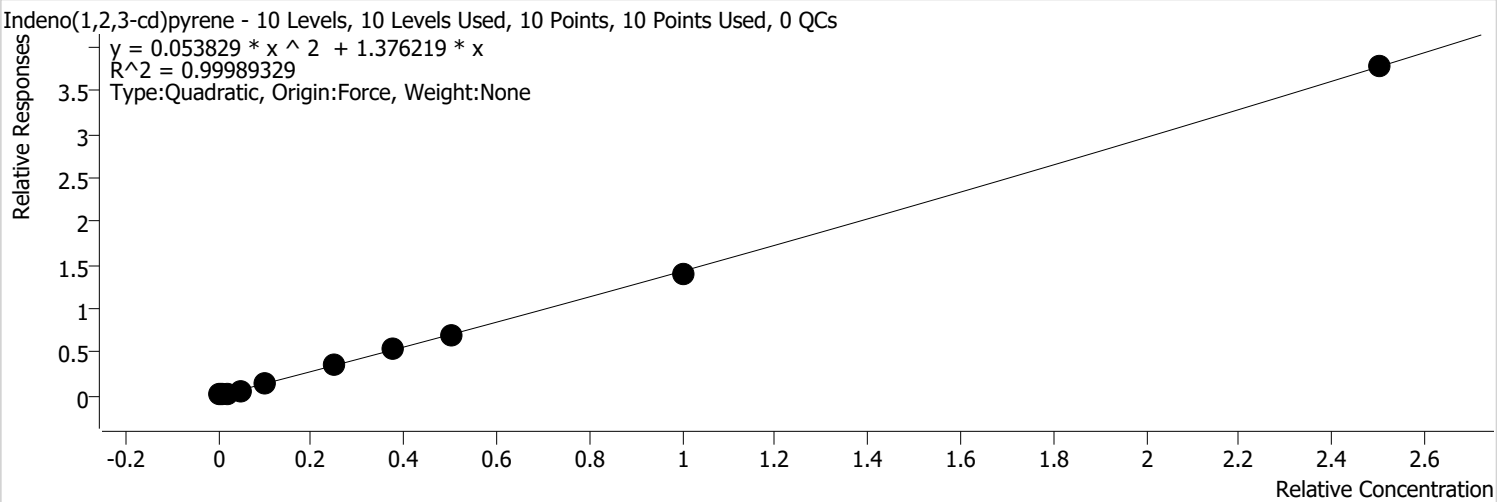
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	5432	40.0000	1.1435	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	12596	100.0000	1.0515	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	27368	200.0000	1.1892	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	72616	500.0000	1.2274	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	108225	750.0000	1.2168	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	151451	1000.0000	1.1749	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	316760	2000.0000	1.2102	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	824860	5000.0000	1.3328	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

Indeno(1,2,3-cd)pyrene %RSE = 5.3



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
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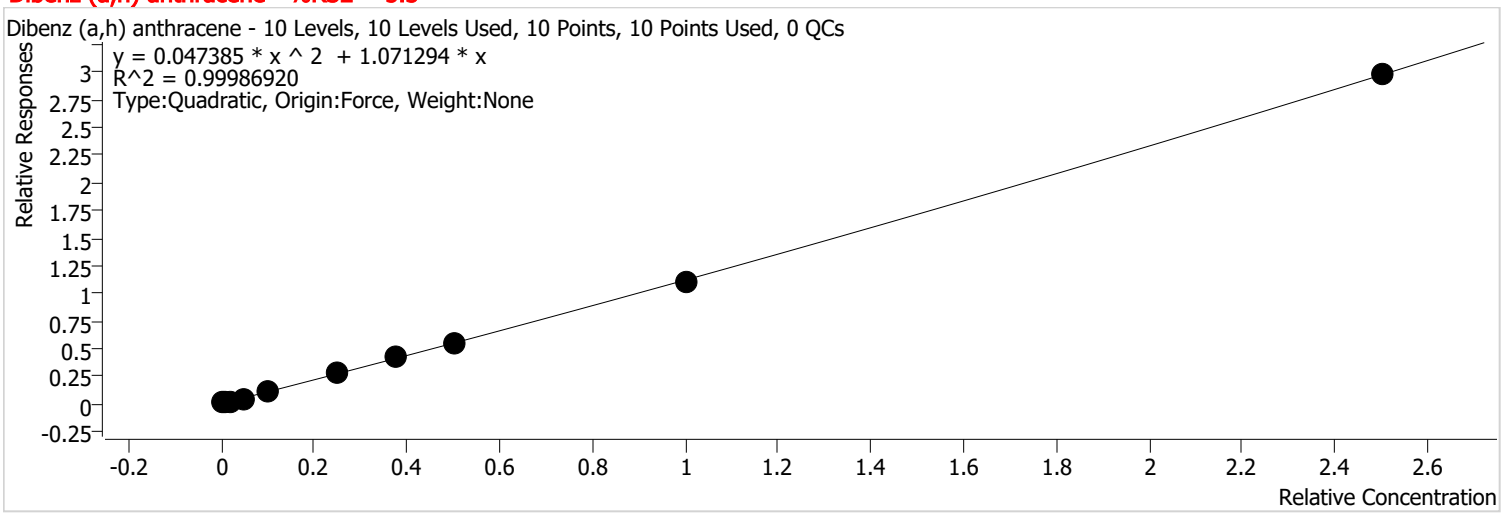
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	3325	20.0000	1.4453	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	6524	40.0000	1.3463	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	15074	100.0000	1.2552	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	32959	200.0000	1.4146	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	87223	500.0000	1.4573	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	129738	750.0000	1.4658	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	179582	1000.0000	1.3896	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	375627	2000.0000	1.4144	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	959368	5000.0000	1.5116	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

Dibenz (a,h) anthracene %RSE = 5.3



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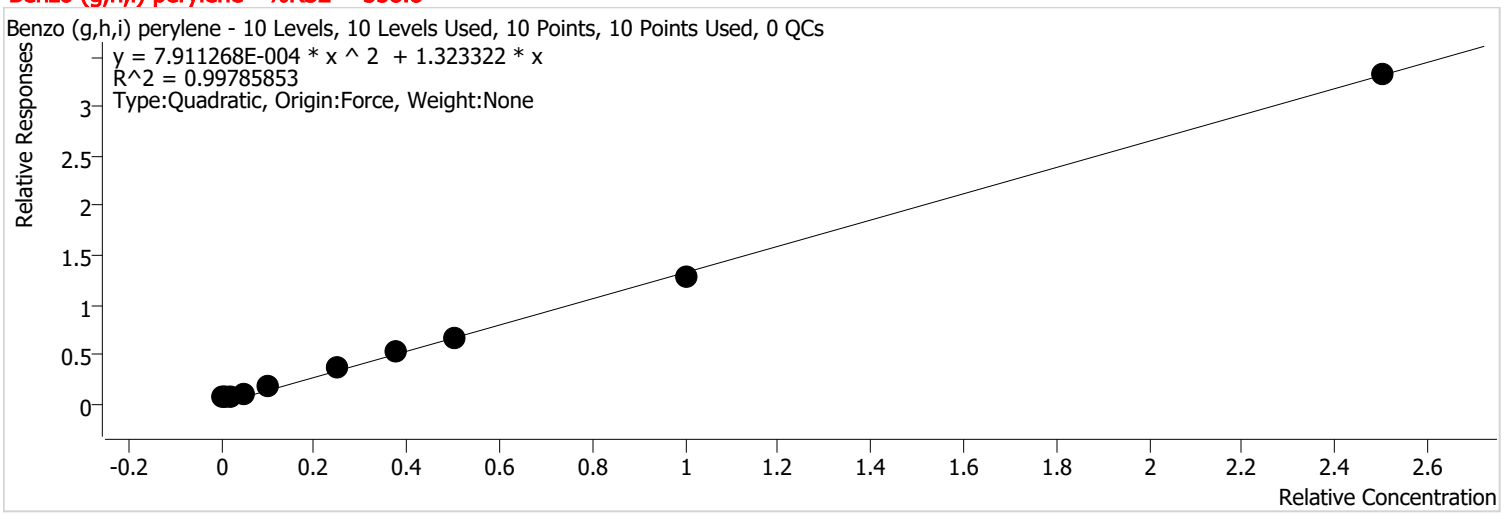
C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	2637	20.0000	1.1460	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	5081	40.0000	1.0484	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	11924	100.0000	0.9929	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	25901	200.0000	1.1116	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	68463	500.0000	1.1438	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	101574	750.0000	1.1476	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	140648	1000.0000	1.0884	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	293012	2000.0000	1.1033	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	755598	5000.0000	1.1905	

Batch Path	C:\GC-14\Data\2021\040221\QuantResults\PAH CAL.batch.bin		
Analysis Time	4/5/2021 8:32 AM	**Analyst Name**	FA\GC14
Report Time	4/5/2021 8:33:24 AM	**Reporter Name**	FA\GC14
Last Calib Update	4/5/2021 8:32 AM	**Batch State**	Processed
Quant Batch Version	10.0	**Quant Report Version**	10.0

Benzo (g,h,i) perylene %RSE = 358.8



Calibration STD Path	Cal Type	Level	Enabled	Resp.	Exp. Conc	Resp. Factor	Level RSD
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C:\GC-14\Data\2021\040221\040215.D	Calibration	2	x	15896	20.0000	6.9095	
C:\GC-14\Data\2021\040221\040216.D	Calibration	3	x	19391	40.0000	4.0013	
C:\GC-14\Data\2021\040221\040217.D	Calibration	4	x	26884	100.0000	2.2385	
C:\GC-14\Data\2021\040221\040218.D	Calibration	5	x	42588	200.0000	1.8278	
C:\GC-14\Data\2021\040221\040219.D	Calibration	6	x	89586	500.0000	1.4968	
C:\GC-14\Data\2021\040221\040220.D	Calibration	7	x	126301	750.0000	1.4269	
C:\GC-14\Data\2021\040221\040221.D	Calibration	8	x	170459	1000.0000	1.3190	
C:\GC-14\Data\2021\040221\040222.D	Calibration	9	x	338315	2000.0000	1.2739	
C:\GC-14\Data\2021\040221\040223.D	Calibration	10	x	842836	5000.0000	1.3280	

PAH Calibration

Date: 04/01/21

Analyst: Sam Beerman

MeCl2: 5673

Cal	ICV
8270 Megamix: 24373	8270 Megamix: 24490

8270 Surrogate: 25095 IS: 25010

Spike Conc. (ppb) 2	BN/Acid Surr Conc. (ppb) 2 (1	2° Spike (uL) 0.2	B/N Surr (uL)	Internal Standard (uL) 10	Remove (uL) 10-2	Final Vol. (mL) 1	(mL) 8270 mm cs Comments
10	10/5	1	--	10	11	1	
20	20/10	2	--	10	12	1	
40	40/20	4	--	10	14	1	
100	100/50	10	--	10	20	1	
200	200/100	20	--	10	30	1	
500	500/250	40	--	10	60	1	
750	750/375	75	--	10	85	1	
1000	1000/500	100	--	10	110	1	
2000	2000/1000	200	--	10	210	1	
5000	5000/2500	500	--	10	510	1	
ICB	1000/500		~~15~~	10	~~115~~	1	
ICV (1000 ppb)	1000/500	~~100 (2° SS)~~	-- C	10	~~110~~	1	1

BM 4/1/21 BM 4/1/21 16 BM 4/1/21

	Mega Mix (uL)	8270 Surr (uL)	Final Volume (mL)
2° Intermediate (cal)	100	100	10
2° Intermediate (SS)	50	50	5

Signature and Date: 4/1/21

Signature: EM

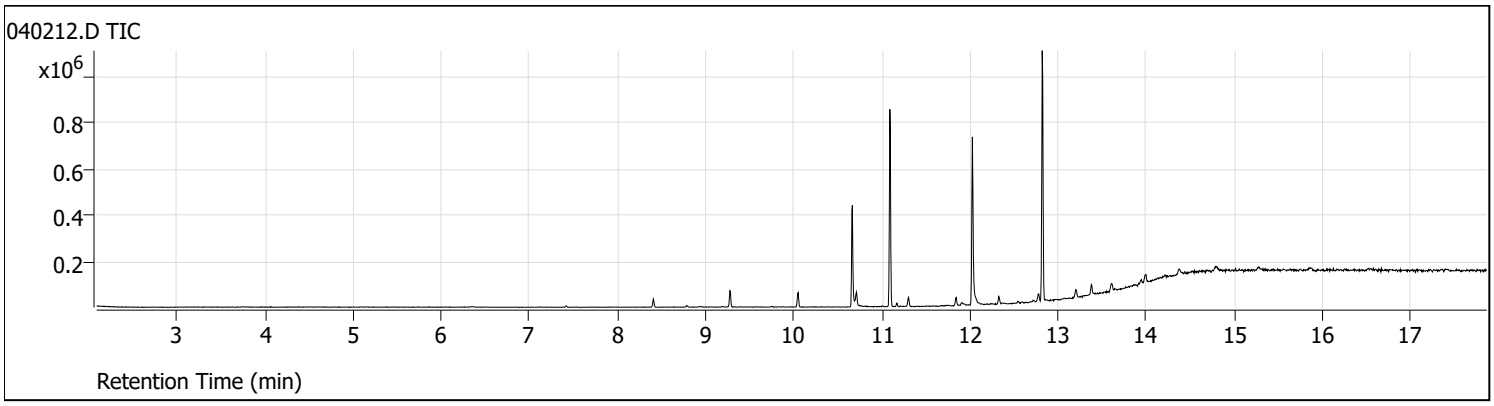
700 Building Calibration Template - PAH v1.1

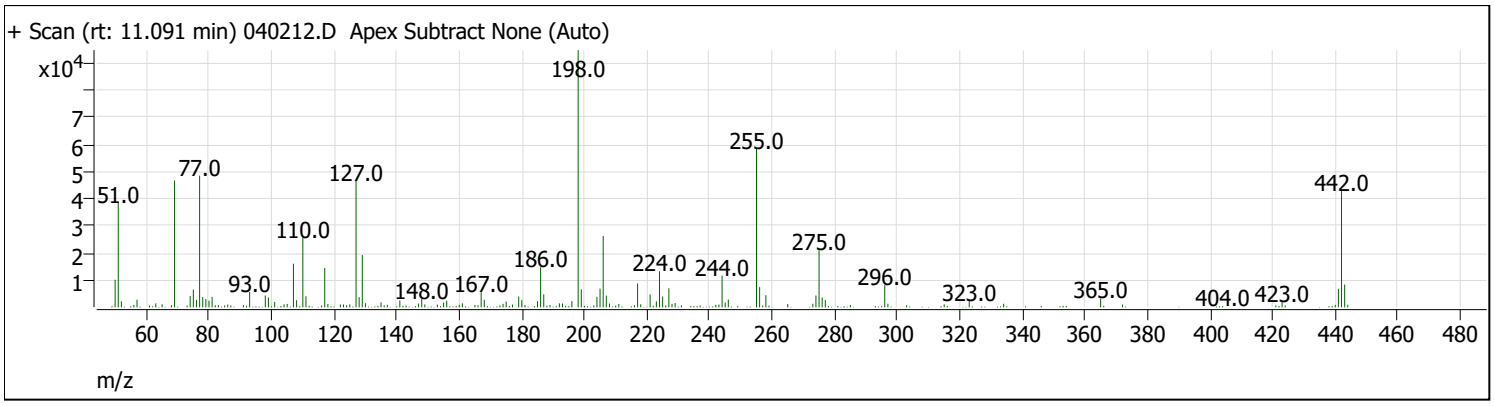
Official Approval: 11/14/2019

Tunes

Tune Evaluation Report

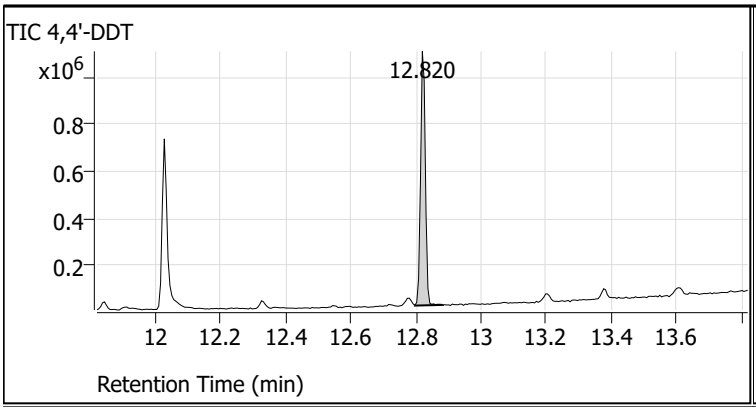
Data Path:	C:\GC-14\Data\2021\040221\040212.D
Acq on:	4/2/2021 1:25:46 PM
Operator:	FA\GC14
Sample:	TUNE
Inst Name:	GC-14
ALS Vial:	1
Method:	C:\GC-14\Methods\Quant Methods\TUNE\DFTPPwBreak&TailingGC218270E.m

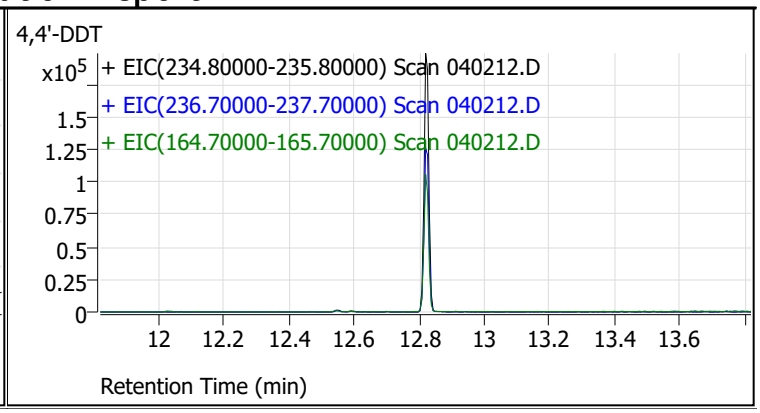


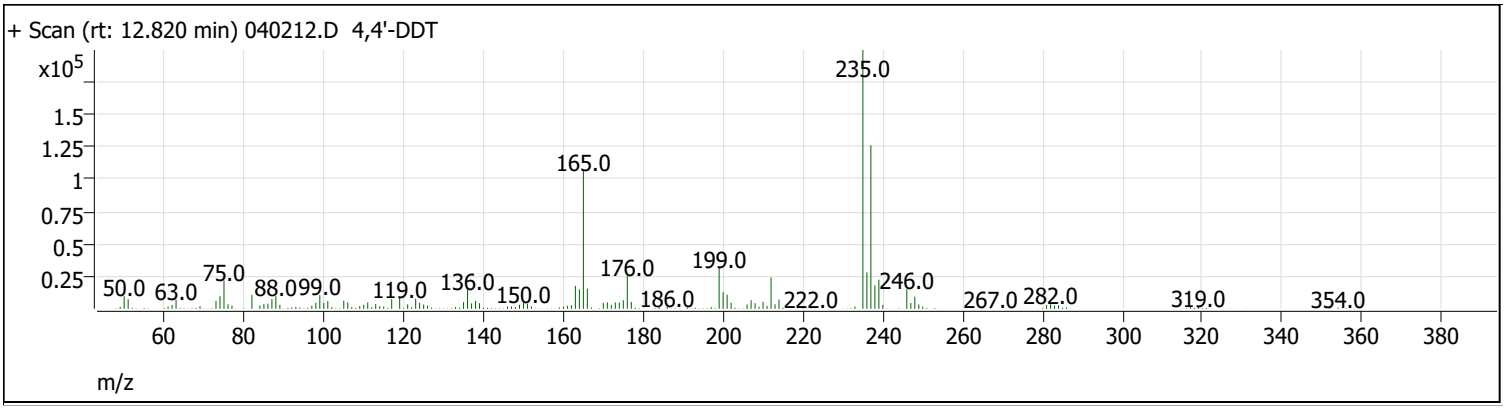


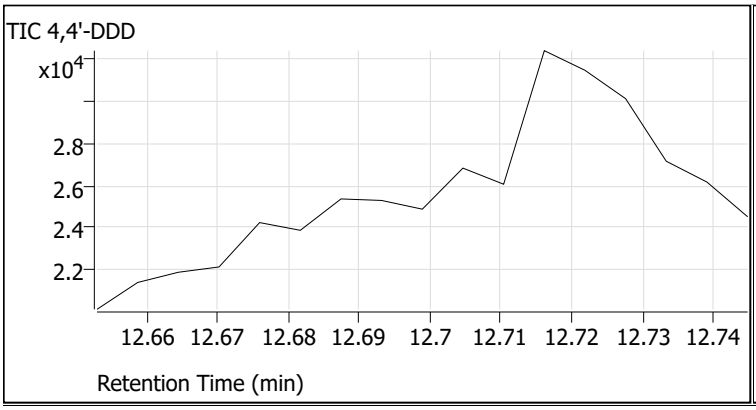
Target Mass	Rel. To Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Pass/Fail
68	69	0	2	1.7	799	Pass
70	69	0	2	0.6	259	Pass
197	198	0	2	0.0	0	Pass
198	198	100	100	100.0	94664	Pass
199	198	5	9	7.0	6639	Pass
365	198	1	100	3.5	3316	Pass
441	443	1E-10	150	81.3	6842	Pass
442	442	100	100	100.0	42920	Pass
443	442	15	24	19.6	8416	Pass
69	69	100	100	100.0	46704	Pass

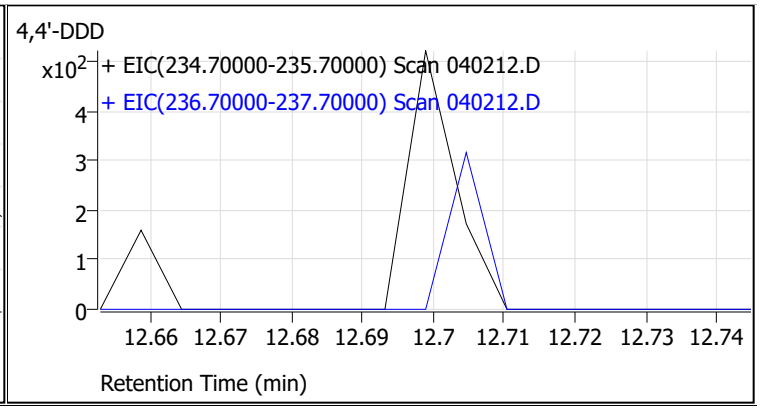
Tune Evaluation Report

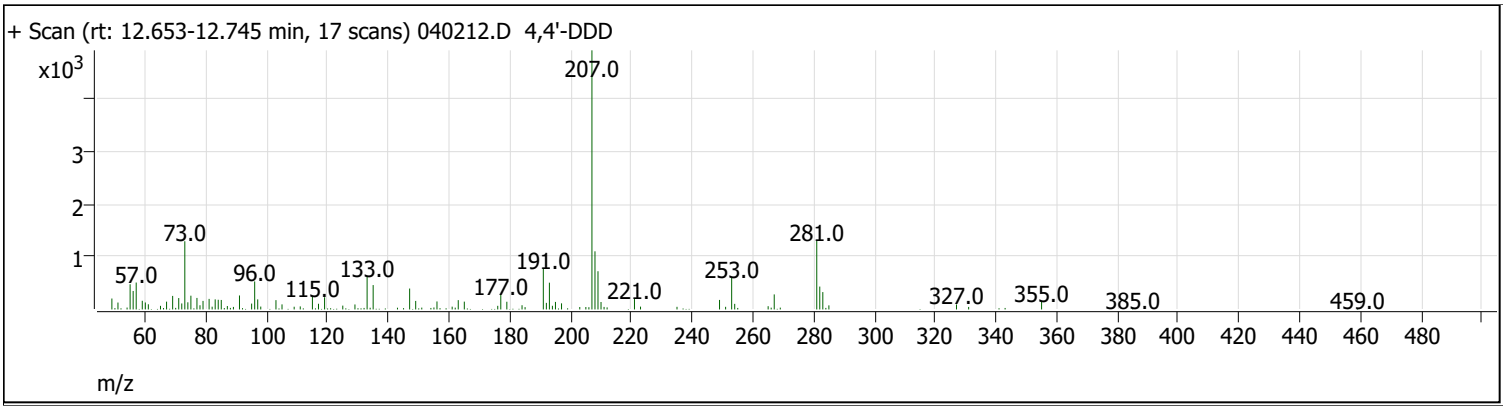






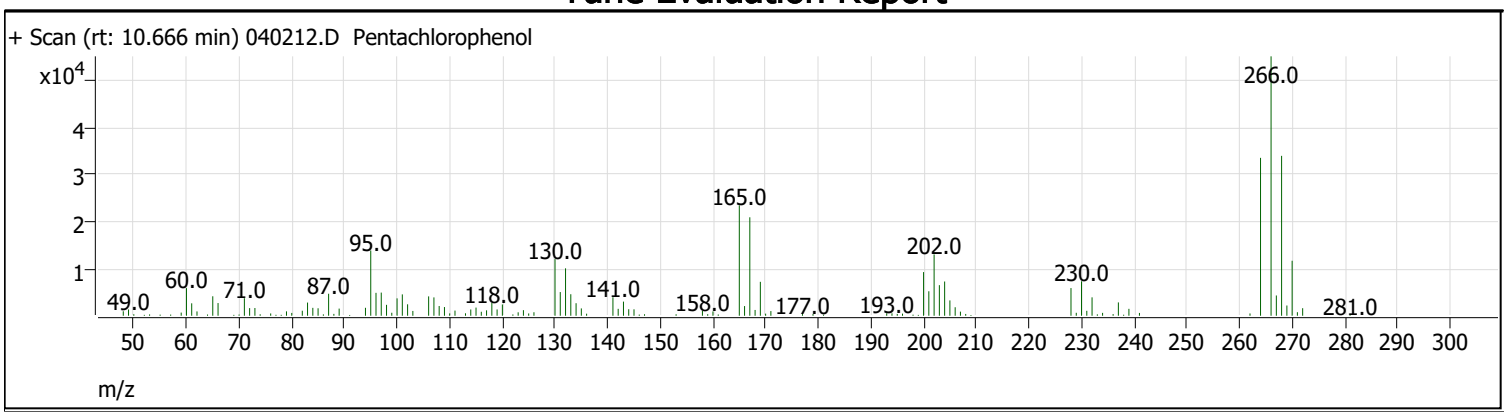


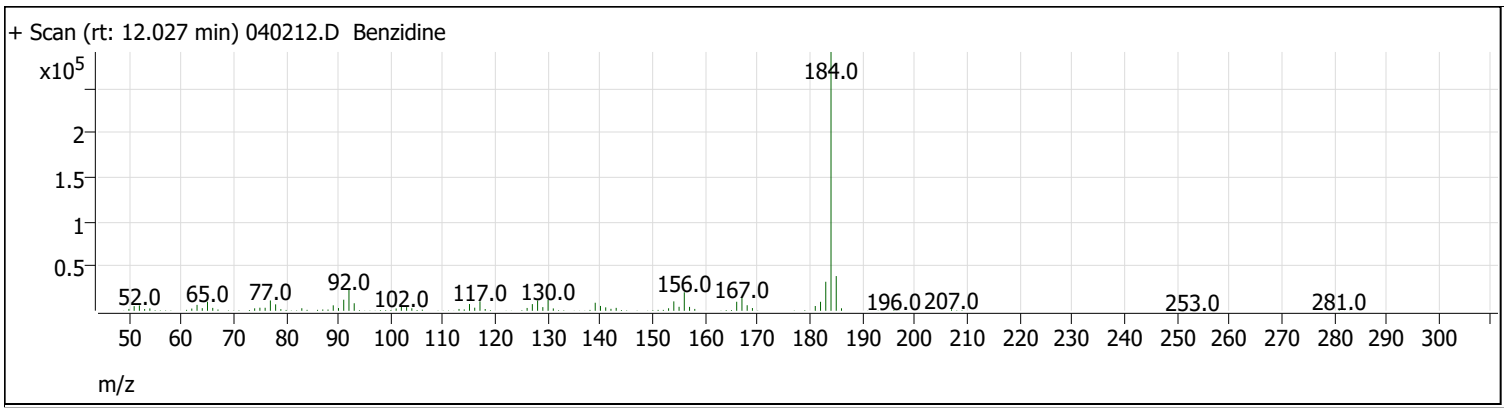




Compound Name	Expected RT	Observed RT	TIC Area	Breakdown %	Pass/Fail
4,4'-DDT	12.820	12.820	1100351	0.0	Pass
4,4'-DDD	12.700	0.000	0		

Tune Evaluation Report





Compound Name	Expected RT	Observed RT	Tailing Factor	PGF	Pass/Fail
Pentachlorophenol	10.660	10.666	1.0	16.0	Pass
Benzidine	12.027	12.027	1.5	14.8	Pass

Tune Evaluation Report

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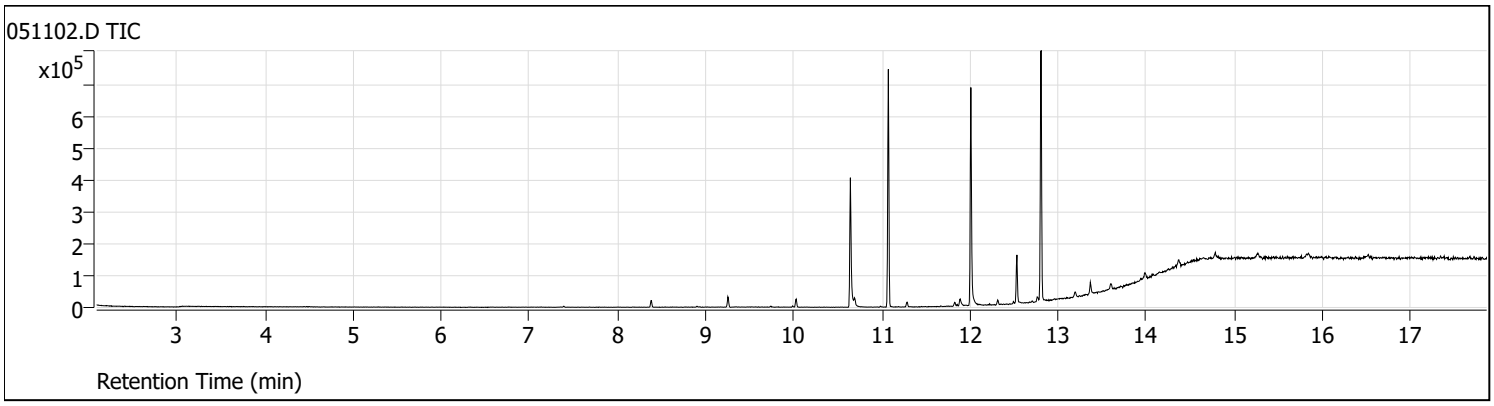
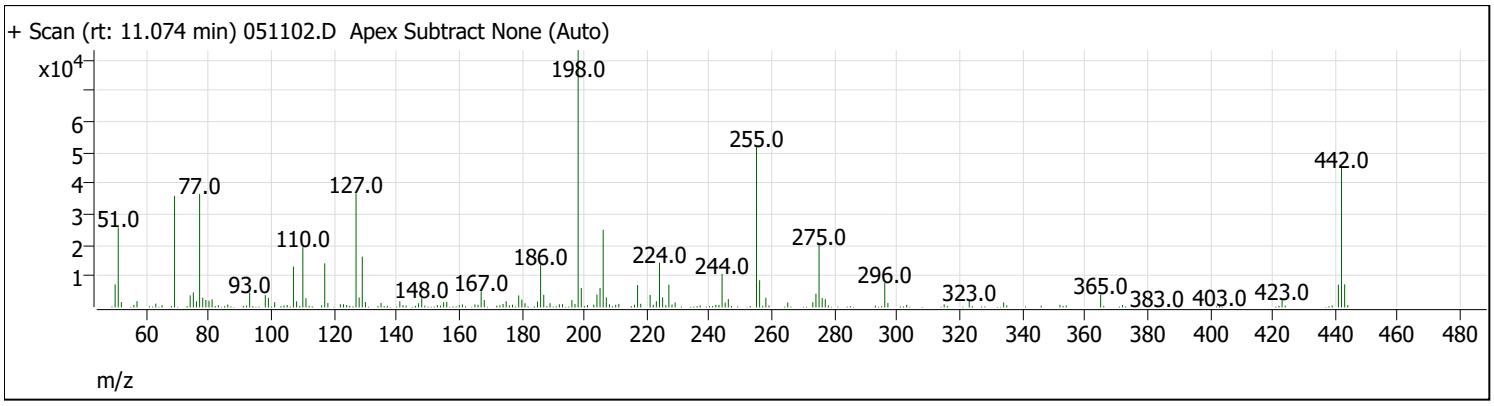
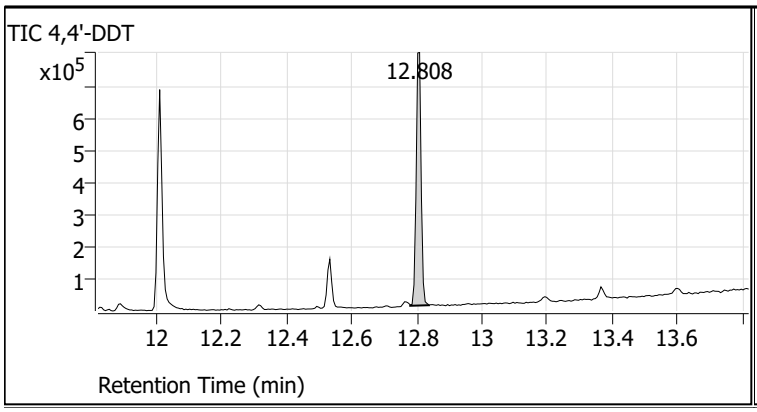
Operator:	FA\GC14
Sample:	TUNE
Inst Name:	GC-14
ALS Vial:	1
Method:	C:\GC-14\Methods\Quant Methods\TUNE\DFTPPwBreak&TailingGC218270E.m

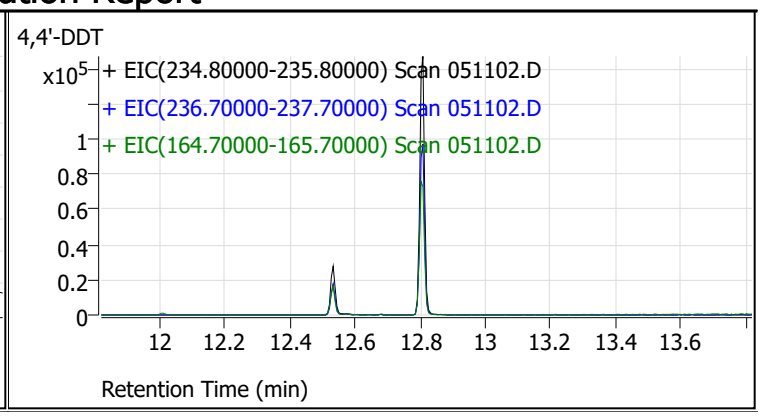


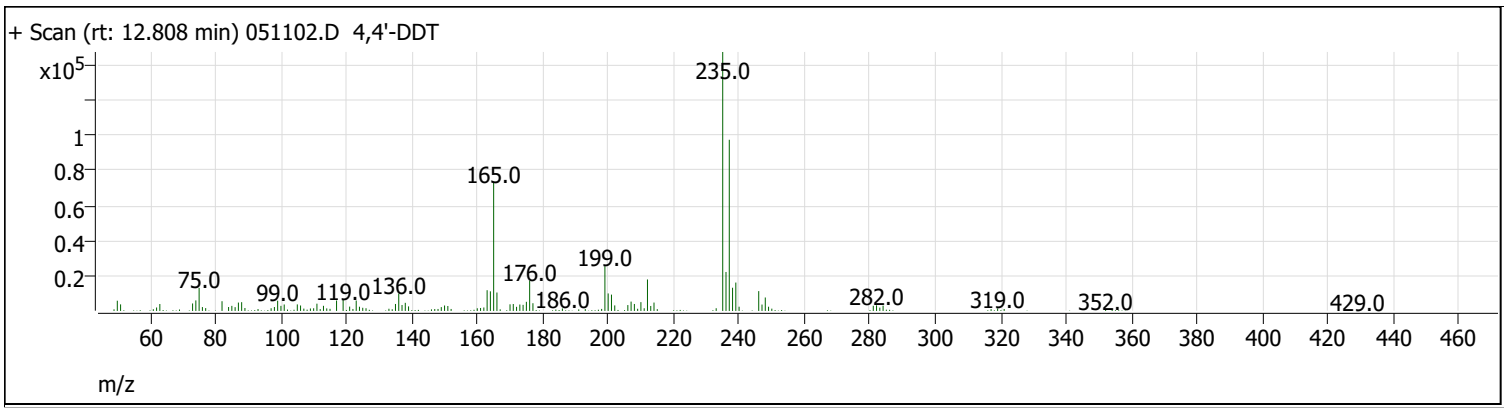


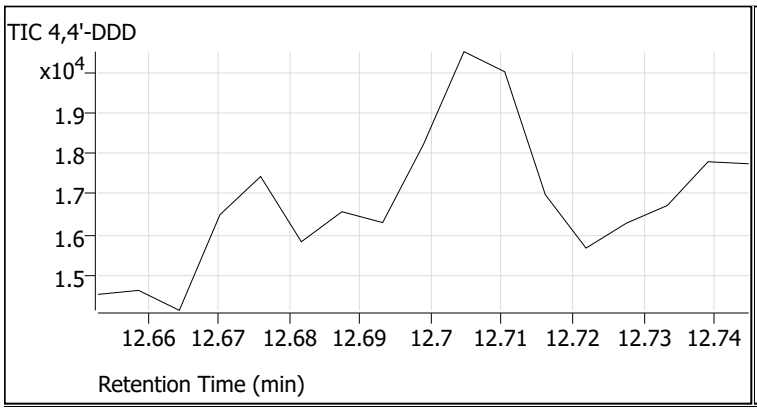
Target Mass	Rel. To Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Pass/Fail
68	69	0	2	1.2	422	Pass
70	69	0	2	0.5	198	Pass
197	198	0	2	1.3	1094	Pass
198	198	100	100	100.0	83072	Pass
199	198	5	9	7.6	6298	Pass
365	198	1	100	5.0	4182	Pass
441	443	1E-10	150	98.5	7347	Pass
442	442	100	100	100.0	45072	Pass
443	442	15	24	16.6	7460	Pass
69	69	100	100	100.0	36040	Pass

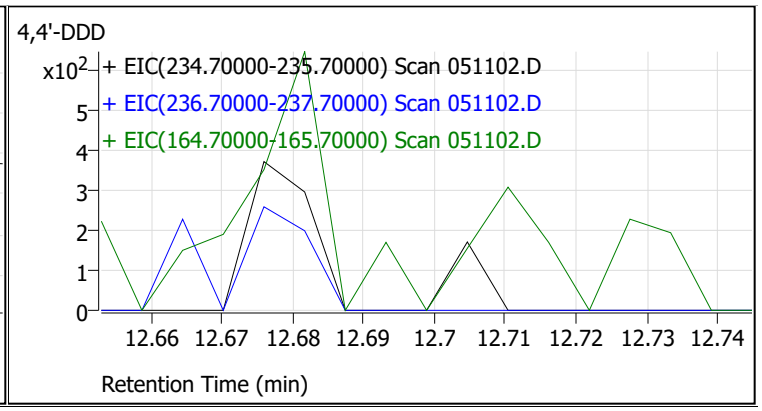
Tune Evaluation Report

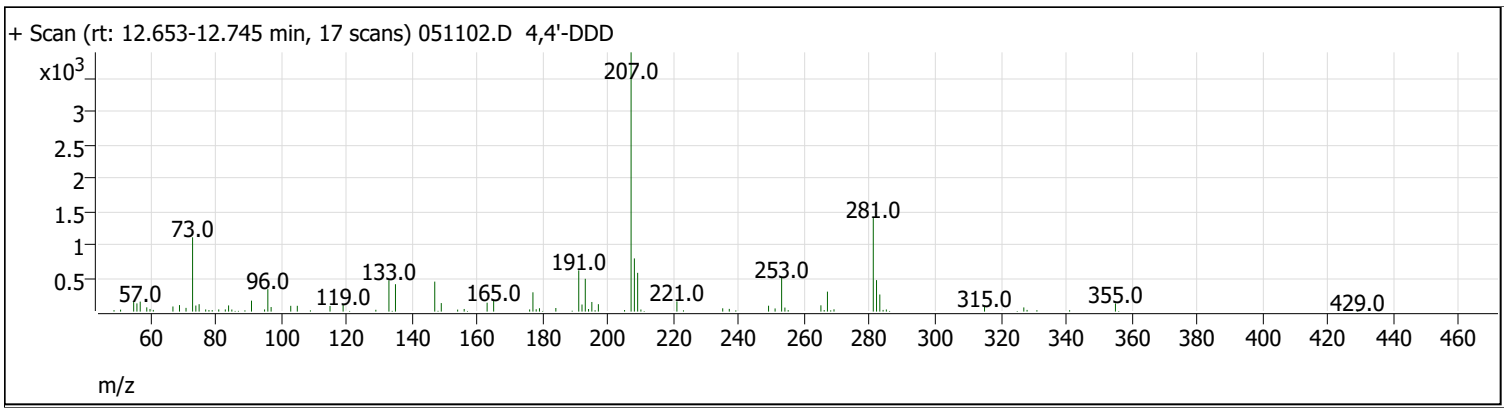






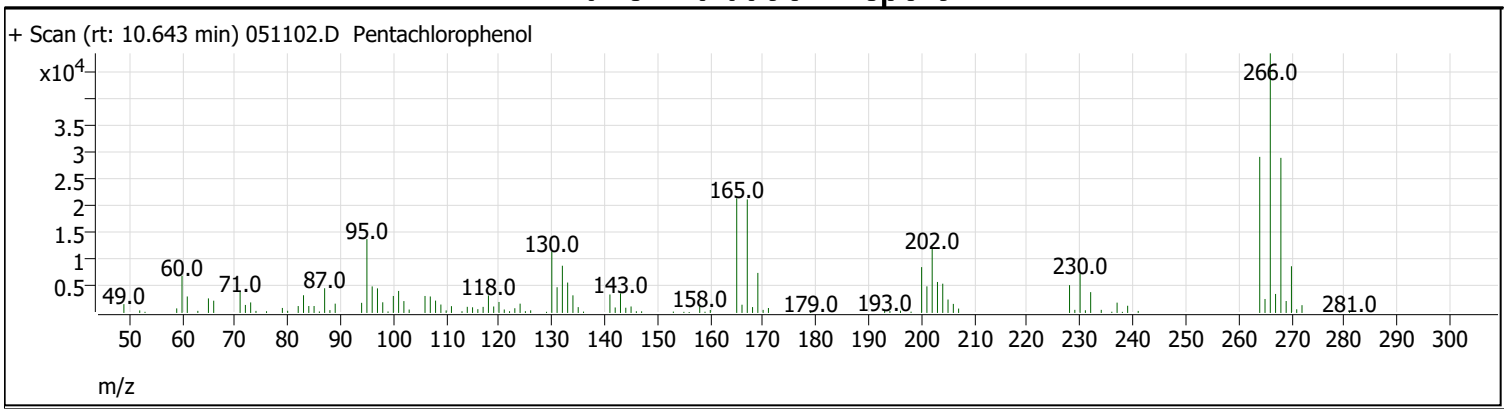


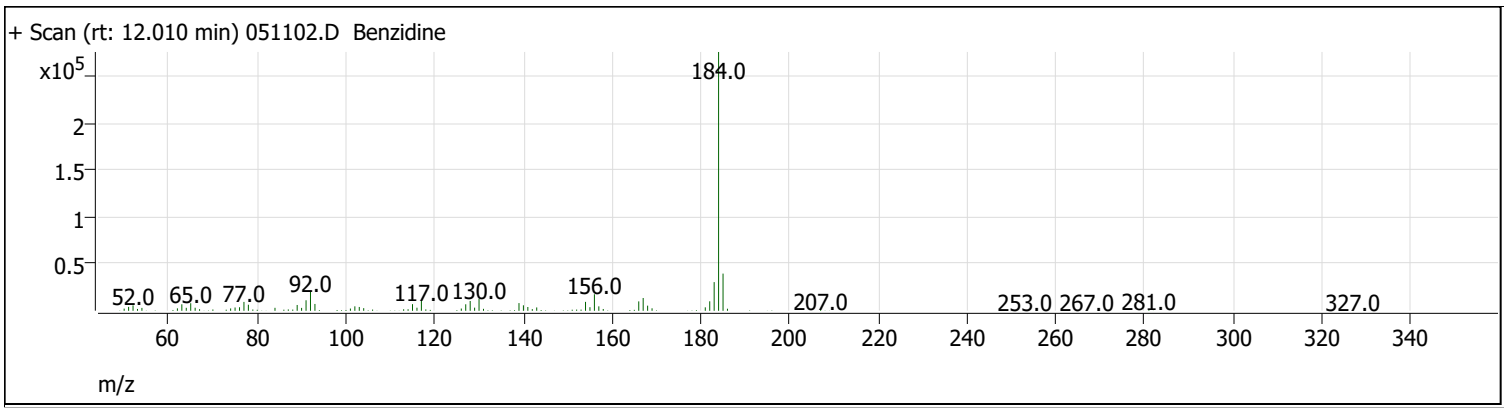




Compound Name	Expected RT	Observed RT	TIC Area	Breakdown %	Pass/Fail
4,4'-DDT	12.820	12.808	819554	0.0	Pass
4,4'-DDD	12.700	0.000	0		

Tune Evaluation Report





Compound Name	Expected RT	Observed RT	Tailing Factor	PGF	Pass/Fail
Pentachlorophenol	10.660	10.643	1.6	42.7	Pass
Benzidine	12.027	12.010	1.2	44.7	Pass

Appendix F

Table F-1: Calculation of Soil Direct Contact Screening Levels

Constituent Category	Detected Constituent	Unrestricted Land Use Scenario			Commercial/Industrial Land Use Scenario		
		Standard Method B Soil Value for Carcinogens [1] (mg/kg)	Standard Method B Soil Value for Non-carcinogens [1] (mg/kg)	Soil Direct Contact Screening Level for an Unrestricted Land Use Scenario [2] (mg/kg)	Standard Method C Soil Value for Carcinogens [1] (mg/kg)	Standard Method C Soil Value for Non-carcinogens [1] (mg/kg)	Soil Direct Contact Screening Level for a Commercial/Industrial Land Use Scenario [2] (mg/kg)
TPH	TPH-D [4]	--	--	3,000	--	--	39,000
	TPH-G [4]	--	--	4,700	--	--	150,000
	TPH-HO [4]	--	--	3,000	--	--	39,000
VOCs	1,2,4-Trimethylbenzene	--	800	800	--	35,000	35,000
	1,3,5-Trimethylbenzene	--	800	800	--	35,000	35,000
	Benzene	18	320	18	2,400	14,000	2,400
	Chloroethane	--	--	No Value [3]	--	--	No Value [3]
	Cumene	--	8,000	8,000	--	350,000	350,000
	Ethylbenzene	--	8,000	8,000	--	350,000	350,000
	Ethylene Dibromide (EDB)	0.50	720	0.50	66	32,000	66
	n-Butylbenzene	--	4,000	4,000	--	180,000	180,000
	n-Propylbenzene	--	8,000	8,000	--	350,000	350,000
	p-isopropyltoluene	--	--	No Value [3]	--	--	No Value [3]
	sec-Butylbenzene	--	8,000	8,000	--	350,000	350,000
	Tetrachloroethylene	480	480	480	63,000	21,000	21,000
	Toluene	--	6,400	6,400	--	280,000	280,000
	Trichloroethylene	12	40	12	2,900	1,800	1,800
	Xylenes, Total	--	16,000	16,000	--	700,000	700,000
SVOCs/PAHs	3&4 Methylphenol coelution	--	--	No Value [3]	--	--	No Value [3]
	Acenaphthene	--	4,800	4,800	--	210,000	210,000
	Acenaphthylene	--	--	No Value [3]	--	--	No Value [3]
	Anthracene	--	24,000	24,000	--	1,100,000	1,100,000
	Benzo(ghi)perylene	--	--	No Value [3]	--	--	No Value [3]
	Carbazole	--	--	No Value [3]	--	--	No Value [3]
	Fluoranthene	--	3,200	3,200	--	140,000	140,000
	Fluorene	--	3,200	3,200	--	140,000	140,000
	Naphthalenes, Total	--	1,600	1,600	--	70,000	70,000
	Phenanthrene	--	--	No Value [3]	--	--	No Value [3]
	Phenol	--	24,000	24,000	--	1,100,000	1,100,000
	Pyrene	--	2,400	2,400	--	110,000	110,000
	Total cPAHs TEF [5]	0.19	24	0.19	130	1,100	130
Other Organics	Total PCBs [6]	0.50	--	0.50	66	--	66
	Total dioxins/furans TEF [5]	1.3E-05	9.3E-05	1.3E-05	1.7E-03	4.1E-03	1.7E-03
Metals	Arsenic	0.67	24	20 [7]	88	1,100	88
	Barium	--	16,000	16,000	--	700,000	700,000
	Chromium (III)	--	120,000	120,000	--	5,300,000	5,300,000
	Lead [8]	--	--	250	--	--	1,000
	Selenium	--	400	400	--	18,000	18,000
	Silver	--	400	400	--	18,000	18,000

Notes:

--: No value exists for this constituent in the CLARC database (Ecology 2021).

All values are presented as two significant figures in standard notation, with the exception of total dioxins/furans in scientific notation.

Screening levels are shown only if the constituent was detected in one or more media during RI data gap activities. Screening levels for total PCBs, which were not detected in any media during RI data gap activities, are also shown.

[1] Values from CLARC (Ecology 2021), unless otherwise noted.

[2] The screening level is the most stringent of the carcinogenic and non-carcinogenic values.

[3] A screening level cannot be calculated because no values exist in CLARC (Ecology 2021). In addition, in the case of alkylbenzenes and non-carcinogenic PAHs, the constituents are components of petroleum products that are already accounted for in the TPH cleanup levels (e.g., see footnote 14(a) to MTCA Table 830-1).

[4] Default TPH-D, TPH-G, and TPH-HO direct contact values for an unrestricted land use scenario (Ecology 2001a) and a commercial/industrial land use scenario (Ecology 2001b).

[5] Total cPAHs and total dioxins/furans screening levels were based on the toxicity of benzo(a)pyrene and 2,3,7,8-tetrachlorodibenzo-p-dioxin, respectively, in accordance with WAC 173-340-708(8). Total cPAHs and total dioxins/furans concentrations were calculated using MTCA toxicity equivalence factors (TEFs).

[6] Total PCBs are the sum of the PCB aroclors.

[7] Adjusted to accepted soil background concentration of 20 mg/kg per WAC 173-340-740(5)(c) (see MTCA Table 740-1 footnote b).

[8] MTCA Method A soil cleanup levels for lead.

Table F-2: Calculation of Groundwater as Drinking Water Screening Levels

Constituent Category	Detected Constituent	MTCA Method A Groundwater Cleanup Level [1] (ug/L)	Standard Method B Groundwater Value for Carcinogens [1] (ug/L)	Standard Method B Groundwater Value for Non-Carcinogens [1] (ug/L)	Maximum Contaminant Level (MCL) [1] (ug/L)	Groundwater Screening Level [2] (ug/L)
TPH	TPH-D	500	--	--	--	500
	TPH-G	800 [3]	--	--	--	800
	TPH-HO	500	--	--	--	500
VOCs	1,2,4-Trimethylbenzene	--	--	80	--	80
	1,3,5-Trimethylbenzene	--	--	80	--	80
	Benzene	5.0	0.80	32	5.0	5.0 [4]
	Chloroethane	--	--	--	--	No Value [5]
	Cumene	--	--	800	--	800
	Ethylbenzene	700	--	800	700	700
	Ethylene Dibromide (EDB)	0.010	0.022	72	0.050	0.050 [4]
	n-Butylbenzene	--	--	400	--	400
	n-Propylbenzene	--	--	800	--	800
	p-isopropyltoluene	--	--	--	--	No Value [5]
	sec-Butylbenzene	--	--	800	--	800
	Tetrachloroethylene	5.0	21	48	5.0	5.0
	Toluene	1,000	--	640	1,000	640
	Trichloroethylene	5.0	0.54	4.0	5.0	4.0 [4]
	Xylenes, Total	1,000	--	1,600	10,000	1,600
SVOCs/PAHs	3&4 Methylphenol coelution	--	--	--	--	No Value [5]
	Acenaphthene	--	--	960	--	960
	Acenaphthylene	--	--	--	--	No Value [5]
	Anthracene	--	--	4,800	--	4,800
	Benzo(ghi)perylene	--	--	--	--	No Value [5]
	Carbazole	--	--	--	--	No Value [5]
	Fluoranthene	--	--	640	--	640
	Fluorene	--	--	640	--	640
	Naphthalenes, Total	160	--	160	--	160
	Phenanthrene	--	--	--	--	No Value [5]
	Phenol	--	--	2,400	--	2,400
	Pyrene	--	--	480	--	480
	Total cPAHs TEF [6]	0.10	0.023	4.8	0.20	0.015 [7]
Other Organics	Total PCBs [8]	0.10	0.044	--	0.50	1.4 [7]
	Total dioxins/furans TEF [6]	--	6.7E-07	1.1E-05	3.0E-05	7.2E-06 [7]
Metals	Arsenic	5.0	0.058	4.8	10.0	5.0 [9]
	Barium	--	--	3,200	2,000	2,000
	Chromium (total)	50	--	--	100	100
	Lead	15	--	--	15	15
	Selenium	--	--	80	50	50
	Silver	--	--	80	--	80

Notes:

--: No value exists for this constituent in the CLARC database (Ecology 2021).

All values are presented as two significant figures in standard notation, with the exception of total dioxins/furans in scientific notation.

Screening levels are shown only if the constituent was detected in one or more media during RI data gap activities. A screening level for total PCBs, which were not detected in any media during RI data gap activities, is also shown.

[1] Values from CLARC (Ecology 2021), unless otherwise noted.

[2] The screening level is the most stringent of the standard Method B groundwater value for carcinogens, the standard Method B groundwater value for non-carcinogens, and the MCL, unless otherwise noted. The MTCA Method A groundwater cleanup level was used if no other values were available. In accordance with WAC 173-340-720(7)(c), some screening levels may need to be adjusted up to the practical quantitation limit (PQL) in the future (beyond what is shown in this table).

[3] Because benzene is present in groundwater, the MTCA Method A groundwater cleanup level of 800 ug/L applies.

[4] In accordance with WAC 173-340-720(7)(b), the standard Method B value for carcinogens was adjusted upward towards the MCL by a maximum factor of ten (not to exceed the MCL).

[5] A screening level cannot be calculated because no values exist in CLARC (Ecology 2021). In addition, in the case of alkylbenzenes and non-carcinogenic PAHs, the constituents are components of petroleum products that are already accounted for in the TPH cleanup levels (e.g., see footnote 14(a) to MTCA Table 830-1).

[6] Total cPAHs and total dioxins/furans screening levels were based on the toxicity of benzo(a)pyrene and 2,3,7,8-tetrachlorodibenzo-p-dioxin, respectively, in accordance with WAC 173-340-708(8). Total cPAHs and total dioxins/furans concentrations were calculated using MTCA toxicity equivalence factors (TEFs).

[7] For current screening purposes, the lowest PQL in any sample was considered for a current PQL adjustment in accordance with WAC 173-340-720(7)(c). The individual constituent PQLs and TEFs were used to calculate PQLs for total cPAHs and total dioxins/furans. The current screening level may need to be adjusted up further in the future in accordance with WAC 173-340-720(7)(c) since some samples had PQLs greater than this screening level. A non-detect result with a PQL greater than the screening level was not considered an exceedance.

[8] Total PCBs are the sum of the PCB aroclors.

[9] Adjusted to accepted groundwater background concentration of 5 ug/L per WAC 173-340-720(7)(c) (see MTCA Table 720-1 footnote b).

Table F-3: Calculation of Surface Water Screening Levels

Constituent Category	Detected Constituent	Standard Method B Surface Water Value for Carcinogens [1] (ug/L)	Standard Method B Surface Water Value for Non-Carcinogens [1] (ug/L)	Surface Water Value for Acute Marine Aquatic Life 173-201A WAC [1] (ug/L)	Surface Water Value for Acute Marine Aquatic Life CWA §304 [1] (ug/L)	Surface Water Value for Chronic Marine Aquatic Life 173-201A WAC [1] (ug/L)	Surface Water Value for Chronic Marine Aquatic Life CWA §304 [1] (ug/L)	Surface Water Value for Human Health in Marine Waters 173-201A WAC [1] (ug/L)	Surface Water Value for Human Health in Marine Waters 40 CFR 131.45 [1] (ug/L)	Surface Water Value for Human Health in Marine Waters CWA §304 [1] (ug/L)	Surface Water Screening Level [2] (ug/L)
TPH	TPH-D	--	--	--	--	--	--	--	--	--	No Value [3]
	TPH-G	--	--	--	--	--	--	--	--	--	No Value [3]
	TPH-HO	--	--	--	--	--	--	--	--	--	No Value [3]
VOCs	1,2,4-Trimethylbenzene	--	--	--	--	--	--	--	--	--	No Value [3]
	1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	No Value [3]
	Benzene	23	2,000	--	--	--	--	1.6	--	16	1.6
	Chloroethane	--	--	--	--	--	--	--	--	--	No Value [3]
	Cumene	--	--	--	--	--	--	--	--	--	No Value [3]
	Ethylbenzene	--	6,900	--	--	--	--	270	31	130	31
	Ethylene dibromide (EDB)	--	--	--	--	--	--	--	--	--	No Value [3]
	n-Butylbenzene	--	--	--	--	--	--	--	--	--	No Value [3]
	n-Propylbenzene	--	--	--	--	--	--	--	--	--	No Value [3]
	p-Isopropyltoluene	--	--	--	--	--	--	--	--	--	No Value [3]
	sec-Butylbenzene	--	--	--	--	--	--	--	--	--	No Value [3]
	Tetrachloroethylene	100	500	--	--	--	--	7.1	2.9	29	2.9
	Toluene	--	19,000	--	--	--	--	410	130	520	130
	Trichloroethylene	4.9	120	--	--	--	--	0.86	0.70	7.0	0.70
	Xylenes, Total	--	--	--	--	--	--	--	--	--	No Value [3]
SVOCs/PAHs	3&4-Methylphenol coelution	--	--	--	--	--	--	--	--	--	No Value [3]
	Acenaphthene	--	640	--	--	--	--	110	30	90	30
	Acenaphthylene	--	--	--	--	--	--	--	--	--	No Value [3]
	Anthracene	--	26,000	--	--	--	--	4,600	100	400	100
	Benzo(ghi)perylene	--	--	--	--	--	--	--	--	--	No Value [3]
	Carbazole	--	--	--	--	--	--	--	--	--	No Value [3]
	Fluoranthene	--	90	--	--	--	--	16	6.0	20	6.0
	Fluorene	--	3,500	--	--	--	--	610	10.0	70	10
	Naphthalenes, Total	--	4,900	--	--	--	--	--	--	--	4,900
	Phenanthrene	--	--	--	--	--	--	--	--	--	No Value [3]
	Phenol	--	560,000	--	--	--	--	200,000	70,000	300,000	70,000
	Pyrene	--	2,600	--	--	--	--	460	8.0	30	8.0
	Total cPAHs TEF [4]	0.035	26	--	--	--	--	0.0021	0.000016	0.00013	0.015 [5]
Other Organics	Total PCBs [6]	0.00010	--	10	--	0.030	0.030	0.00017	0.0000070	0.000064	1.4 [5]
	Total dioxins/furans TEF [4]	1.0E-08	3.6E-07	--	--	--	--	6.4E-08	1.4E-08	5.1E-09	7.2E-06 [5]
Metals	Arsenic	0.098	18	69	69	36	36	10	0.14	0.14	5.0 [7]
	Barium	--	--	--	--	--	--	--	--	--	No Value [3]
	Chromium (total)	--	240,000	--	--	--	--	--	--	--	240,000
	Lead	--	--	210	210	8.1	8.1	--	--	--	8.1
	Selenium	--	2,700	290	290	71	71	480	200	4,200	71
	Silver	--	26,000	1.9	1.9	--	--	--	--	--	1.9

Notes:

--: No value exists for this constituent in the CLARC database (Ecology 2021).

All values are presented as two significant figures in standard notation, with the exception of total dioxins/furans in scientific notation.

Screening levels are shown only if the constituent was detected in one or more media during RI data gap activities. A screening level for total PCBs, which were not detected in any media during RI data gap activities, is also shown.

[1] Values from CLARC (Ecology 2021), unless otherwise noted.

[2] The screening level is the most stringent of the standard Method B surface water value for carcinogens, the standard Method B surface water value for non-carcinogens, the 173-210A WAC and CWA §304 acute marine aquatic life values, the 173-210A WAC and CWA §304 chronic marine aquatic life values, and the 173-210A WAC, CWA §304, and 40 CFR 131.45 human health marine water values, unless otherwise noted. In accordance with WAC 173-340-730(3)(c), some screening levels may need to be adjusted up to the practical quantitation limit (PQL) in the future (beyond what is shown in this table).

[3] A screening level cannot be calculated because no values exist in CLARC (Ecology 2021).

[4] Total cPAHs and total dioxins/furans screening levels were based on the toxicity of benzo(a)pyrene and 2,3,7,8-tetrachlorodibenzo-p-dioxin, respectively, in accordance with WAC 173-340-708(8). Total cPAHs and total dioxins/furans concentrations will be calculated using MTCA toxicity equivalence factors (TEFs).

[5] For current screening purposes, the lowest PQL in any sample was considered for a current PQL adjustment in accordance with WAC 173-340-730(5)(c)). The individual constituent PQLs and TEFs were used to calculate PQLs for total cPAHs and total dioxins/furans. The current screening level may need to be adjusted up further in the future in accordance with WAC 173-340-730(5)(c) since some samples had PQLs greater than this screening level. A non-detect result with a PQL greater than the screening level was not considered an exceedance.

[6] Total PCBs are the sum of the PCB aroclors.

[7] Adjusted to accepted groundwater background concentration of 5 ug/L per WAC 173-340-730(5)(c).

Table F-4: Calculation of Groundwater Screening Levels

Constituent Category	Detected Constituent	Groundwater as Drinking Water Screening Level [1] (ug/L)	Surface Water Screening Level [2] (ug/L)	Groundwater Screening Level [3] (ug/L)
TPH	TPH-D	500	No Value	500
	TPH-G	800	No Value	800
	TPH-HO	500	No Value	500
VOCs	1,2,4-Trimethylbenzene	80	No Value	80
	1,3,5-Trimethylbenzene	80	No Value	80
	Benzene	5.0	1.6	1.6
	Chloroethane	No Value	No Value	No Value
	Cumene	800	No Value	800
	Ethylbenzene	700	31	31
	Ethylene dibromide (EDB)	0.050	No Value	0.050
	n-Butylbenzene	400	No Value	400
	n-Propylbenzene	800	No Value	800
	p-Isopropyltoluene	No Value	No Value	No Value
	sec-Butylbenzene	800	No Value	800
	Tetrachloroethylene	5.0	2.9	2.9
	Toluene	640	130	130
	Trichloroethylene	4.0	0.70	0.70
	Xylenes, Total	1,600	No Value	1,600
SVOCs/PAHs	3&4-Methylphenol coelution	No Value	No Value	No Value
	Acenaphthene	960	30	30
	Acenaphthylene	No Value	No Value	No Value
	Anthracene	4,800	100	100
	Benzo(ghi)perylene	No Value	No Value	No Value
	Carbazole	No Value	No Value	No Value
	Fluoranthene	640	6.0	6.0
	Fluorene	640	10	10.0
	Naphthalenes, Total	160	4,900	160
	Phenanthrene	No Value	No Value	No Value
	Phenol	2,400	70,000	2,400
	Pyrene	480	8.0	8.0
	Total cPAHs TEF [4]	0.015	0.015	0.015
Other Organics	Total PCBs [5]	1.4	1.4	1.4
	Total dioxins/furans TEF [4]	7.2E-06	7.2E-06	7.2E-06
Metals	Arsenic	5.0	5.0	5.0
	Barium	2,000	No Value	2,000
	Chromium (total)	100	240,000	100
	Lead	15	8.1	8.1
	Selenium	50	71	50
	Silver	80	1.9	1.9

Notes:

All values are presented as two significant figures in standard notation, with the exception of total dioxins/furans in scientific notation.

Screening levels are shown only if the constituent was detected in one or more media during RI data gap activities. A screening level for total PCBs, which were not detected in any media during RI data gap activities, is also shown.

[1] See Table F-2 for calculation of groundwater as drinking water screening levels.

[2] See Table F-3 for calculation of surface water screening levels.

[3] The screening level is the most restrictive of the groundwater as drinking water and surface water screening levels.

[4] Total cPAHs and total dioxins/furans screening levels were based on the toxicity of benzo(a)pyrene and 2,3,7,8-tetrachlorodibenzo-p-dioxin, respectively, in accordance with WAC 173-340-708(8). Total cPAHs and total dioxins/furans concentrations were calculated using MTCA toxicity equivalence factors (TEFs).

[5] Total PCBs are the sum of the PCB aroclors.

Table F-5: Calculation of Soil-to-Groundwater Screening Levels

Constituent Category	Detected Constituent	Groundwater Screening Level [1] (ug/L)	Physiochemical Properties [2]				Soil-to-Groundwater Calculations		
			Henry's Law Constant (Hcc) (unitless)	Organic Carbon Partitioning Coefficient (Koc) (L/kg)	Aqueous Solubility (mg/L)	Distribution Coefficient (Kd) (L/kg)	Soil Concentration Protective of Groundwater Screening Level [3] (mg/kg)	Soil Saturation Concentration [4] (mg/kg)	Soil-to-Groundwater Screening Level [5] (mg/kg)
TPH	TPH-D	500	--	--	--	Not applicable	1,000,000 [6]	2,000 [7]	2,000
	TPH-G	800	--	--	--	Not applicable	30 [6]	1,000 [7]	30
	TPH-HO	500	--	--	--	Not applicable	1,000,000 [6]	2,000 [7]	2,000
VOCs	1,2,4-Trimethylbenzene	80	--	--	--	--	--	--	No Value [8]
	1,3,5-Trimethylbenzene	80	0.11	--	--	--	--	--	No Value [8]
	Benzene	1.6	0.13	62	1,750	0.062	0.0088	479	0.0088 [9]
	Chloroethane	No Value	--	--	--	--	--	--	No Value [8]
	Cumene	800	0.26	--	--	--	--	--	No Value [8]
	Ethylbenzene	31	0.16	204	169	0.20	0.26	71	0.26
	Ethylene Dibromide (EDB)	0.050	0.015	66	--	0.066	0.00027	--	0.00079 [9]
	n-Butylbenzene	400	0.24	--	--	--	--	--	No Value [8]
	n-Propylbenzene	800	0.20	--	--	--	--	--	No Value [8]
	p-isopropyltoluene	No Value	--	--	--	--	--	--	No Value [8]
	sec-Butylbenzene	800	0.26	--	--	--	--	--	No Value [8]
	Tetrachloroethylene	2.9	0.40	265	200	0.27	0.029	100	0.029
	Toluene	130	0.15	140	526	0.14	0.92	186	0.92
	Trichloroethylene	0.70	0.24	94	1,100	0.094	0.0044	346	0.020 [9]
	Xylenes, Total	1,600	0.14	233	171	0.23	14	76	14
SVOCs/PAHs	3&4-Methylphenol coelution	No Value	--	--	--	--	--	--	No Value [8]
	Acenaphthene	30	0.0021	4,898	4.2	4.9	3.1	22	3.1
	Acenaphthylene	No Value	--	--	--	--	--	--	No Value [8]
	Anthracene	100	0.00076	23,493	0.043	23	47	1.0	1.0
	Benzo(ghi)perylene	No Value	--	--	--	--	--	--	No Value [8]
	Carbazole	No Value	--	--	--	--	--	--	No Value [8]
	Fluoranthene	6.0	0.00017	49,096	0.21	49	5.9	10	5.9
	Fluorene	10	0.00086	7,707	2.0	7.7	1.6	16	1.6
	Naphthalenes, Total	160	0.0082	1,191	31	1.2	4.5	43	4.5
	Phenanthrene	No Value	--	--	--	--	--	--	No Value [8]
	Phenol	2,400	0.0082	1,191	31	1.2	67	43	43
	Pyrene	8.0	0.00011	67,992	0.14	68	11	9.2	9.2
	Total cPAHs TEF [10]	0.015	0.0000064	969,000	0.0016	969	0.29	1.6	0.29
Other Organics	Total PCBs [11]	1.4	0.017	309,000	0.70	309	8.7	216	8.7
	Total dioxins/furans TEF [10]	7.2E-06	0.0020	249,000	0.00020	249	3.6E-05	5.0E-02	3.6E-05
Metals	Arsenic	5.0	0.0	Not applicable	Not applicable	29	2.9	Not applicable	20 [12]
	Barium	2,000	0.0	Not applicable	Not applicable	41	1,648	Not applicable	1,600
	Chromium (total)	100	0.0	Not applicable	Not applicable	1,000	2,000	Not applicable	2,000
	Lead	8.1	0.0	Not applicable	Not applicable	10,000	1,620	Not applicable	1,600
	Selenium	50	0.0	Not applicable	Not applicable	5.0	5.2	Not applicable	5.2
	Silver	1.9	0.0	Not applicable	Not applicable	8.3	0.32	Not applicable	0.32

Notes:

--: No value exists for this constituent in the CLARC database (Ecology 2021) or no value can be calculated.

All screening levels (SLs) are presented as two significant figures in standard notation, with the exception of total dioxins/furans SLs in scientific notation.

SLs are shown only if the constituent was detected in one or more media during RI data gap activities. A SL for total PCBs, which were not detected in any media during RI data gap activities, is also shown.

[1] See Table F-4 for calculation of groundwater SLs.

[2] Values from CLARC (Ecology 2021), unless otherwise noted. Henry's Law Constant values are for 13 degrees Celsius, with the exception that values for total PCBs and total dioxins/furans are for 25 degrees Celsius.

[3] Calculated with the MTCA three-phase partitioning model using standard MTCA default inputs in WAC 173-340-747(4).

[4] Calculated by substituting aqueous solubility value for target groundwater concentration * dilution factor in MTCA Equation 747-1 (Ecology 2001a), unless otherwise noted.

[5] Most stringent of soil concentration protective of target groundwater concentration and soil saturation concentration. In accordance with WAC 173-340-740(5)(c), some SLs may need to be adjusted up to the practical quantitation limit (PQL) in the future (beyond what is shown in this table).

[6] SL in Ecology 2001a.

[7] Default residual soil saturation concentration in MTCA Table 747-5.

[8] A SL cannot be calculated because the applicable inputs to perform the calculation do not exist in CLARC (Ecology 2021). In addition, in the case of alkylbenzenes and non-carcinogenic PAHs, the constituents are components of petroleum products that are already accounted for in the TPH cleanup levels (e.g., see footnote 14(a) to MTCA Table 830-1).

[9] For current screening purposes, the lowest PQL in any sample was considered for a current PQL adjustment in accordance with WAC 173-340-740(5). In the case of benzene, the current SL was not adjusted since at least one sample had a PQL less than the current SL. In the case of EDB and trichloroethylene, the current SLs were adjusted up to the lowest PQL in any sample. The current SL may need to be adjusted up further in the future in accordance with WAC 173-340-740(5) since some samples had PQLs greater than this SL. A non-detect result with a PQL greater than the SL was not considered an exceedance.

[10] Total cPAHs and total dioxins/furans SLs were based on the toxicity of benzo(a)pyrene and 2,3,7,8-tetrachlorodibenzo-p-dioxin, respectively, in accordance with WAC 173-340-708(8). Total cPAHs and total dioxins/furans concentrations were calculated using MTCA toxicity equivalence factors (TEFs).

[11] Total PCBs are the sum of the PCB aroclors.

[12] Adjusted to accepted soil background concentration of 20 mg/kg per WAC 173-340-740(5)(c) (see MTCA Table 740-1 footnote b).

Table F-6: Calculation of Preliminary Groundwater Vapor Intrusion Screening Levels

Constituent Category	Detected Volatile Constituent	Unrestricted Land Use Scenario			Commercial/Industrial Land Use Scenario		
		Standard Method B Groundwater VI Screening Level for Carcinogens [1] (ug/L)	Standard Method B Groundwater VI Screening Level for Non-carcinogens [1] (ug/L)	Groundwater VI Screening Level for an Unrestricted Land Use Scenario [2] (ug/L)	Standard Method C Groundwater VI Screening Level for Carcinogens [1] (ug/L)	Standard Method C VI Groundwater Screening Level for Non-carcinogens [1] (ug/L)	Groundwater VI Screening Level for a Commercial/Industrial Land Use Scenario [2] (ug/L)
TPH	TPH-D [3]	--	--	500	--	--	500
	TPH-G [3]	--	--	800	--	--	800
VOCs	1,2,4-Trimethylbenzene	--	240	240	--	520	520
	1,3,5-Trimethylbenzene	--	170	170	--	370	370
	Benzene	2.4	100	2.4	24	220	24
	Chloroethane	--	15,000	15,000	--	32,000	32,000
	Cumene	--	910	910	--	2,000	2,000
	Ethylbenzene	--	2,800	2,800	--	6,100	6,100
	Ethylene Dibromide (EDB)	0.30	290	0.30	3.0	640	3.0
	n-Butylbenzene	--	--	--	--	--	--
	n-Propylbenzene		2,300	2,300	--	4,900	4,900
	p-isopropyltoluene	--	--	--	--	--	--
	sec-Butylbenzene	--	--	--	--	--	--
	Tetrachloroethylene	24	46	24	240	100	100
	Toluene	--	15,000	15,000	--	34,000	34,000
	Trichloroethylene	1.4	3.8	1.4	25	8.2	8.2
	Xylenes, Total	--	320	320	--	710	710
SVOCs/PAHs	Naphthalene	8.9	170	8.9	89	360	89

Notes:

--: No value exists for this constituent in the CLARC database (Ecology 2021).

All values are presented as two significant figures in standard notation.

Screening levels are shown only if a volatile constituent was detected in one or more media during RI data gap activities.

[1] Values from CLARC (Ecology 2021), unless otherwise noted.

[2] The screening level is the most stringent of the carcinogenic and non-carcinogenic values.

[3] Method A groundwater cleanup levels were used as conservative, preliminary screening levels for TPH-G and TPH-D since there are no TPH-G or TPH-D values in the CLARC database. As indicated in Ecology guidance, "the vast majority of sites that meet the Method A soil and groundwater cleanup levels will be protective of the PVI pathway both now and if a building is constructed in the future" (Ecology 2018).

[4] A screening level cannot be calculated because no values exist in CLARC (Ecology 2021).