King County Environmental Laboratory

WORK GROUP REPORT (wk02)

Dec 04 2006, 05:41 pm

Work Group: WG89202 (BL#679 PHPAHSOURCE) for Department: 7 - Organics, Trace

Created: 27-NOV-06 PrepDate: 27-NOV-06 Due: Operator: JG

Sample	Project Number	Project Description	Prey	C	Product	Matrix	Stat	UA	Workdate	*Duedate
L41104-1	423589-090-1	Lower Duwamish Phthalate Studies	S		PHPAHSOURCE	BLANK WTR	PREP	U	04-DEC-06	20-DEC-06
WG89202-1	SB		S		PHPAHSOURCE	BLANK WTR	PREP	U	27-NOV-06	
WG89202-2	MB		S		PHPAHSOURCE	BLANK WTR	PREP	U	27-NOV-06	

Comments:

L41104-1	blank water
WG89202-1	WG89202-2
WG89202-2	MB061127

KCSlip4 55309

SEA421637

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab QC Report - 12/05/06 09:46
Run ID: R117592 Workgroup: WG89202 (BL#679 PHPAHSOURCE)

SB:WG89202-1 MB:WG89202-2 Matrix: BLANK WTR Listtype: ORPHPAHSOURCE Method: 8270B Project: 423589-090-1 Pkey: STD
(Spike Blank, Method Blank)

Parameter	Mdl	Rdl	Units	MB Value	Truevalue	SB Value	% Rec.	Qual	LabLimit
Acenaphthylene	.01	.02	ug/L	<MDL	0.250	.121	48		10-150
Dimethyl Phthalate	.01	.02	ug/L	<MDL	0.250	.205	82		10-150
Fluorene	.01	.02	ug/L	<MDL	0.250	.176	70		10-150
Diethyl Phthalate	.015	.03	ug/L	<MDL	0.250	.242	97		10-150
Phenanthrene	.01	.02	ug/L	<MDL	0.250	.193	77		10-150
Anthracene	.01	.02	ug/L	<MDL	0.250	.171	68		10-150
Di-N-Butyl Phthalate	.01	.02	ug/L	.0263	0.250	.307	112		10-150
Pyrene	.01	.02	ug/L	<MDL	0.250	.238	95		10-150
Benzyl Butyl Phthalate	.01	.02	ug/L	.014	0.250	.337	129		10-150
Benzo(a)anthracene	.01	.02	ug/L	<MDL	0.250	.231	92		10-150
Chrysene	.01	.02	ug/L	<MDL	0.250	.229	92		10-150
Bis(2-Ethylhexyl)Phthalate	.01	.02	ug/L	.0695	0.250	.278	83		10-150
Benzo(b)fluoranthene	.015	.03	ug/L	<MDL	0.250	.201	81		10-150
Benzo(k)fluoranthene	.015	.03	ug/L	<MDL	0.250	.18	72		10-150
Benzo(a)pyrene	.015	.03	ug/L	<MDL	0.250	.167	67		10-150
Indeno(1,2,3-Cd)Pyrene	.015	.03	ug/L	<MDL	0.250	.128	51		10-150
Dibenzo(a,h)anthracene	.015	.03	ug/L	<MDL	0.250	.14	56		10-150
Benzo(g,h,i)perylene	.015	.03	ug/L	<MDL	0.250	.124	50		10-150

MB:WG89202-2 Matrix: BLANK WTR Listtype: ORPHPAHSOURCE Method: 8270B Project: 423589-090-1 Pkey: STD
(Method Blank)

Parameter	Mdl	Rdl	Units	MB Value	Qual
Naphthalene	.02	.04	ug/L	<MDL	
Acenaphthylene	.01	.02	ug/L	<MDL	
Dimethyl Phthalate	.01	.02	ug/L	<MDL	
Acenaphthene	.01	.02	ug/L	<MDL	
Fluorene	.01	.02	ug/L	<MDL	
Diethyl Phthalate	.015	.03	ug/L	<MDL	
Phenanthrene	.01	.02	ug/L	<MDL	
Anthracene	.01	.02	ug/L	<MDL	
Di-N-Butyl Phthalate	.01	.02	ug/L	.0263	B
Fluoranthene	.01	.02	ug/L	<MDL	
Pyrene	.01	.02	ug/L	<MDL	
Benzyl Butyl Phthalate	.01	.02	ug/L	.014	B
Benzo(a)anthracene	.01	.02	ug/L	<MDL	
Chrysene	.01	.02	ug/L	<MDL	
Bis(2-Ethylhexyl)Phthalate	.01	.02	ug/L	.0695	B
Di-N-Octyl Phthalate	.015	.03	ug/L	<MDL	
Benzo(b)fluoranthene	.015	.03	ug/L	<MDL	
Benzo(k)fluoranthene	.015	.03	ug/L	<MDL	
Benzo(a)pyrene	.015	.03	ug/L	<MDL	
Indeno(1,2,3-Cd)Pyrene	.015	.03	ug/L	<MDL	
Dibenzo(a,h)anthracene	.015	.03	ug/L	<MDL	
Benzo(g,h,i)perylene	.015	.03	ug/L	<MDL	
2-Methylnaphthalene	.015	.03	ug/L	<MDL	

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KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab QC Report - 12/06/06 09:46
Run ID: R117592 Workgroup: WG89202 (BL#679 PHPAHSOURCE)

Sample #	d14-Terphenyl	D6-Dimethyl Phtha-late	D8-Acenaphthylene	D10-Fluorene	D10-Anthracene	D10-Pyrene	D12-Benzo(a)pyren-e
(Lab Limits)	33-141	0-150	0-150	0-150	0-150	0-150	0-150
L41104-1	90	76	46	58	87	126	118
WG89202-1	87	103	70	86	90	119	102
WG89202-2	91	102	61	80	97	128	124

If the following parameters are reported, values in the RPD column are their Absolute Differences:
pH
pH, Field
Salinity
Salinity, Field
Sample Depth
Sample Temperature, Field

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LIQUID SAMPLE EXTRACTION RECORD FOR BNA ANALYSIS

TRACE ORGANICS LABORATORY

Acetone Lot# 064335

MeCL2 Lot # LR536 PHPAHSOURCE/PCBLL via SPE

QC BATCH NO.: BL#679

EPA SW-846 EXTRACTION METHOD:

CONT. L-L EPA 3520 SEP. FUNNEL EPA 3510

WORKGROUP NO.: {PHPAHSOURCE = WG89202 PCB Field Surr = 1217; PCBLL = WG89203 PCB Header Surr = 1216}

BNA SURROGATE SPIKE: 1315 + 1205 (DMCs)

BNA MATRIX SPIKE: 1246

PCB MS LL = 1261

Date/ Analyst	Sample Number	Project Number	Sample Description	coc	pH	Initial Amt. (ml)	Spike Amount (ul)	Vf (ml)	Conc. Anlyst	Turn Over Date	Comments	
JG 11/27/06	WG89202-1 WG89203-1	QC	SB		6	2000	1205-25µl 1315-100µl 1216-100µl 1217-100µl 1261-100µl 1246-50µl	1.0	JG	12/04/06	10 ml MeOH SPE Lot C03N14	10.0
	WG89202-2 WG89203-2	QC	MB		6	2000	1205-25µl 1315-100µl 1216-100µl 1217-100µl	1.0	JG	12/04/06	10 ml MeOH SPE Lot C03N14	10.0
	L41104-1	423589-090-001	BWR-BK-112006-112006		6	2000	1205-25µl 1315-100µl 1216-100µl 1217-100µl	1.0	JG	12/04/06	10 ml MeOH SPE Lot C03N14	11.0

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SEA421640

Batch: \\Orgizmo\EE\chem\6890n.i\061205.b

#	Smp. #	Injection Time	Wkgp. #	QC #	Project #	Sample Description	Matrix	Amount	DilFac	IS#2-RT	IS#2-Area	Method	Init Cali	Analyst
1	BLANK-1	05-DEC-2006 06:24	SDGa1658	SDGa16	421152	Solvent Blank + ISTD's	WATER	1000.000	1.0	6.695	289653	PHPAH.m	04-DEC-2006	Dave Fada
2	DFTPP-1	05-DEC-2006 07:05	SDGa2816	SDGa28	421152	SS#1254x50 DFTPP	NONE	0.000	1.0	12.734	105872	LVI_DFTP.m		Dave Fada
3	CCALI-1	05-DEC-2006 07:46	SDGa1658	SDGa16	421152	SS#1345E 250 ppb	WATER	1.000	1.0	6.695	327208	PHPAH.m	04-DEC-2006	Dave Fada
4	SURROGATE-	05-DEC-2006 08:32	SDGa1658	SDGa16	423589-09	Surrogate Check SS#1343	WATER	1000.000	1.0	6.695	338571	PHPAH.m	04-DEC-2006	Dave Fada
5	WG88926-2	05-DEC-2006 09:40	WG88926	BL#674	423589-09	Method Blank (10-31-2006)	WATER	2000.000	1.0	6.686	365191	PHPAH.m	04-DEC-2006	Dave Fada
6	WG89202-2	05-DEC-2006 10:21	WG89202	BL#679	423589-09	Method Blank (11-27-2006)	WATER	2000.000	1.0	6.686	360130	PHPAH.m	04-DEC-2006	Dave Fada
7	WG88926-1	05-DEC-2006 11:03	WG88926	BL#674	423589-09	Spike Blank (10-31-2006)	WATER	2000.000	1.0	6.686	374427	PHPAH.m	04-DEC-2006	Dave Fada
8	WG89202-1	05-DEC-2006 11:45	WG89202	BL#679	423589-09	Spike Blank Dup (11-27-2006)	WATER	2000.000	1.0	6.686	359960	PHPAH.m	04-DEC-2006	Dave Fada
9	L40901-1	05-DEC-2006 12:27	WG88926	BL#674	423589-09	Lower Duwamish Phthalate Stu	WATER	2000.000	1.0	6.686	370383	PHPAH.m	04-DEC-2006	Dave Fada
10	L41104-1	05-DEC-2006 13:08	WG89202	BL#679	423589-09	Lower Duwamish Phthalate Stu	WATER	2000.000	1.0	6.686	369476	PHPAH.m	04-DEC-2006	Dave Fada

Samples: 2 **QC Samples + Misc.:** 6 **ContinuingCals:** 1 **Tunes:** 1 **Calibrations:** 0

```
   Sequence Name: C:\msdchem\1\sequence\061205.S
         Comment:
        Operator: Dave Fada
       Data Path: C:\MSDCHEM\1\DATA\061205\
Instrument Control  Pre-Seq Cmd:
Data Analysis       Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis      Post-Seq Cmd:

   Method Sections To Run      On A Barcode Mismatch
    (X) Full Method              (X) Inject Anyway
    ( ) Reprocessing Only        ( ) Don't Inject

  ---------------------------------------------------------------------
  Line                    Sample Name/Misc Info
  ---------------------------------------------------------------------
  1   Type: Blank         Solvent Blank + ISTD's
      Vial: 1             Solvent Blank + ISTD's
      Method  : PHPAH.M
      Datafile: BLANK-1.D
      Bar Code: 421152            Samp Amt: 1000       Multiplr: 1
      Matrix            :Method Default   Sublist         :Method Default
      Spikelist         :Method Default   Re-inject       :No
  ---------------------------------------------------------------------
  2   Type: Tune          SS#1254x50 DFTPP
      Vial: 2             DFTPP 1.0 ug/ml 20 ul injection
      Method  : LVI_DFTP.M
      Datafile: DFTPP-1.D
      Bar Code: 421152            Samp Amt: 1          Multiplr: 1
      Matrix            :Method Default   Sublist         :Method Default
      Spikelist         :Method Default   Re-inject       :No
  ---------------------------------------------------------------------
  3   Type: Cont.Cal      SS#1345E 250 ppb
      Vial: 3             Phthalate/PAH 250 ppb 20 ul injection
      Method  : PHPAH.M
      Datafile: CCALI-1.D
      Bar Code: 421152            Samp Amt: 1          Multiplr: 1
      Matrix            :Method Default   Sublist         :Method Default
      Spikelist         :Method Default   Re-inject       :No
  ---------------------------------------------------------------------
  4   Type: Blank         Surrogate Check SS#1343
      Vial: 4             None
      Method  : PHPAH.M
      Datafile: SURROGATE-1.D
      Bar Code: 423589-090-1      Samp Amt: 1000       Multiplr: 1
      Matrix            :Liquid           Sublist         :Method Default
      Spikelist         :Method Default   Re-inject       :No
  ---------------------------------------------------------------------
  5   Type: Blank         Method Blank (10-31-2006)
      Vial: 5             WG88926;BL#674;SS#969x200;SS#1205/1315
      Method  : PHPAH.M
      Datafile: WG88926-2.D
      Bar Code: 423589-090-1      Samp Amt: 2000       Multiplr: 1
      Matrix            :Liquid           Sublist         :Method Default
      Spikelist         :Method Default   Re-inject       :No
  ---------------------------------------------------------------------
  6   Type: Blank         Method Blank (11-27-2006)
      Vial: 6             WG89202;BL#679;SS#969x200;SS#1205/1315
      Method  : PHPAH.M
      Datafile: WG89202-2.D
      Bar Code: 423589-090-1      Samp Amt: 2000       Multiplr: 1
      Matrix            :Liquid           Sublist         :Method Default
      Spikelist         :Method Default   Re-inject       :No
  ---------------------------------------------------------------------
  7   Type: SB            Spike Blank (10-31-2006)
      Vial: 7             WG88926;BL#674;SS#969x200;SS#1205/1315
      Method  : PHPAH.M
      Datafile: WG88926-1.D
      Bar Code: 423589-090-1      Samp Amt: 2000       Multiplr: 1
      Matrix            :Liquid           Sublist         :Method Default
      Spikelist         :Method Default   Re-inject       :No
  ---------------------------------------------------------------------
  8   Type: SB            Spike Blank Dup (11-27-2006)

  Sequence Last Modified  Tue Dec 05 09:35:36 2006        Page: 1
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```
    Vial: 8            WG89202;BL#679;SS#969x200;SS#1205/1315
    Method   : PHPAH.M
    Datafile: WG89202-1.D
    Bar Code: 423589-090-1      Samp Amt: 2000        Multiplr: 1
    Matrix            :Liquid            Sublist          :Method Default
    Spikelist         :Method Default    Re-inject        :No
-----------------------------------------------------------------------
9   Type: Sample       Lower Duwamish Phthalate Studies
    Vial: 9            WG88926;BL#674;SS#969x200;SS#1205/1315
    Method   : PHPAH.M
    Datafile: L40901-1.D
    Bar Code: 423589-090-1      Samp Amt: 2000        Multiplr: 1
    Matrix            :Liquid            Sublist          :Method Default
    Spikelist         :Method Default    Re-inject        :No
-----------------------------------------------------------------------
10  Type: Sample       Lower Duwamish Phthalate Studies
    Vial: 10           WG89202;BL#679;SS#969x200;SS#1205/1315
    Method   : PHPAH.M
    Datafile: L41104-1.D
    Bar Code: 423589-090-1      Samp Amt: 2000        Multiplr: 1
    Matrix            :Liquid            Sublist          :Method Default
    Spikelist         :Method Default    Re-inject        :No
-----------------------------------------------------------------------
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KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 12/11/06 09:30 - Data Source: ELD

Sample#: WG89202-1	Matrix: BLANK WTR	List Type:	ORPHPAHSOURCE		
	Project:	Run ID:	R117592	Col. Date:	
	Locator: SB	Work Group:	WG89202	Rec. Date:	27-NOV-06
	Site: NONE	QC Type:	SB	Due Date:	
	Method Code: 8270B				

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Naphthalene		ug/L	<MDL	.02	.04	
Acenaphthylene	.121	ug/L		.01	.02	
Dimethyl Phthalate	.205	ug/L		.01	.02	
Acenaphthene		ug/L	<MDL	.01	.02	
Fluorene	.176	ug/L		.01	.02	
Diethyl Phthalate	.242	ug/L		.015	.03	
Phenanthrene	.193	ug/L		.01	.02	
Anthracene	.171	ug/L		.01	.02	
Di-N-Butyl Phthalate	.307	ug/L		.01	.02	
Fluoranthene		ug/L	<MDL	.01	.02	
Pyrene	.238	ug/L		.01	.02	
Benzyl Butyl Phthalate	.337	ug/L		.01	.02	
Benzo(a)anthracene	.231	ug/L		.01	.02	
Chrysene	.229	ug/L		.01	.02	
Bis(2-Ethylhexyl)Phthalate	.278	ug/L		.01	.02	
Di-N-Octyl Phthalate		ug/L	<MDL	.015	.03	
Benzo(b)fluoranthene	.201	ug/L		.015	.03	
Benzo(k)fluoranthene	.18	ug/L		.015	.03	
Benzo(a)pyrene	.167	ug/L		.015	.03	
Indeno(1,2,3-Cd)Pyrene	.128	ug/L		.015	.03	
Dibenzo(a,h)anthracene	.14	ug/L		.015	.03	
Benzo(g,h,i)perylene	.124	ug/L		.015	.03	
2-Methylnaphthalene		ug/L	<MDL	.015	.03	
d14-Terphenyl	.544	ug/L		.01	.02	
D6-Dimethyl Phthalate	.257	ug/L		.01	.02	
D8-Acenaphthylene	.174	ug/L		.01	.02	
D10-Fluorene	.216	ug/L		.01	.02	
D10-Anthracene	.226	ug/L		.01	.02	
D10-Pyrene	.298	ug/L		.01	.02	
D12-Benzo(a)pyrene	.255	ug/L		.01	.02	
Amount Analyzed	2000	ml				
Standard Amount	1000	ml				
Dilution Factor	1	none				
Date Analyzed						05-DEC-06
Operator ID						Dave Fada
Porthandler File						/usr/users/seed2/METROS3/files/gcms/WG89202-1.rp
Instrument ID						6890n.1
Prep Date						27-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
d14-Terphenyl	87	33-141
D6-Dimethyl Phthalate	103	0-150
D8-Acenaphthylene	70	0-150
D10-Fluorene	86	0-150
D10-Anthracene	90	0-150
D10-Pyrene	119	0-150
D12-Benzo(a)pyrene	102	0-150

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SEA421644

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 12/11/06 09:30 - Data Source: ELD

Sample#: WG89202-2	Matrix: BLANK WTR	List Type:	ORPHPAHSOURCE		
	Project:	Run ID:	R117592	Col. Date:	
	Locator: MB	Work Group:	WG89202	Rec. Date:	27-NOV-06
	Site: NONE	QC Type:	MB	Due Date:	
	Method Code: 8270B				

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Naphthalene		ug/L	<MDL	.02	.04	
Acenaphthylene		ug/L	<MDL	.01	.02	
Dimethyl Phthalate		ug/L	<MDL	.01	.02	
Acenaphthene		ug/L	<MDL	.01	.02	
Fluorene		ug/L	<MDL	.01	.02	
Diethyl Phthalate		ug/L	<MDL	.015	.03	
Phenanthrene		ug/L	<MDL	.01	.02	
Anthracene		ug/L	<MDL	.01	.02	
Di-N-Butyl Phthalate	.0263	ug/L	B	.01	.02	
Fluoranthene		ug/L	<MDL	.01	.02	
Pyrene		ug/L	<MDL	.01	.02	
Benzyl Butyl Phthalate	.014	ug/L	<RDL,B	.01	.02	
Benzo(a)anthracene		ug/L	<MDL	.01	.02	
Chrysene		ug/L	<MDL	.01	.02	
Bis(2-Ethylhexyl)Phthalate	.0695	ug/L	B	.01	.02	
Di-N-Octyl Phthalate		ug/L	<MDL	.015	.03	
Benzo(b)fluoranthene		ug/L	<MDL	.015	.03	
Benzo(k)fluoranthene		ug/L	<MDL	.015	.03	
Benzo(a)pyrene		ug/L	<MDL	.015	.03	
Indeno(1,2,3-Cd)Pyrene		ug/L	<MDL	.015	.03	
Dibenzo(a,h)anthracene		ug/L	<MDL	.015	.03	
Benzo(g,h,i)perylene		ug/L	<MDL	.015	.03	
2-Methylnaphthalene		ug/L	<MDL	.015	.03	
d14-Terphenyl	.572	ug/L		.01	.02	
D6-Dimethyl Phthalate	.255	ug/L		.01	.02	
D8-Acenaphthylene	.159	ug/L		.01	.02	
D10-Fluorene	.199	ug/L		.01	.02	
D10-Anthracene	.241	ug/L		.01	.02	
D10-Pyrene	.32	ug/L		.01	.02	
D12-Benzo(a)pyrene	.311	ug/L		.01	.02	
Amount Analyzed	2000	ml				
Standard Amount	1000	ml				
Dilution Factor	1	none				
Date Analyzed						05-DEC-06
Operator ID						Dave Fada
Porthandler File						/usr/users/seed2/METROS3/files/gcms/WG89202-2.rp
Instrument ID						6890n.i
Prep Date						27-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
d14-Terphenyl	91	33-141
D6-Dimethyl Phthalate	102	0-150
D8-Acenaphthylene	63	0-150
D10-Fluorene	80	0-150
D10-Anthracene	97	0-150
D10-Pyrene	128	0-150
D12-Benzo(a)pyrene	124	0-150

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SEA421645

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 12/11/06 09:30 - Data Source: ELD

Sample#: L41104-1	Matrix:	BLANK WTR	List Type:	ORPHPAHSOURCE	
	Project:	423589-090-1	Run ID:	R117592	Col. Date: 20-NOV-06
	Locator:	BWR	Work Group:	WG89202	Rec. Date: 20-NOV-06
	Site:	METRO	QC Type:		Due Date: 20-DEC-06
	Method Code:	8270B			

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Naphthalene		ug/L	<MDL	.02	.04	
Acenaphthylene		ug/L	<MDL	.01	.02	
Dimethyl Phthalate		ug/L	<MDL	.01	.02	
Acenaphthene		ug/L	<MDL	.01	.02	
Fluorene		ug/L	<MDL	.01	.02	
Diethyl Phthalate		ug/L	<MDL	.015	.03	
Phenanthrene		ug/L	<MDL	.01	.02	
Anthracene		ug/L	<MDL	.01	.02	
Di-N-Butyl Phthalate	.0386	ug/L	B	.01	.02	
Fluoranthene		ug/L	<MDL	.01	.02	
Pyrene		ug/L	<MDL	.01	.02	
Benzyl Butyl Phthalate	.014	ug/L	<RDL,B	.01	.02	
Benzo(a)anthracene		ug/L	<MDL	.01	.02	
Chrysene		ug/L	<MDL	.01	.02	
Bis(2-Ethylhexyl)Phthalate	.0544	ug/L	B	.01	.02	
Di-N-Octyl Phthalate		ug/L	<MDL	.015	.03	
Benzo(b)fluoranthene		ug/L	<MDL	.015	.03	
Benzo(k)fluoranthene		ug/L	<MDL	.015	.03	
Benzo(a)pyrene		ug/L	<MDL	.015	.03	
Indeno(1,2,3-Cd)Pyrene		ug/L	<MDL	.015	.03	
Dibenzo(a,h)anthracene		ug/L	<MDL	.015	.03	
Benzo(g,h,i)perylene		ug/L	<MDL	.015	.03	
2-Methylnaphthalene		ug/L	<MDL	.015	.03	
d14-Terphenyl	.561	ug/L		.01	.02	
D6-Dimethyl Phthalate	.19	ug/L		.01	.02	
D8-Acenaphthylene	.115	ug/L		.01	.02	
D10-Fluorene	.145	ug/L		.01	.02	
D10-Anthracene	.218	ug/L		.01	.02	
D10-Pyrene	.314	ug/L		.01	.02	
D12-Benzo(a)pyrene	.296	ug/L		.01	.02	

Amount Analyzed	2000	ml	
Standard Amount	1000	ml	
Dilution Factor	1	none	
Date Analyzed			05-DEC-06
Operator ID			Dave Fada
Porthandler File			/usr/users/seed2/METROS3/files/gcms/L41104-1.rp
Instrument ID			6890n i
Prep Date			27-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
d14-Terphenyl	90	33-141
D6-Dimethyl Phthalate	76	0-150
D8-Acenaphthylene	46	0-150
D10-Fluorene	58	0-150
D10-Anthracene	87	0-150
D10-Pyrene	126	0-150
D12-Benzo(a)pyrene	118	0-150

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SEA421646

King County Environmental Laboratory

WORK GROUP REPORT (wk02)

Dec 07 2006, 05:39 pm

Work Group: WG89203 (BL#679 PCBLL) for Department: 7 - Organics, Trace

Created: 27-NOV-06 PrepDate: 27-NOV-06 Due: Operator: JG

Sample	Project Number	Project Description	Prey C	Product	Matrix	Stat	UA	Workdate	Duedate
L41104-1	423589-090-1	Lower Duwamish Phthalate Studies	S	PCBLL	BLANK WTR	PREP	U	27-NOV-06	20-DEC-06
WG89203-1	SB		S	PCBLL	BLANK WTR	PREP	U	27-NOV-06	
WG89203-2	MB		S	PCBLL	BLANK WTR	PREP	U	27-NOV-06	

Comments:

L41104-1	blank water
WG89203-1	WG89203-2
WG89203-2	MB061127

KCSlip4 55319

SEA421647

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab QC Report - 12/11/06 11:46
Run ID: R117711 Workgroup: WG89203 (BL#679 PCBLL)

SB:WG89203-1 MB:WG89203-2 Matrix: BLANK WTR Listtype: ORPCBLL Method: EPA 8081A/8082 (7-3-03-002) Project: Pkey: STD
(Spike Blank, Method Blank)

Parameter	Mdl	Rdl	Units	MB Value	Truevalue	SB Value	% Rec	Qual	LabLimit
Aroclor 1016	.025	.05	ug/L	<MDL	0.150	.133	88		65-129
Aroclor 1260	.025	.05	ug/L	<MDL	0.150	.11	73		72-128

MB:WG89203-2 Matrix: BLANK WTR Listtype: ORPCBLL Method: EPA 8081A/8082 (7-3-03-002) Project: Pkey: STD
(Method Blank)

Parameter	Mdl	Rdl	Units	MB Value	Qual
Aroclor 1016	.025	.05	ug/L	<MDL	
Aroclor 1221	.025	.05	ug/L	<MDL	
Aroclor 1232	.025	.05	ug/L	<MDL	
Aroclor 1242	.025	.05	ug/L	<MDL	
Aroclor 1248	.025	.05	ug/L	<MDL	
Aroclor 1254	.025	.05	ug/L	<MDL	
Aroclor 1260	.025	.05	ug/L	<MDL	

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SEA421648

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab QC Report - 12/11/06 11:46
Run ID: R117711 Workgroup: WG89203 (BL#679 PCBLL)

Sample # (Lab Limits)	Decachlorobipheny-1 12-158	2,4,5,6-Tetrachloro-m-xylene 10-118
L41104-1	99	20
WG89203-1	93	30
WG89203-2	96	26

If the following parameters are reported, values in the RPD column are their Absolute Differences:

pH
pH, Field
Salinity
Salinity, Field
Sample Depth
Sample Temperature, Field

KCSlip4 55321
SEA421649

Acetone Lot# 064335

Rand 15 - Rinse Blank

LIQUID SAMPLE EXTRACTION RECORD FOR BNA ANALYSIS
TRACE ORGANICS LABORATORY

MeCL2 Lot # UR536

QC BATCH NO.: BL#679

PHPAHSOURCE / PCBLL via SPE

EPA SW-846 EXTRACTION METHOD:

CONT. L-L EPA 3520 SEP. FUNNEL EPA 3510

WORKGROUP NO.: { PHPAHSOURCE = WG89202 PCB Field Surr = 1217; PCBLL = WG89203 PCB Header Surr = 1216 }

BNA SURROGATE SPIKE: 1315 + 1205 (DMCs)

BNA MATRIX SPIKE: 1246

PCB MS LL = 1261

Date/ Analyst	Sample Number	Project Number	Sample Description	coc	pH	Initial Amt. (ml)	Spike Amount (ul)	Vf (ml)	Conc. Anlyst	Turn Over Date	Comments	
JG 11/27/06	WG89202-1 WG89203-1	QC	SB		6	2000	1205-25ul 1315-100ul 1216-100ul 1217-100ul 1261-100ul 1246-50ul	1.0	JG JG	12/01/06 12/03/06	10 ml MeOH SPE Lot C03N14	10.0
	WG89202-2 WG89203-2	QC	MB		6	2000	1205-25ul 1315-100ul 1216-100ul 1217-100ul	1.0	JG JG	12/01/06 12/03/06	10 ml MeOH SPE Lot C03N14	10.0
	L41104-1	423589-090-001	BWR-BK-112006-1120006		6	2000	1205-25ul 1315-100ul 1216-100ul 1217-100ul	1.0	JG JG	12/01/06 12/07/06	10 ml MeOH SPE Lot C03N14	11.0

For all samples in WG89203, split for PCBLL analysis turned over 12/07/06 after cleanups (alumina and H_2SO_4 - both on 12/07/06)

~~For WG8920~~ JG 12/07/06

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SEA421650

Data File Name	Sample Name	Date Acquired	Vial Numb	Sample Amount	Sample Multiplie	Isodrin (RT)	Isodrin (Height)	Leptophos (RT)	Leptophos (Height)	Isodrin #2 (RT)	Isodrin #2 (Height)	Leptoph (RT)	Leptophos #2 (Height)	Misc Info	Data File Path
COND-01.D	conditioner	12/8/2006 9:32	1	0	1										S:\MSDCHEM\2\DATA\061208\
BLANK-01.D	blank	12/8/2006 10:09	2	0	1										S:\MSDCHEM\2\DATA\061208\
PCB-01.D	1218D 1016/1260 500/50	12/8/2006 10:46	3	0	1	14.249	136166915	22.462	261195851	12.944	243406238	19.346	374912298		S:\MSDCHEM\2\DATA\061208\
PCB-02.D	1209.2 1248 500/50	12/8/2006 11:22	4	0	1	14.249	131408907	22.462	249918558	12.944	259225327	19.345	360394940		S:\MSDCHEM\2\DATA\061208\
PCB-03.D	1210.1 1254 500/50	12/8/2006 11:59	5	0	1	14.248	115926520	22.461	213483030	12.943	241660892	19.343	376181753		S:\MSDCHEM\2\DATA\061208\
PCB-04.D	1206.1 1221 500/50	12/8/2006 12:36	6	0	1	14.248	124311953	22.460	226321118	12.943	251636681	19.344	383473141		S:\MSDCHEM\2\DATA\061208\
PCB-05.D	1207.1 1232 500/50	12/8/2006 13:12	7	0	1	14.249	134435814	22.462	264236699	12.943	258594226	19.345	407819481		S:\MSDCHEM\2\DATA\061208\
PCB-06.D	1208.1 1242 500/50	12/8/2006 13:49	8	0	1	14.248	130927345	22.462	255734804	12.942	276239503	19.343	422246419		S:\MSDCHEM\2\DATA\061208\
WG69203-1.D	SB	12/8/2006 14:26	9	2000	1	14.248	118841541	22.461	237218817	12.944	222388531	19.346	348069991	BL679 PCBLL DUWAMISH PHTHALATES	S:\MSDCHEM\2\DATA\061208\
WG69203-2.D	MB	12/8/2006 15:02	10	2000	1	14.250	118976460	22.464	237273542	12.944	227259468	19.345	367586563	BL679 PCBLL DUWAMISH PHTHALATES	S:\MSDCHEM\2\DATA\061208\
L41104-1.D	L41104-1	12/8/2006 15:39	11	2000	1	14.249	116948249	22.462	222030135	12.944	226604286	19.346	370384783	BL679 PCBLL DUWAMISH PHTHALATES	S:\MSDCHEM\2\DATA\061208\
WG68927-1.D	SB	12/8/2006 16:16	12	2000	1	14.249	109583061	22.463	212495856	12.944	211875800	19.345	322937652	BL674 PCBLL DUWAMISH PHTHALATES	S:\MSDCHEM\2\DATA\061208\
WG68927-2.D	MB	12/8/2006 16:52	13	2000	1	14.249	123441256	22.463	245391999	12.943	231455326	19.344	356856687	BL674 PCBLL DUWAMISH PHTHALATES	S:\MSDCHEM\2\DATA\061208\
L40901-1.D	L40901-1	12/8/2006 17:29	14	2000	1	14.247	118349736	22.462	240522918	12.942	232206791	19.342	374134439	BL674 PCBLL DUWAMISH PHTHALATES	S:\MSDCHEM\2\DATA\061208\
PCB-07.D	1218D 1016/1260 500/50	12/8/2006 18:06	3	0	1	14.249	137210935	22.464	275661527	12.943	269352444	19.345	428487945		S:\MSDCHEM\2\DATA\061208\
PCB-08.D	1209.2 1248 500/50	12/8/2006 18:42	4	0	1	14.249	140300123	22.463	279039532	12.944	272948537	19.346	413023545		S:\MSDCHEM\2\DATA\061208\
					Ave.	14.249	125487794	22.462	244323028	12.943	244632298	19.345	380471403		
					Std. Dev.	0.001	9511076	0.001	21359495	0.001	20384579	0.001	29273588		
					%RSD		8%		9%		8%		8%		

KCSlip4 55323
SEA421651

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 12/11/06 11:49 - Data Source: ELD

Sample#: WG89203-1	Matrix:	BLANK WTR	List Type:	ORPCBLL	
	Project:		Run ID:	R117711	Col. Date:
	Locator:	SB	Work Group:	WG89203	Rec. Date: 27-NOV-06
	Site:	NONE	QC Type:	SB	Due Date:
	Method Code:	EPA 8081A/8082 (7-3-03-002)			

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Aroclor 1016	.133	ug/L		.025	.05	
Aroclor 1221		ug/L	<MDL	.025	.05	
Aroclor 1232		ug/L	<MDL	.025	.05	
Aroclor 1242		ug/L	<MDL	.025	.05	
Aroclor 1248		ug/L	<MDL	.025	.05	
Aroclor 1254		ug/L	<MDL	.025	.05	
Aroclor 1260	.11	ug/L		.025	.05	
Decachlorobiphenyl	.0467	ug/L		.0025	.005	
2,4,5,6-Tetrachloro-m-xylene	.0151	ug/L		.0025	.005	
Amount Analyzed	2000	ml				
Standard Amount	1	ml				
Dilution Factor	1	none				
Date Analyzed						08-DEC-06
Operator ID						JSP
Porthandler File						/usr/users/seed2/METROS1/files/gc/wg89203.txt
Instrument ID						HP6890ECD-G
Prep Date						27-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
Decachlorobiphenyl	93	12-158
2,4,5,6-Tetrachloro-m-xylene	30	10-118

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 12/11/06 11:49 - Data Source: ELD

Sample#: WG89203-2	Matrix:	BLANK WTR	List Type:	ORPCBLL	
	Project:		Run ID:	R117711	Col. Date:
	Locator:	MB	Work Group:	WG89203	Rec. Date: 27-NOV-06
	Site:	NONE	QC Type:	MB	Due Date:
	Method Code:	EPA 8081A/8082 (7-3-03-002)			

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Aroclor 1016		ug/L	<MDL	.025	.05	
Aroclor 1221		ug/L	<MDL	.025	.05	
Aroclor 1232		ug/L	<MDL	.025	.05	
Aroclor 1242		ug/L	<MDL	.025	.05	
Aroclor 1248		ug/L	<MDL	.025	.05	
Aroclor 1254		ug/L	<MDL	.025	.05	
Aroclor 1260		ug/L	<MDL	.025	.05	
Decachlorobiphenyl	.0482	ug/L		.0025	.005	
2,4,5,6-Tetrachloro-m-xylene	.0129	ug/L		.0025	.005	
Amount Analyzed	2000	ml				
Standard Amount	1	ml				
Dilution Factor	1	none				
Date Analyzed						08-DEC-06
Operator ID						JSF
Porthandler File						/usr/users/seed2/METROS3/files/gc/wg89203.txt
Instrument ID						HP6890ECD-G
Prep Date						27-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
Decachlorobiphenyl	96	12-158
2,4,5,6-Tetrachloro-m-xylene	26	10-118

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SEA421653

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 12/11/06 11:49 - Data Source: ELD

Sample#: L41104-1	Matrix:	BLANK WTR	List Type:	ORPCBLL	
	Project:	423589-090-1	Run ID:	R117711	Col. Date: 20-NOV-06
	Locator:	BWR	Work Group:	WG89203	Rec. Date: 20-NOV-06
	Site:	METRO	QC Type:		Due Date: 20-DEC-06
	Method Code:	EPA 8081A/8082 (7-3-03-002)			

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Aroclor 1016		ug/L	<MDL	.025	.05	
Aroclor 1221		ug/L	<MDL	.025	.05	
Aroclor 1232		ug/L	<MDL	.025	.05	
Aroclor 1242		ug/L	<MDL	.025	.05	
Aroclor 1248		ug/L	<MDL	.025	.05	
Aroclor 1254		ug/L	<MDL	.025	.05	
Aroclor 1260		ug/L	<MDL	.025	.05	
Decachlorobiphenyl	.0496	ug/L		.0025	.005	
2,4,5,6-Tetrachloro-m-xylene	.0102	ug/L		.0025	.005	
Amount Analyzed	2000	ml				
Standard Amount	1	ml				
Dilution Factor	1	none				
Date Analyzed						08-DEC-06
Operator ID						JSF
Porthandler File						/usr/users/seed2/METROS3/files/gc/wg89203.txt
Instrument ID						HP6890ECD-G
Prep Date						27-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
Decachlorobiphenyl	99	12-158
2,4,5,6-Tetrachloro-m-xylene	20	10-118

Trace Organics Data Anomaly Form

Date(s) Occurred: *12-8-06*

WG #(s): *WG88927, WG89203*

☒ **All samples in WKGP(s)** or ☐ **Sample #(s):**

Project #(s): *423589*

Matrix: ☒ **Liquid** ☐ **Solid** ☐ **Air** ☐ **Tissue** ☐ **Calibration** ☐ **Other:**

I. Analysis/Extraction

☐ BNA	☐ BNALL	☐ EDC	☐ EDC-LVI
☐ CLPESTPCB	☐ PEST	☒ PCB	☐ OPPEST
☐ VOA-GCMS	☐ NWTPH-GX	☐ NWTPH-DX	☐ NWTPH-HCID
☐ BUTYL TIN	☐ AIRTOX	☐ AIR-SULFUR	
☐ Other:			
☐ Subcontracted:			

II. Instrument

GC/ICP/MS: ☐ P

GC/MS: ☐ D ☐ E ☐ J ☐ K ☐ L ☐ M ☐ N

GC: ☐ F ECD ☒ G ECD ☐ H FID ☐ H OI4450PID/FID ☐ I FID

Extraction/Cleanup: ☐ PFE ☐ GPC ☐ Other:

III. Type of Sample/Analytical Anomaly

☐ Values Outside of Control Limits:

[1] ☐ Blank Contamination	[8] ☐ Surrogate Spike Recoveries
[2] ☐ SB/SBD Spike Recoveries	[9] ☐ SB/SBD RPD
[3] ☐ MS/MSD Spike Recoveries	[10] ☐ MS/MSD RPD
[4] ☐ LCS/SRM Recoveries	[11] ☐ Sample/LD RPD
[5] ☐ Initial Calibration	[12] ☒ Continuing Calibration Checks
[6] ☐ Performance Checks	[13] ☐ Tuning Criteria
[7] ☐ ISTD % Differences	

[14] ☐ Holding time exceeded by:
[15] ☐ Insufficient sample amount.
[16] ☐ Inappropriate storage, container or preservation.
[17] ☒ Other

Anomaly Description: *12. PCB-01,03 have surrogate recoveries for DCB that are <85% on the front column. 17. WG89203-1 (SB) had many interfering peaks that obscured 3 of the 5 congeners normally used to quantitate aroclor 1016 on the front column.*

IV. Type of Project Anomaly

☐ SAP/Work Plan specified MDLs not met.
☐ SAP/Work Plan specified QC frequency or QC type not met.
☐ SAP/Work Plan specified methodology not used.
☐ Sample exceeds regulatory and/or hazardous waste limits.
☐ Sample data results are unusual or inconsistent with expected results.
☐ Other

Anomaly Description:

V. Corrective Action Taken

☐ Sample(s) re-analyzed
☐ Sample(s) re-prepared and re-analyzed
☒ Sample(s) reported "AS IS"
☐ Data qualified with the following flags:
☐ Other

Corrective Action Description: *12. All surrogate recoveries are from the back column. All are within range. 17. All responses are taken from the back column. The front column will be used as confirmatory.*

VI. Potential Effects on Data Quality:

☒ None; corrective action entirely corrected anomaly (explanation optional):

☐ Potential effect explanation (explanation mandatory):

	Signatures	Signature Dates
Reported By: *JSF*		12-11-06
Reviewer: *Gretchen Nerlin*		12/12/06
Supervisor: *Dana Walker*		12/12/06
QA Officer: *Colin Elliott* (For QA1 only)		
cc: LPM:		

A/m
1/8/07
MS

King County Environmental Laboratory

WORK GROUP REPORT (wk02)

Nov 28 2006, 11:33 am

Work Group: WG89210 (PHPAH WIPE) for Department: 7 - Organics, Trace

Created: 28-NOV-06 PrepDate: 28-NOV-06 Due: Operator: MCD

Sample	Project Number	Project Description	FKey	C	Product	Matrix	Stat	UA	Workdate	Duedate
L40900-10	423589-090-1	Lower Duwamish Phthalate Studies	S		PHPAHWIPE	OTHR SOLID	WKGP	U	15-NOV-06	01-DEC-06
L40900-6	423589-090-1	Lower Duwamish Phthalate Studies	S		PHPAHWIPE	OTHR SOLID	WKGP	U	15-NOV-06	01-DEC-06
L40900-7	423589-090-1	Lower Duwamish Phthalate Studies	S		PHPAHWIPE	OTHR SOLID	WKGP	U	15-NOV-06	01-DEC-06
L40900-8	423589-090-1	Lower Duwamish Phthalate Studies	S		PHPAHWIPE	OTHR SOLID	WKGP	U	15-NOV-06	01-DEC-06
L40900-9	423589-090-1	Lower Duwamish Phthalate Studies	S		PHPAHWIPE	OTHR SOLID	WKGP	U	15-NOV-06	01-DEC-06
L41104-2	423589-090-1	Lower Duwamish Phthalate Studies	S		PHPAHWIPE	OTHR SOLID	WKGP	U	15-NOV-06	01-DEC-06
WG89210-1	MB		S		PHPAHWIPE	OTHR SOLID	WKGP	U	04-DEC-06	20-DEC-06
			S		PHPAHWIPE	OTHR SOLID	WKGP	U	28-NOV-06	

Comments:

L40900-10	wipes
L40900-6	wipes
L40900-7	wipes
L40900-8	wipes
L40900-9	wipes
L41104-2	wipe blank
WG89210-1	FILTER PAPER BLANK

KCSlip4 55329

SEA421657

SOLID AND TISSUE SAMPLE EXTRACTION RECORD FOR BNA ANALYSIS
TRACE ORGANICS LABORATORY

QC BATCH NO.: BS 1:1 Acetone:MeCl2 WORKGROUP NO.:

EPA SW-846 EXTRACTION METHOD: BNA SURROGATE SPIKE I.D.#: Coprostanol:

SONICATION EPA 3550 SOXHLET EPA 3540 BNA MATRIX SPIKE I.D.#: Caffeine:

Date/ Analyst	Sample Number	Project Number	Sample Description	coc	Init. Amt (g)	Spike Amount (uL)	Vf (mL)	Clean ups (GPC)	Conc. Anal.	Turn Over Date	Comments
	WG89210-1		Extraction BLANK			50 BNA	1mL	AL	MD	11/28/02	samples conc
	WG89211-1					25 PCB					to 1mL split
Doubled Spiked ? →	L41104-2		Funnel BLANK wipe								for BNA/PCB
	L40900-6		Funnel wipes								0.5 BNA
	-7										0.5 PCB
	-8										
	-9										
	-10										

(1) filter paper rinsed with MeCl2

(2) Funnel wiped X 2 with MeCl2 soaked filter paper

(3) BNA/PCB surrogate added / samples extracted X3 with 50 mls MeCl2 on sonic bath and conc to 1.0 mL

(4) 0.5 BNA analysis / 0.5 exchanged to hex for AL clean up and conc to 0.5 mL for PCB analysis

KCSlip4 55330
SEA421658

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab QC Report - 01/02/07 01:28
Run ID: R118046 Workgroup: WG89210 (PHPAH WIPE)

N/M 1/8/07

MB:WG89210-1 Matrix: OTHR SOLID Listtype: ORPHPAHWIPE Method: 8270D-WIPETEST Project: 423589-090-1 Pkey: STD
(Method Blank)

Parameter	Mdl	Rdl	Units	MB Value	Qual
Naphthalene	.02	.04	ug	<MDL	
Acenaphthylene	.01	.02	ug	<MDL	
Dimethyl Phthalate	.05	.1	ug	<MDL	
Acenaphthene	.01	.02	ug	<MDL	
Fluorene	.01	.02	ug	<MDL	
Diethyl Phthalate	.05	.1	ug	<MDL	
Phenanthrene	.01	.02	ug	<MDL	
Anthracene	.01	.02	ug	<MDL	
Di-N-Butyl Phthalate	.05	.1	ug	.259	B
Fluoranthene	.01	.02	ug	<MDL	
Pyrene	.01	.02	ug	<MDL	
Benzyl Butyl Phthalate	.05	.1	ug	.292	B
Benzo(a)anthracene	.01	.02	ug	<MDL	
Chrysene	.01	.02	ug	<MDL	
Bis(2-Ethylhexyl)Phthalate	.05	.1	ug	2.63	B
Di-N-Octyl Phthalate	.05	.1	ug	<MDL	
Benzo(b)fluoranthene	.02	.04	ug	<MDL	
Benzo(k)fluoranthene	.02	.04	ug	<MDL	
Benzo(a)pyrene	.02	.04	ug	<MDL	
Indeno(1,2,3-Cd)Pyrene	.02	.04	ug	<MDL	
Dibenzo(a,h)anthracene	.02	.04	ug	<MDL	
Benzo(g,h,i)perylene	.02	.04	ug	<MDL	
2-Methylnaphthalene	.01	.02	ug	<MDL	

X 3 = 0.777
X 3 = 0.876
X 3 = 7.890

BLANK X 3
Rule for phthalates
"B" Flag

KCSlip4 55331
SEA421659

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab QC Report - 01/02/07 01:28
Run ID: R118046 Workgroup: WG89210 (PHPAH WIPE)

Sample #	2-Fluorobiphenyl	d14-Terphenyl
(Lab Limits)	30-115	18-137
L40900-6	24 *	24
L40900-7	90	118
L40900-8	60	74
L40900-9	107	122
L40900-10	87	101
L41104-2	87	97
WG89210-1	108	117

If the following parameters are reported, values in the RPD column are their Absolute Differences:

pH
pH, Field
Salinity
Salinity, Field
Sample Depth
Sample Temperature, Field

KCSlip4 55332
SEA421660

Trace Organics Data Anomaly Form

Date(s) Occurred: *06/11/29, 06/11/30*

WG #(s): *WG89210*

☒ **All samples in WKGP(s)** **or** ☐ **Sample #(s):**

Project #(s): *423589-090-001*

Matrix: ☐ **Liquid** ☐ **Solid** ☐ **Air** ☐ **Tissue** ☐ **Calibration** ☒ **Other:** *WIPES*

I. Analysis/Extraction

☐ BNA ☐ BNALL ☐ EDC ☐ EDC-LVI
☐ CLPESTPCB ☐ PEST ☐ PCB ☐ OPPEST
☐ VOA-GCMS ☐ NWTPH-GX ☐ NWTPH-DX ☐ NWTPH-HCID
☐ BUTYL TIN ☐ AIRTOX ☐ AIR-SULFUR
☒ Other: *PHPAHWIPE*
☐ Subcontracted:

II. Instrument

GC/ICP/MS: ☐ P
GC/MS: ☐ D ☐ E ☒ J ☐ K ☐ L ☐ M ☐ N
GC: ☐ F ECD ☐ G ECD ☐ H FID ☐ H OI4450PID/FID
☐ I FID
Extraction/Cleanup: ☐ PFE ☐ GPC
☐ Other:

III. Type of Sample/Analytical Anomaly

☒ Values Outside of Control Limits:

1 ☒ Blank Contamination
2 ☐ SB/SBD Spike Recoveries
3 ☐ MS/MSD Spike Recoveries
4 ☐ LCS/SRM Recoveries
5 ☐ Initial Calibration
6 ☐ Performance Checks
7 ☒ ISTD % Differences
8 ☒ Surrogate Spike Recoveries
9 ☐ SB/SBD RPD
10 ☐ MS/MSD RPD
11 ☐ Sample/LD RPD
12 ☐ Continuing Calibration Checks
13 ☐ Tuning Criteria

14 ☐ Holding time exceeded by:
15 ☐ Insufficient sample amount.
16 ☐ Inappropriate storage, container or preservation.
17 ☐ Other

Anomaly Description:

1. WG89210-1 Filter Blank had quantitatable levels of phthalates. The Bis(2EH)phthalate at 2.63 ug is slightly above "normal" lab background contamination. The source of the contamination is most likely from the extraction lab as the instrument blanks indicated no phthalates were detected. Past phthalate "spikes" have been documented with no real definative source identified. Samples with high

concetrations of phthalates have been extracted for sediment and IW projects and could have contributed to the lab contamination. All samples were flagged "B" in accordance with 3 times rule for the project.

7. L41104-2, L40900-6 and L40900-9 failed ISTD % differences compared to the daily standard on 06/11/29. The samples were re-analyzed on 06/11/30 and all ISTD % differences passed QA/QC limits.

8. L41104-2 Wipe Blanks was doubled spike with surrogates. The amount added was corrected in the samples header info and the sample was requantitated with all surrogates passing QA/QC.

IV. Type of Project Anomaly

- ☐ SAP/Work Plan specified MDLs not met.
- ☐ SAP/Work Plan specified QC frequency or QC type not met.
- ☐ SAP/Work Plan specified methodology not used.
- ☐ Sample exceeds regulatory and/or hazardous waste limits.
- ☐ Sample data results are unusual or inconsistent with expected results.
- ☐ Other

Anomaly Description:

V. Corrective Action Taken

- ☒ Sample(s) re-analyzed
- ☐ Sample(s) re-prepared and re-analyzed
- ☒ Sample(s) reported "AS IS"
- ☒ Data qualified with the following flags: *B*
- ☐ Other

Corrective Action Description:

VI. Potential Effects on Data Quality:

- ☐ None; corrective action entirely corrected anomaly (explanation optional):
- ☐ Potential effect explanation (explanation mandatory):

	Signatures	Signature Dates
Reported By:		1/3/07
Reviewer:		
Supervisor: *Dana Walker*	Dana Walker	1/8/07
QA Officer: *Colin Elliott* (For QA1 only)		
cc: LPM:		

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 01/09/07 07:12 - Data Source: ELD

Sample#: WG89210-1	Matrix: OTHR SOLID	List Type: ORPHPAHWIPE			
	Project:	Run ID: R118046	Col. Date:		
	Locator: MB	Work Group: WG89210	Rec. Date:	28-NOV-06	
	Site: NONE	QC Type: MB	Due Date:		
	Method Code: 8270D-WIPETEST				

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Naphthalene		ug	<MDL	.02	.04	
Acenaphthylene		ug	<MDL	.01	.02	
Dimethyl Phthalate		ug	<MDL	.05	.1	
Acenaphthene		ug	<MDL	.01	.02	
Fluorene		ug	<MDL	.01	.02	
Diethyl Phthalate		ug	<MDL	.05	.1	
Phenanthrene		ug	<MDL	.01	.02	
Anthracene		ug	<MDL	.01	.02	
Di-N Butyl Phthalate	.259	ug	B	.05	.1	
Fluoranthene		ug	<MDL	.01	.02	
Pyrene		ug	<MDL	.01	.02	
Benzyl Butyl Phthalate	.292	ug	B	.05	.1	
Benzo(a)anthracene		ug	<MDL	.01	.02	
Chrysene		ug	<MDL	.01	.02	
Bis(2-Ethylhexyl)Phthalate	2.63	ug	B	.05	.1	
Di-N-Octyl Phthalate		ug	<MDL	.05	.1	
Benzo(b)fluoranthene		ug	<MDL	.02	.04	
Benzo(k)fluoranthene		ug	<MDL	.02	.04	
Benzo(a)pyrene		ug	<MDL	.02	.04	
Indeno(1,2,3-Cd)Pyrene		ug	<MDL	.02	.04	
Dibenzo(a,h)anthracene		ug	<MDL	.02	.04	
Benzo(g,h,i)perylene		ug	<MDL	.02	.04	
2-Methylnaphthalene		ug	<MDL	.01	.02	
2-Fluorobiphenyl	1.34	ug		.02	.04	
d14-Terphenyl	1.47	ug		.02	.04	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						29-NOV-06
Operator ID						M.Doubrava
Porthandler File						/usr/users/seed2/METROS1/files/gcms/WG89210-1.rp
Instrument ID						6890j.i
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
2-Fluorobiphenyl	108	30-115
d14-Terphenyl	117	18-137

KCSlip4 55335

SEA421663

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 01/09/07 07:12 - Data Source: ELD

Sample#: L41104-2	Matrix:	OTHR SOLID	List Type:	ORPHPAHWIPE	
	Project:	423589-090-1	Run ID:	R118046	Col. Date: 20-NOV-06
	Locator:	BWR	Work Group:	WG89210	Rec. Date: 20-NOV-06
	Site:	METRO	QC Type:		Due Date: 20-DEC-06
	Method Code:	8270D-WIPETEST			

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Naphthalene		ug	<MDL	.02	.04	
Acenaphthylene		ug	<MDL	.01	.02	
Dimethyl Phthalate		ug	<MDL	.05	.1	
Acenaphthene		ug	<MDL	.01	.02	
Fluorene		ug	<MDL	.01	.02	
Diethyl Phthalate		ug	<MDL	.05	.1	
Phenanthrene		ug	<MDL	.01	.02	
Anthracene		ug	<MDL	.01	.02	
Di-N-Butyl Phthalate		ug	<MDL	.05	.1	
Fluoranthene		ug	<MDL	.01	.02	
Pyrene		ug	<MDL	.01	.02	
Benzyl Butyl Phthalate		ug	<MDL	.05	.1	
Benzo(a)anthracene		ug	<MDL	.01	.02	
Chrysene		ug	<MDL	.01	.02	
Bis(2-Ethylhexyl)Phthalate	.233	ug	B	.05	.1	
Di-N-Octyl Phthalate		ug	<MDL	.05	.1	
Benzo(b)fluoranthene		ug	<MDL	.02	.04	
Benzo(k)fluoranthene		ug	<MDL	.02	.04	
Benzo(a)pyrene		ug	<MDL	.02	.04	
Indeno(1,2,3-Cd)Pyrene		ug	<MDL	.02	.04	
Dibenzo(a,h)anthracene		ug	<MDL	.02	.04	
Benzo(g,h,i)perylene		ug	<MDL	.02	.04	
2-Methylnaphthalene		ug	<MDL	.01	.02	
2-Fluorobiphenyl	2.18	ug		.02	.04	
d14-Terphenyl	2.42	ug		.02	.04	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						30-NOV-06
Operator ID						M.Doubrava
Porthandler File						/usr/users/seed2/METROS3/files/gcms/L41104-2.rp
Instrument ID						6890j.i
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
2-Fluorobiphenyl	87	30-115
d14-Terphenyl	97	18-137

KCSlip4 55336

SEA421664

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 01/09/07 07:11 - Data Source: ELD

Sample#: L40900-6	Matrix:	OTHR SOLID	List Type:	ORPHPAHWIPE	
	Project:	423589-090-1	Run ID:	R118046	Col. Date: 01-NOV-06
	Locator:	BWR	Work Group:	WG89210	Rec. Date: 01-NOV-06
	Site:	METRO	QC Type:		Due Date: 01-DEC-06
	Method Code:	8270D-WIPETEST			

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Naphthalene		ug	<MDL	.02	.04	
Acenaphthylene		ug	<MDL	.01	.02	
Dimethyl Phthalate		ug	<MDL	.05	.1	
Acenaphthene		ug	<MDL	.01	.02	
Fluorene		ug	<MDL	.01	.02	
Diethyl Phthalate		ug	<MDL	.05	.1	
Phenanthrene		ug	<MDL	.01	.02	
Anthracene		ug	<MDL	.01	.02	
Di-N-Butyl Phthalate		ug	<MDL	.05	.1	
Fluoranthene		ug	<MDL	.01	.02	
Pyrene		ug	<MDL	.01	.02	
Benzyl Butyl Phthalate		ug	<MDL	.05	.1	
Benzo(a)anthracene		ug	<MDL	.01	.02	
Chrysene		ug	<MDL	.01	.02	
Bis(2-Ethylhexyl)Phthalate	.339	ug	B	.05	.1	
Di-N-Octyl Phthalate		ug	<MDL	.05	.1	
Benzo(b)fluoranthene		ug	<MDL	.02	.04	
Benzo(k)fluoranthene		ug	<MDL	.02	.04	
Benzo(a)pyrene		ug	<MDL	.02	.04	
Indeno(1,2,3-Cd)Pyrene		ug	<MDL	.02	.04	
Dibenzo(a,h)anthracene		ug	<MDL	.02	.04	
Benzo(g,h,i)perylene		ug	<MDL	.02	.04	
2-Methylnaphthalene		ug	<MDL	.01	.02	
2-Fluorobiphenyl	.298	ug		.02	.04	
d14-Terphenyl	.302	ug		.02	.04	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						30-NOV-06
Operator ID						M Doubrava
Porthandler File						/usr/users/seed2/METROS3/file s/gcms/L40900-6.rp
Instrument ID						6H90j.i
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
2-Fluorobiphenyl	24 *	30-115
d14-Terphenyl	24	18-137

KCSlip4 55337

SEA421665

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 01/09/07 07:12 - Data Source: ELD

Sample#: L40900-7	Matrix:	OTHR SOLID	List Type:	ORPHPAHWIPE	
	Project:	423589-090-1	Run ID:	R118046	Col. Date: 01-NOV-06
	Locator:	CER	Work Group:	WG89210	Rec. Date: 01-NOV-06
	Site:	METRO	QC Type:		Due Date: 01-DEC-06
	Method Code:	8270D-WIPETEST			

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Naphthalene		ug	<MDL	.02	.04	
Acenaphthylene		ug	<MDL	.01	.02	
Dimethyl Phthalate		ug	<MDL	.05	.1	
Acenaphthene		ug	<MDL	.01	.02	
Fluorene		ug	<MDL	.01	.02	
Diethyl Phthalate	.164	ug		.05	.1	
Phenanthrene	.0419	ug		.01	.02	
Anthracene		ug	<MDL	.01	.02	
Di-N-Butyl Phthalate	.417	ug	B	.05	.1	
Fluoranthene	.0278	ug		.01	.02	
Pyrene	.0212	ug		.01	.02	
Benzyl Butyl Phthalate	.4	ug	B	.05	.1	
Benzo(a)anthracene		ug	<MDL	.01	.02	
Chrysene		ug	<MDL	.01	.02	
Bis(2-Ethylhexyl)Phthalate	3.3	ug	B	.05	.1	
Di-N-Octyl Phthalate		ug	<MDL	.05	.1	
Benzo(b)fluoranthene		ug	<MDL	.02	.04	
Benzo(k)fluoranthene		ug	<MDL	.02	.04	
Benzo(a)pyrene		ug	<MDL	.02	.04	
Indeno(1,2,3-Cd)Pyrene		ug	<MDL	.02	.04	
Dibenzo(a,h)anthracene		ug	<MDL	.02	.04	
Benzo(g,h,i)perylene		ug	<MDL	.02	.04	
2-Methylnaphthalene		ug	<MDL	.01	.02	
2-Fluorobiphenyl	1.12	ug		.02	.04	
d14-Terphenyl	1.47	ug		.02	.04	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						29-NOV-06
Operator ID						M.Doubrava
Porthandler File						/usr/users/seed2/METROS3/files/gcms/L40900-7 rp
Instrument ID						6890j.i
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
2-Fluorobiphenyl	90	30-115
d14-Terphenyl	118	18-137

KCSlip4 55338

SEA421666

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 01/09/07 07:12 - Data Source: ELD

Sample#: L40900-8	Matrix:	OTHR SOLID	List Type:	ORPHPAHWIPE	
	Project:	423589-090-1	Run ID:	R118046	Col. Date: 01-NOV-06
	Locator:	DZ	Work Group:	WG89210	Rec. Date: 01-NOV-06
	Site:	METRO	QC Type:		Due Date: 01-DEC-06
	Method Code:	8270D-WIPETEST			

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Naphthalene		ug	<MDL	.02	.04	
Acenaphthylene		ug	<MDL	.01	.02	
Dimethyl Phthalate		ug	<MDL	.05	.1	
Acenaphthene		ug	<MDL	.01	.02	
Fluorene		ug	<MDL	.01	.02	
Diethyl Phthalate	.192	ug		.05	.1	
Phenanthrene	.0478	ug		.01	.02	
Anthracene		ug	<MDL	.01	.02	
Di-N-Butyl Phthalate	.363	ug	B	.05	.1	
Fluoranthene	.0441	ug		.01	.02	
Pyrene	.0355	ug		.01	.02	
Benzyl Butyl Phthalate	.42	ug	B	.05	.1	
Benzo(a)anthracene		ug	<MDL	.01	.02	
Chrysene	.0284	ug		.01	.02	
Bis(2-Ethylhexyl)Phthalate	10.6	ug		.05	.1	
Di-N-Octyl Phthalate	.578	ug		.05	.1	
Benzo(b)fluoranthene		ug	<MDL	.02	.04	
Benzo(k)fluoranthene		ug	<MDL	.02	.04	
Benzo(a)pyrene		ug	<MDL	.02	.04	
Indeno(1,2,3-Cd)Pyrene		ug	<MDL	.02	.04	
Dibenzo(a,h)anthracene		ug	<MDL	.02	.04	
Benzo(g,h,i)perylene	.034	ug	<RDL	.02	.04	
2-Methylnaphthalene		ug	<MDL	.01	.02	
2-Fluorobiphenyl	1.2	ug		.02	.04	
d14-Terphenyl	1.48	ug		.02	.04	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						29-NOV-06
Operator ID						M.Doubrava
Porthandler File						/usr/users/seed2/METROS3/file6/gcms/L40900-8.rp
Instrument ID						6890j.i
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
2-Fluorobiphenyl	60	30-115
d14-Terphenyl	74	18-137

KCSlip4 55339

SEA421667

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 01/09/07 07:12 - Data Source: ELD

Sample#: L40900-9	Matrix:	OTHR SOLID	List Type:	ORPHPAHWIPE	
	Project:	423589-090-1	Run ID:	R118046	Col. Date: 01-NOV-06
	Locator:	KCIA	Work Group:	WG89210	Rec. Date: 01-NOV-06
	Site:	METRO	QC Type:		Due Date: 01-DEC-06
	Method Code:	8270D-WIPETEST			

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Naphthalene		ug	<MDL	.02	.04	
Acenaphthylene		ug	<MDL	.01	.02	
Dimethyl Phthalate		ug	<MDL	.05	.1	
Acenaphthene		ug	<MDL	.01	.02	
Fluorene		ug	<MDL	.01	.02	
Diethyl Phthalate	.126	ug		.05	.1	
Phenanthrene	.0814	ug		.01	.02	
Anthracene		ug	<MDL	.01	.02	
Di-N-Butyl Phthalate	.301	ug	B	.05	.1	
Fluoranthene	.18	ug		.01	.02	
Pyrene	.15	ug		.01	.02	
Benzyl Butyl Phthalate	.311	ug	B	.05	.1	
Benzo(a)anthracene	.0499	ug		.01	.02	
Chrysene	.113	ug		.01	.02	
Bis(2-Ethylhexyl)Phthalate	2.25	ug	B	.05	.1	
Di-N-Octyl Phthalate		ug	<MDL	.05	.1	
Benzo(b)fluoranthene	.154	ug		.02	.04	
Benzo(k)fluoranthene	.0993	ug		.02	.04	
Benzo(a)pyrene		ug	<MDL	.02	.04	
Indeno(1,2,3-Cd)Pyrene	.0854	ug		.02	.04	
Dibenzo(a,h)anthracene		ug	<MDL	.02	.04	
Benzo(g,h,i)perylene	.107	ug		.02	.04	
2-Methylnaphthalene		ug	<MDL	.01	.02	
2-Fluorobiphenyl	1.34	ug		.02	.04	
d14-Terphenyl	1.52	ug		.02	.04	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						30-NOV-06
Operator ID						M.Doubrava
Porthandler File						/usr/users/seed2/METROS3/file s/gcms/L40900-9 rp
Instrument ID						68903.1
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
2-Fluorobiphenyl	107	30-115
d14-Terphenyl	122	18-137

KCSlip4 55340

SEA421668

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 01/09/07 07:11 - Data Source: ELD

Sample#: L40900-10	Matrix: OTHR SOLID	List Type: ORPHPAHWIPE			
	Project: 423589-090-1	Run ID: R118046		Col. Date:	01-NOV-06
	Locator: SPCC	Work Group: WG89210		Rec. Date:	01-NOV-06
	Site: METRO	QC Type:		Due Date:	01-DEC-06
	Method Code: 8270D-WIPETEST				

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Naphthalene		ug	<MDL	.02	.04	
Acenaphthylene		ug	<MDL	.01	.02	
Dimethyl Phthalate		ug	<MDL	.05	.1	
Acenaphthene		ug	<MDL	.01	.02	
Fluorene		ug	<MDL	.01	.02	
Diethyl Phthalate	.191	ug		.05	.1	
Phenanthrene	.0539	ug		.01	.02	
Anthracene		ug	<MDL	.01	.02	
Di-N-Butyl Phthalate	.337	ug	B	.05	.1	
Fluoranthene	.0513	ug		.01	.02	
Pyrene	.0451	ug		.01	.02	
Benzyl Butyl Phthalate	.445	ug	B	.05	.1	
Benzo(a)anthracene	.016	ug	<RDL	.01	.02	
Chrysene	.0246	ug		.01	.02	
Bis(2-Ethylhexyl)Phthalate	4.6	ug	B	.05	.1	
Di-N-Octyl Phthalate		ug	<MDL	.05	.1	
Benzo(b)fluoranthene		ug	<MDL	.02	.04	
Benzo(k)fluoranthene		ug	<MDL	.02	.04	
Benzo(a)pyrene		ug	<MDL	.02	.04	
Indeno(1,2,3-Cd)Pyrene		ug	<MDL	.02	.04	
Dibenzo(a,h)anthracene		ug	<MDL	.02	.04	
Benzo(g,h,i)perylene		ug	<MDL	.02	.04	
2-Methylnaphthalene		ug	<MDL	.01	.02	
2-Fluorobiphenyl	1.36	ug		.02	.04	
d14-Terphenyl	1.58	ug		.02	.04	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						29-NOV-06
Operator ID						M.Doubrava
Porthandler File						/usr/users/seed2/METROS3/files/gcms/L40900-10.rp
Instrument ID						6890j.i
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
2-Fluorobiphenyl	87	30-115
d14-Terphenyl	101	18-137

KCSlip4 55341

SEA421669

King County Environmental Laboratory

WORK GROUP REPORT (wk02)

Nov 28 2006, 11:40 am

Work Group: WG89211 (PCB WIPE) for Department: 7 - Organics, Trace

Created: 28-NOV-06 PrepDate: 28-NOV-06 Due: Operator: MCD

Sample	Project Number	Project Description	Prep C	Product	Matrix	Stat	UA	Worldate	Duedate
L40900-10	423589-090-1	Lower Duwamish Phthalate Studies	S	PCBWIPE	OTHR SOLID	WKGP	U	15-NOV-06	01-DEC-06
L40900-6	423589-090-1	Lower Duwamish Phthalate Studies	S	PCBWIPE	OTHR SOLID	WKGP	U	15-NOV-06	01-DEC-06
L40900-7	423589-090-1	Lower Duwamish Phthalate Studies	S	PCBWIPE	OTHR SOLID	WKGP	U	15-NOV-06	01-DEC-06
L40900-8	423589-090-1	Lower Duwamish Phthalate Studies	S	PCBWIPE	OTHR SOLID	WKGP	U	15-NOV-06	01-DEC-06
L40900-9	423589-090-1	Lower Duwamish Phthalate Studies	S	PCBWIPE	OTHR SOLID	WKGP	U	15-NOV-06	01-DEC-06
L41104-2	423589-090-1	Lower Duwamish Phthalate Studies	S	PCBWIPE	OTHR SOLID	WKGP	U	04-DEC-06	20-DEC-06
WG89211-1	MB		S	PCBWIPE	OTHR SOLID	WKGP	U	28-NOV-06	

Comments:

L40900-10	wipes
L40900-6	wipes
L40900-7	wipes
L40900-8	wipes
L40900-9	wipes
L41104-2	wipe blank
WG89211-1	FILTER PAPER BLANK

KCSlip4 55342

SEA421670

SOLID AND TISSUE SAMPLE EXTRACTION RECORD FOR BNA ANALYSIS
TRACE ORGANICS LABORATORY

QC BATCH NO.: BS 1:1 Acetone:MeCl2 WORKGROUP NO.:

EPA SW-846 EXTRACTION METHOD: BNA SURROGATE SPIKE I.D.#: Coprostanol:

SONICATION EPA 3550 SOXHLET EPA 3540 BNA MATRIX SPIKE I.D.#: Caffeine:

Date/ Analyst	Sample Number	Project Number	Sample Description	coc	Init. Amt (g)	Spike Amount (uL)	Vf (mL)	Clean ups (GPC)	Conc. Anal.	Turn Over Date	Comments
	WG89210-1		Extraction BLANK			50 BNA	1mL	AL	MO	11/28/02	samples conc
	WG89211-1					25 PCB					to 1mL split
	241104-2		Funnel BLANK wipe								for BNA/PCB
	240900-6		Funnel wipes								0.5 BNA
	-7										0.5 PCB
	-8										
	-9										
	-10										

(1) filter paper rinsed with MeCl2

(2) Funnel wiped X 2 with MeCl2 soaked filter paper

(3) BNA/PCB surrogate added / samples extracted X3 with 50 mls MeCl2 on sonic bath and conc to 1.0 mL

(4) 0.5 BNA analysis / 0.5 exchanged to hex for AL clean up and conc to 0.5 mL for PCB analysis

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KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab QC Report - 11/30/06 12:40
Run ID: R117507 Workgroup: WG89211 (PCB WIPE)

MB:WG89211-1 Matrix: OTHR SOLID Listtype: ORPCBWIPE Method: 8270D-WIPETEST Project: Pkey: STD
(Method Blank)

Parameter	Mdl	Rdl	Units	MB Value	Qual
Aroclor 1016	50	100	ug	<MDL	
Aroclor 1221	50	100	ug	<MDL	
Aroclor 1232	50	100	ug	<MDL	
Aroclor 1242	50	100	ug	<MDL	
Aroclor 1248	50	100	ug	<MDL	
Aroclor 1254	50	100	ug	<MDL	
Aroclor 1260	50	100	ug	<MDL	

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KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab QC Report - 11/30/06 12:40
Run ID: R117507 Workgroup: WG89211 (PCB WIPE)

Sample #	Decachlorobiphenyl-1
(Lab Limits)	25-150
L40900-6	26
L40900-7	72
L40900-8	67
L40900-9	72
L40900-10	61
L41104-2	49
WG89211-1	72

If the following parameters are reported, values in the RPD column are their Absolute Differences.

pH
pH, Field
Salinity
Salinity, Field
Sample Depth
Sample Temperature, Field

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Data File Name	Sample Name	Date Acquired	Vial Numbe	Sample Amount	Sample Multiplie	Isodrin (RT)	Isodrin (Height)	Leptophos (RT)	Leptophos (Height)	Isodrin #2 (RT)	Isodrin #2 (Height)	Leptoph (RT)	Leptophos #2 (Height)	Misc Info	Data File Path
COND-01.D	conditioner	11/29/2006 10:25	1	0	1										S:\MSDCHEM\2\DATA\061129\
BLANK-01.D	blank	11/29/2006 11:02	2	0	1										S:\MSDCHEM\2\DATA\061129\
PCB-01.D	1218D 1016/1260 500/50	11/29/2006 11:39	3	0	1	14.241	116106395	22.451	247647157	12.940	177123515	19.338	291915148		S:\MSDCHEM\2\DATA\061129\
PCB-02.D	1209.2 1248 500/50	11/29/2006 12:15	4	0	1	14.242	115168416	22.451	233835278	12.939	189681996	19.336	314714757		S:\MSDCHEM\2\DATA\061129\
PCB-03.D	1210.1 1254 500/50	11/29/2006 12:52	5	0	1	14.243	120680909	22.452	254671414	12.939	207435170	19.335	344894285		S:\MSDCHEM\2\DATA\061129\
PCB-04.D	1206.1 1221 500/50	11/29/2006 13:29	6	0	1	14.241	119851999	22.452	239861571	12.938	194855282	19.334	324804858		S:\MSDCHEM\2\DATA\061129\
PCB-05.D	1207.1 1232 500/50	11/29/2006 14:05	7	0	1	14.241	111957844	22.451	235507986	12.939	191126951	19.335	321006403		S:\MSDCHEM\2\DATA\061129\
PCB-06.D	1208.1 1242 500/50	11/29/2006 14:42	8	0	1	14.243	115106801	22.452	244710604	12.940	200834728	19.336	329403026		S:\MSDCHEM\2\DATA\061129\
WG69211-1.D	MB	11/29/2006 15:19	9	0	1	14.242	111611710	22.452	240769264	12.941	179836377	19.337	307782504	PCBWIPE DUWAMISH PHTHALATES	S:\MSDCHEM\2\DATA\061129\
L40900-6.D	L40900-6	11/29/2006 15:35	10	0	1	14.243	128280648	22.452	270515995	12.941	201347116	19.337	359432810	PCBWIPE DUWAMISH PHTHALATES	S:\MSDCHEM\2\DATA\061129\
L40900-7.D	L40900-7	11/29/2006 16:32	11	0	1	14.244	108153190	22.454	261549353	12.941	173851021	19.337	346351588	PCBWIPE DUWAMISH PHTHALATES	S:\MSDCHEM\2\DATA\061129\
L40900-8.D	L40900-8	11/29/2006 17:08	12	0	1	14.243	103214159	22.454	248572931	12.942	166380284	19.340	329366162	PCBWIPE DUWAMISH PHTHALATES	S:\MSDCHEM\2\DATA\061129\
L40900-9.D	L40900-9	11/29/2006 17:45	13	0	1	14.246	105855519	22.455	248086217	12.941	165019725	19.337	302807219	PCBWIPE DUWAMISH PHTHALATES	S:\MSDCHEM\2\DATA\061129\
L40900-10.D	L40900-10	11/29/2006 18:22	14	0	1	14.245	103182079	22.455	237889434	12.943	165889659	19.343	320655489	PCBWIPE DUWAMISH PHTHALATES	S:\MSDCHEM\2\DATA\061129\
L41104-2.D	L41104-2	11/29/2006 18:58	15	0	1	14.247	117531629	22.457	276673897	12.942	187304473	19.338	351754535	PCBWIPE DUWAMISH PHTHALATES	S:\MSDCHEM\2\DATA\061129\
PCB-07.D	1218D 1016/1260 500/50	11/29/2006 19:35	3	0	1	14.244	114044305	22.456	236043792	12.939	183075011	19.336	313244985		S:\MSDCHEM\2\DATA\061129\
PCB-08.D	1209.2 1248 500/50	11/29/2006 20:12	4	0	1	14.243	115379292	22.452	248135480	12.941	186391491	19.338	319059007		S:\MSDCHEM\2\DATA\061129\
					Ave.	14.243	113594327	22.453	248542011	12.940	184637047	19.337	325392849		
					Std. Dev.	0.002	5490246	0.002	12803890	0.001	13401625	0.002	19202465		
					%RSD		5%		5%		7%		6%		

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KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 12/01/06 10:26 - Data Source: ELD

Sample#:	WG89211-1	Matrix:	OTHR SOLID	List Type:	ORPCBWIPE		
		Project:		Run ID:	R117507	Col. Date:	
		Locator:	MB	Work Group:	WG89211	Rec. Date:	28-NOV-06
		Site:	NONE	QC Type:	MB	Due Date:	
		Method Code:	8270D-WIPETEST				

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Aroclor 1016		ug	<MDL	50	100	
Aroclor 1221		ug	<MDL	50	100	
Aroclor 1232		ug	<MDL	50	100	
Aroclor 1242		ug	<MDL	50	100	
Aroclor 1248		ug	<MDL	50	100	
Aroclor 1254		ug	<MDL	50	100	
Aroclor 1260		ug	<MDL	50	100	
Decachlorobiphenyl	22.6	ug		5	10	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						29-NOV-06
Operator ID						JSF
Porthandler File						/usr/users/seed2/METROS3/files/gc/wg89211.txt
Instrument ID						HP6890ECD-G
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
Decachlorobiphenyl	72	25-150

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 12/01/06 10:26 - Data Source: ELD

Sample#: L40900-6	Matrix:	OTHR SOLID	List Type:	ORPCBWIPE	
	Project:	423589-090-1	Run ID:	R117507	Col. Date: 01-NOV-06
	Locator:	BWR	Work Group:	WG89211	Rec. Date: 01-NOV-06
	Site:	METRO	QC Type:		Due Date: 01-DEC-06
	Method Code:	8270D-WIPETEST			

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Aroclor 1016		ug	<MDL	50	100	
Aroclor 1221		ug	<MDL	50	100	
Aroclor 1232		ug	<MDL	50	100	
Aroclor 1242		ug	<MDL	50	100	
Aroclor 1248		ug	<MDL	50	100	
Aroclor 1254		ug	<MDL	50	100	
Aroclor 1260		ug	<MDL	50	100	
Decachlorobiphenyl	8.1	ug	<RDL	5	10	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						29-NOV-06
Operator ID						JSF
Porthandler File						/usr/users/seed2/METRO93/files/gc/wg89211.txt
Instrument ID						HP6890ECD-G
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
Decachlorobiphenyl	26	25-150

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KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 12/01/06 10:26 - Data Source: ELD

Sample#: L40900-7	Matrix: OTHR SOLID	List Type: ORPCBWIPE			
	Project: 423589-090-1	Run ID: R117507		Col. Date:	01-NOV-06
	Locator: CER	Work Group: WG89211		Rec. Date:	01-NOV-06
	Site: METRO	QC Type:		Due Date:	01-DEC-06
	Method Code: 8270D-WIPETEST				

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Aroclor 1016		ug	<MDL	50	100	
Aroclor 1221		ug	<MDL	50	100	
Aroclor 1232		ug	<MDL	50	100	
Aroclor 1242		ug	<MDL	50	100	
Aroclor 1248		ug	<MDL	50	100	
Aroclor 1254		ug	<MDL	50	100	
Aroclor 1260		ug	<MDL	50	100	
Decachlorobiphenyl	22.5	ug		5	10	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						29-NOV-06
Operator ID						JSF
Porthandler File						/usr/users/seed2/METROS3/files/wg89211.txt
Instrument ID						HP6890ECD-G
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
Decachlorobiphenyl	72	25-150

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SEA421677

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 12/01/06 10:26 - Data Source: ELD

Sample#: L40900-8	Matrix: OTHR SOLID	List Type: ORPCBWIPE			
	Project: 423589-090-1	Run ID: R117507		Col. Date:	01-NOV-06
	Locator: DZ	Work Group: WG89211		Rec. Date:	01-NOV-06
	Site: METRO	QC Type:		Due Date:	01-DEC-06
	Method Code: 8270D-WIPETEST				

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Aroclor 1016		ug	<MDL	50	100	
Aroclor 1221		ug	<MDL	50	100	
Aroclor 1232		ug	<MDL	50	100	
Aroclor 1242		ug	<MDL	50	100	
Aroclor 1248		ug	<MDL	50	100	
Aroclor 1254		ug	<MDL	50	100	
Aroclor 1260		ug	<MDL	50	100	
Decachlorobiphenyl	20.8	ug		5	10	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						29-NOV-06
Operator ID						JSF
Porthandler File						/usr/users/seed2/METROS3/files/gc/wg89211.txt
Instrument ID						HP6890ECD-G
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
Decachlorobiphenyl	67	25-150

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SEA421678

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 12/01/06 10:26 - Data Source: ELD

Sample#: L40900-9	Matrix:	OTHR SOLID	List Type:	ORPCBWIPE	
	Project:	423589-090-1	Run ID:	R117507	Col. Date: 01-NOV-06
	Locator:	KCIA	Work Group:	WG89211	Rec. Date: 01-NOV-06
	Site:	METRO	QC Type:		Due Date: 01-DEC-06
	Method Code:	8270D-WIPETEST			

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Aroclor 1016		ug	<MDL	50	100	
Aroclor 1221		ug	<MDL	50	100	
Aroclor 1232		ug	<MDL	50	100	
Aroclor 1242		ug	<MDL	50	100	
Aroclor 1248		ug	<MDL	50	100	
Aroclor 1254		ug	<MDL	50	100	
Aroclor 1260		ug	<MDL	50	100	
Decachlorobiphenyl	22.4	ug		5	10	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						29-NOV-06
Operator ID						JSF
Porthandler File						/usr/users/seed2/METRO93/files/gc/wg89211.txt
Instrument ID						HP6890ECD-G
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
Decachlorobiphenyl	72	25-150

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SEA421679

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 12/01/06 10:25 - Data Source: ELD

Sample#: L40900-10	Matrix:	OTHR SOLID	List Type:	ORPCBWIPE	
	Project:	423589-090-1	Run ID:	R117507	Col. Date: 01-NOV-06
	Locator:	SPCC	Work Group:	WG89211	Rec. Date: 01-NOV-06
	Site:	METRO	QC Type:		Due Date: 01-DEC-06
	Method Code:	8270D-WIPETEST			

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Aroclor 1016		ug	<MDL	50	100	
Aroclor 1221		ug	<MDL	50	100	
Aroclor 1232		ug	<MDL	50	100	
Aroclor 1242		ug	<MDL	50	100	
Aroclor 1248		ug	<MDL	50	100	
Aroclor 1254		ug	<MDL	50	100	
Aroclor 1260		ug	<MDL	50	100	
Decachlorobiphenyl	19	ug		5	10	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						29-NOV-06
Operator ID						JSF
Porthandler File						/usr/users/seed2/METROS1/files/gc/wg89211.txt
Instrument ID						HP6890ECD-G
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
Decachlorobiphenyl	61	25-150

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SEA421680

KING COUNTY METRO ENVIRONMENTAL LABORATORY
Lab Review Report - 12/01/06 10:25 - Data Source: ELD

Sample#: L41104-2	Matrix:	OTHR SOLID	List Type:	ORPCBWIPE	
	Project:	423589-090-1	Run ID:	R117507	Col. Date: 20-NOV-06
	Locator:	BWR	Work Group:	WG89211	Rec. Date: 20-NOV-06
	Site:	METRO	QC Type:		Due Date: 20-DEC-06
	Method Code:	8270D-WIPETEST			

Parameter	Value	Units	Valq	Mdl	Rdl	Textvalue
Aroclor 1016		ug	<MDL	50	100	
Aroclor 1221		ug	<MDL	50	100	
Aroclor 1232		ug	<MDL	50	100	
Aroclor 1242		ug	<MDL	50	100	
Aroclor 1248		ug	<MDL	50	100	
Aroclor 1254		ug	<MDL	50	100	
Aroclor 1260		ug	<MDL	50	100	
Decachlorobiphenyl	15.2	ug		5	10	
Amount Analyzed	1	g				
Standard Amount	1	g				
Dilution Factor	1	none				
Date Analyzed						29-NOV-06
Operator ID						JSF
Porthandler File						/usr/users/seed2/METROS3/files/gc/wg89211.txt
Instrument ID						HP6890ECD-G
Prep Date						28-NOV-06

SURROGATE RECOVERY INFORMATION

Parameter	% Rec	Lab Limits
Decachlorobiphenyl	49	25-150

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Trace Organics Data Anomaly Form

Date(s) Occurred: *11-29-06*

WG #(s): *WG89211*

☒ **All samples in WKGP(s) or Sample #(s):**

Project #(s): *423589*

Matrix: ☐ **Liquid** ☐ **Solid** ☐ **Air** ☐ **Tissue** ☐ **Calibration** ☒ **Other:** *Wipes*

I. Analysis/Extraction

☐ BNA	☐ BNALL	☐ EDC	☐ EDC-LVI
☐ CLPESTPCB	☐ PEST	☒ PCB	☐ OPPEST
☐ VOA-GCMS	☐ NWTPH-GX	☐ NWTPH-DX	☐ NWTPH-HCID
☐ BUTYL TIN	☐ AIRTOX	☐ AIR-SULFUR	
☐ Other:			
☐ Subcontracted:			

II. Instrument

GC/ICP/MS:	☐ P
GC/MS:	☐ D ☐ E ☐ J ☐ K ☐ L ☐ M ☐ N
GC:	☐ F ECD ☒ G ECD ☐ H FID ☐ H OI4450PID/FID
	☐ I FID
Extraction/Cleanup:	☐ PFE ☐ GPC
	☐ Other:

III. Type of Sample/Analytical Anomaly

☒ Values Outside of Control Limits:

1 ☐ Blank Contamination	8 ☐ Surrogate Spike Recoveries
2 ☐ SB/SBD Spike Recoveries	9 ☐ SB/SBD RPD
3 ☐ MS/MSD Spike Recoveries	10 ☐ MS/MSD RPD
4 ☐ LCS/SRM Recoveries	11 ☐ Sample/LD RPD
5 ☐ Initial Calibration	12 ☒ Continuing Calibration Checks
6 ☐ Performance Checks	13 ☐ Tuning Criteria
7 ☐ ISTD % Differences	

14 ☐ Holding time exceeded by:
15 ☐ Insufficient sample amount.
16 ☐ Inappropriate storage, container or preservation.
17 ☐ Other

Anomaly Description: *12. Continuing cal PCB-07 had a recovery for aroclor 1260 that was just under 85%,* at 82%.

IV. Type of Project Anomaly

☐ SAP/Work Plan specified MDLs not met.
☐ SAP/Work Plan specified QC frequency or QC type not met.
☐ SAP/Work Plan specified methodology not used.
☐ Sample exceeds regulatory and/or hazardous waste limits.
☐ Sample data results are unusual or inconsistent with expected results.
☐ Other

Anomaly Description:

V. Corrective Action Taken

☐ Sample(s) re-analyzed
☒ Sample(s) reported "AS IS"
☐ Data qualified with the following flags:
☐ Other
☐ Sample(s) re-prepared and re-analyzed

Corrective Action Description: *12. All aroclor 1260 results are reported from the back column. No aroclors reported.*

VI. Potential Effects on Data Quality

Based upon the expected performance of this method:

☐ It is <u>likely</u> the observed anomaly influenced the reported value(s).
☒ It is <u>unlikely</u> the observed anomaly influenced the reported value(s).
☐ The observed anomaly <u>may have</u> influenced the reported value(s).
☐ It is <u>unknown</u> whether or not the observed anomaly affected the reported value(s).

Explanation: *All other QC, spikes, and surrogates are acceptable.*

	Signatures	Signature Dates
Reported By: *JSF*		11-30-06
Reviewer: *Gretchen Nerlin*		12/1/06
Supervisor: *Dana Walker*	Dana Walker	12/1/06
QA Officer: *Colin Elliott* (For QA1 only)		
cc: LPM:		