Massachusetts Water Resources Authority
Remote Headworks Upgrade Design and Construction Administration Services, MWRA Contract No. 7206

Risk Based Disposal Plan – Chelsea Creek Headworks

Appendix A

- Figures 1-5

01740453.0000

MALCOLM PIRNIE | ARCADIS
The Water Division of ARCADIS

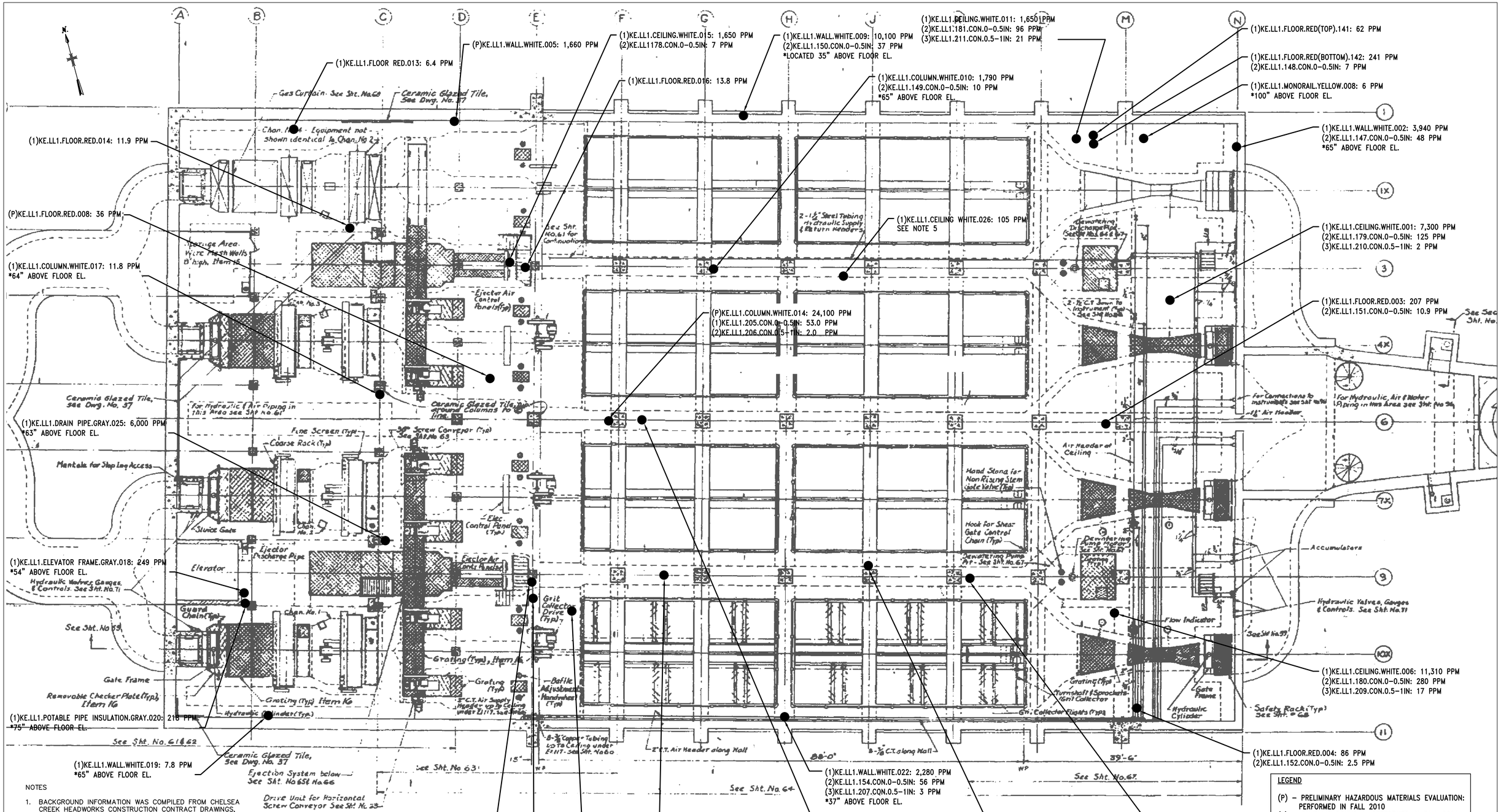
MALCOLM PIRNIE | ARCADIS
The Water Division of ARCADIS

Remote Headworks Upgrades
Design and Construction Administration Services
MWRA Contract 7206

Chelsea Creek Remote Headworks Facility
FIGURE 1: SITE LOCATION PLAN

N W E S

1 inch = 1,000 feet



NOTES

1. BACKGROUND INFORMATION WAS COMPILED FROM CHELSEA CREEK HEADWORKS CONSTRUCTION CONTRACT DRAWINGS, MWRA CONTRACT C-216, DECEMBER 1957.
2. PARTS PER MILLION (PPM) = MG/KG
3. ND = NOT DETECTED
4. NO SUBSTRATE SAMPLE COLLECTED DUE TO INACCESSIBILITY OF SAMPLE LOCATIONS

LEGEND

(P) - PRELIMINARY HAZARDOUS MATERIALS EVALUATION: PERFORMED IN FALL 2010
(1) - SAMPLING ROUND 1: PERFORMED IN FALL 2011
(2) - SAMPLING ROUND 2: PERFORMED IN FALL 2012
(3) - SAMPLING ROUND 3: PERFORMED IN FALL 2012

GENERAL PLAN ABOVE ELEVATION 88.75

SCALE: 1/8" = 1'-0"

4 0 4 8
SCALE: 1/8" = 1'-0"

REDUCED, NOT TO SCALE

NO.	DATE	BY	CHK'D	REVISION

MALCOLM PIRNIE | ARCADIS
The Water Division of ARCADIS

CONTRACT NO. : 7244
ACCESSION NO. : ACCESSION
DATE: DECEMBER 2011
SCALE:
CAD FILE NO.
SECTION NO. SECTION
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY :
MALCOLM PIRNIE, THE WATER DIVISION
OF ARCADIS U.S., INC. (PIRNIE/ARCADIS)

REMOTE HEADWORKS UPGRADES
CHELSEA CREEK HEADWORKS

FIGURE 2
LOWER LEVEL 1 PCB SAMPLE LOCATION PLAN

DRAWING NO.
KE

1 OF 4

XREFS:G:\PROJECTS\1740453\MWRA Contract No. 7244 - To@20 PCB\Report\Figures\Chelsea Creek\XREF\7244_KE_TB.dwg IMAGES:G:\PROJECTS\1740453\MWRA Contract No. 7244 - To@20 PCB\Report\Figures\Chelsea Creek\CHELSEA CREEK LL1 PLAN.DWG Scale:1:1 Date:03/05/2013 Time:14:08 Layout:Layout1
User:Raquse Spec:PIRNIE STANDARD File:G:\PROJECTS\1740453\MWRA Contract No. 7244 - To@20 PCB\Report\Figures\Chelsea Creek\XREF\7244_KE_TB.dwg

NOTES

1. BACKGROUND INFORMATION WAS COMPILED FROM CHELSEA CREEK HEADWORKS CONSTRUCTION CONTRACT DRAWINGS, MWRA CONTRACT C-216, DECEMBER 1957.
2. PARTS PER MILLION (PPM) = MG/KG
3. ND = NOT DETECTED
4. NO SUBSTRATE SAMPLE COLLECTED DUE TO PROXIMITY TO OTHER SUBSTRATE SAMPLE LOCATIONS

LEGEND

(P) – PRELIMINARY HAZARDOUS MATERIALS EVALUATION: PERFORMED IN FALL 2010
(1) – SAMPLING ROUND 1: PERFORMED IN FALL 2011
(2) – SAMPLING ROUND 2: PERFORMED IN FALL 2012
(3) – SAMPLING ROUND 3: PERFORMED IN FALL 2012

REDUCED, NOT TO SCALE

NO.	DATE	BY	CHK'D	REVISION

MALCOLM PIRNIE | ARCADIS
The Water Division of ARCADIS

CONTRACT NO. : 7244
ACCESSION NO. : ACCESSION
DATE: DECEMBER 2011
SCALE:

CAD FILE NO.
SECTION NO. SECTION
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY :
MALCOLM PIRNIE, THE WATER DIVISION OF ARCADIS U.S., INC. (PIRNIE/ARCADIS)

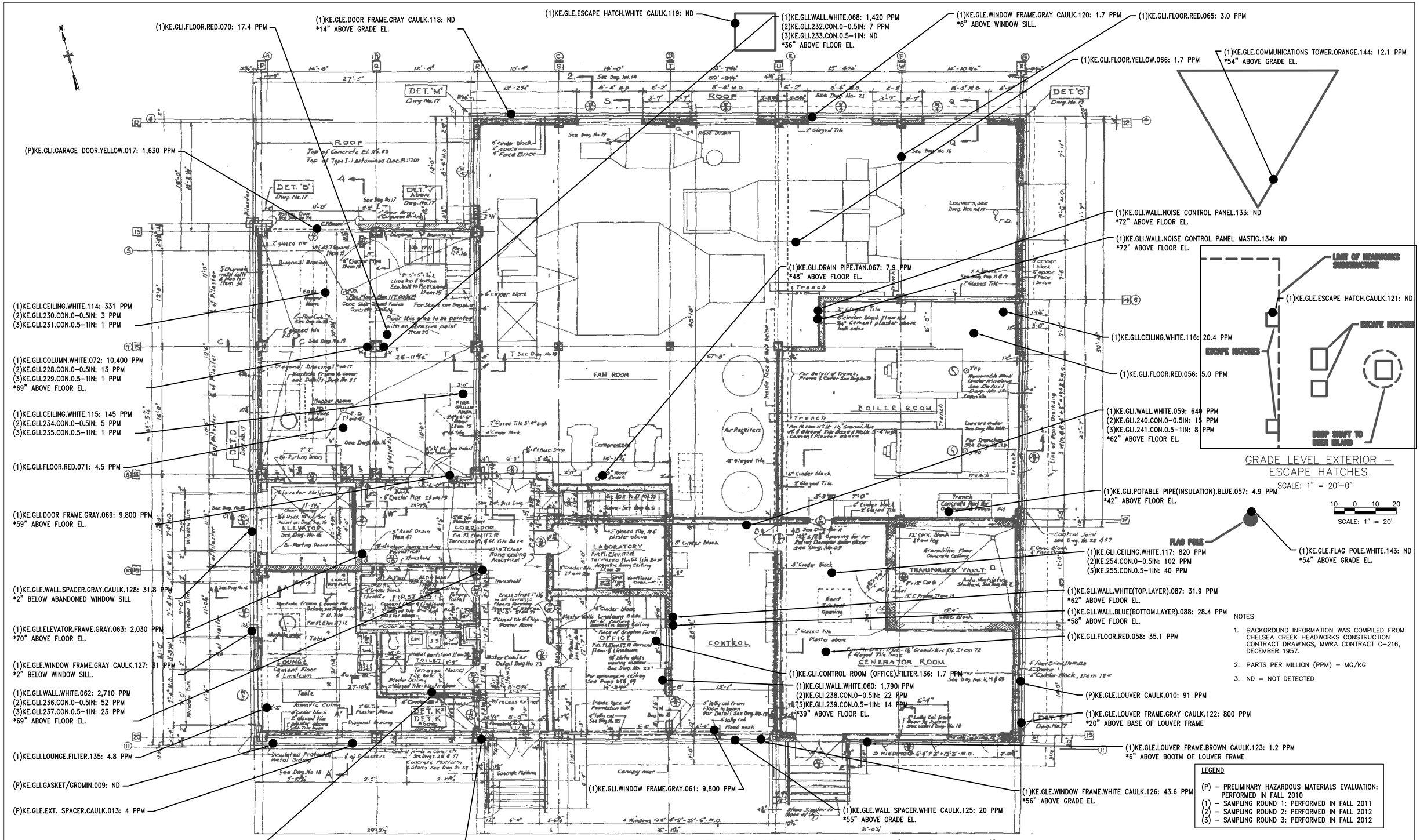
REMOTE HEADWORKS UPGRADES
CHELSEA CREEK HEADWORKS

FIGURE 3
LOWER LEVEL 2 PCB SAMPLE LOCATION PLAN

DRAWING NO.
KE

2 OF 4

XREFS:G:\PROJECTS\1740453\MWRA Contract No. 7244 - TO#20 PCB\Report\Figures\Chelsea Creek\XREF\7244_KE_TB.dwg IMAGES:G:\PROJECTS\1740453\MWRA Contract No. 7244 - TO#20 PCB\Report\Figures\Chelsea Creek\Images\KE.LL2.REVISION01.11.23.11.tif
User:Ragusa Spec:PIRNIE STANDARD File:G:\PROJECTS\1740453\MWRA Contract No. 7244 - TO#20 PCB\Report\Figures\Chelsea Creek\CHELSEA CREEK LL2 PLAN.DWG Scale:1:1 Date:03/05/2013 Time:14:09 Layout:Layout1



GRADE LEVEL EXTERIOR – ESCAPE HATCHES

SCALE: 1" = 20'-0"

GENERAL PLAN ABOVE ELEVATION 117.12

SCALE: 3/16" = 1'-0"

NOTES

1. BACKGROUND INFORMATION WAS COMPILED FROM CHELSEA CREEK HEADWORKS CONSTRUCTION CONTRACT DRAWINGS, MWRA CONTRACT C-216, DECEMBER 1957.
2. PARTS PER MILLION (PPM) = MG/KG
3. ND = NOT DETECTED

LEGEND

(P) – PRELIMINARY HAZARDOUS MATERIALS EVALUATION: PERFORMED IN FALL 2010
(1) – SAMPLING ROUND 1: PERFORMED IN FALL 2011
(2) – SAMPLING ROUND 2: PERFORMED IN FALL 2012
(3) – SAMPLING ROUND 3: PERFORMED IN FALL 2012

REDUCED, NOT TO SCALE

NO.	DATE	BY	CHK'D	REVISION

MALCOLM PIRNIE — ARCADIS — The Water Division of ARCADIS

CONTRACT NO. : 7244 | CAD FILE NO.
ACCESSION NO. : ACCESSION | SECTION NO. SECTION
DATE: DECEMBER 2011 | DESIGNED BY:
DRAWN BY:
SCALE: | CHECKED BY:
APPROVED BY:

MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY :
MALCOLM PIRNIE, THE WATER DIVISION
OF ARCADIS U.S., INC. (PIRNIE/ARCADIS)

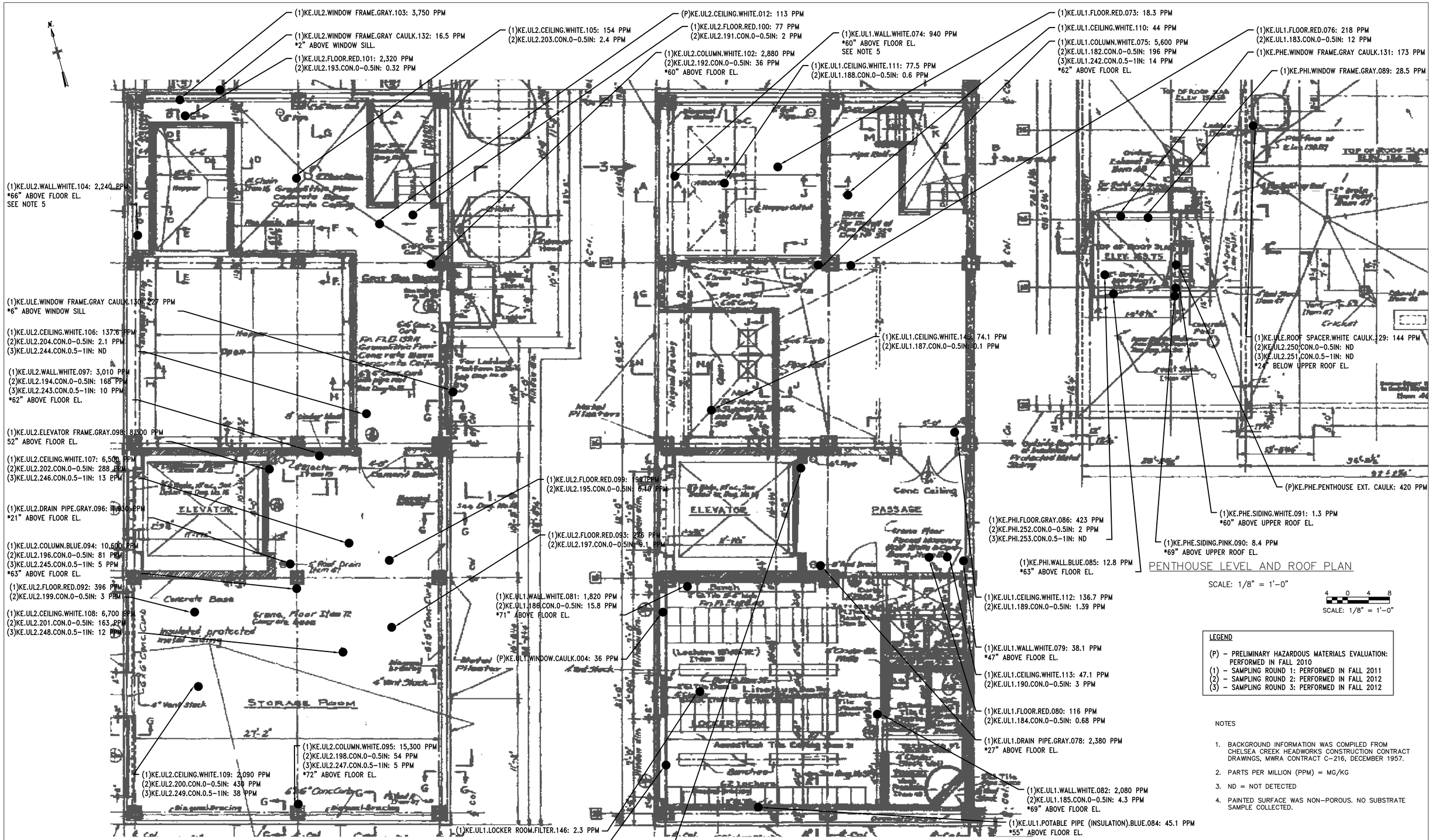
REMOTE HEADWORKS UPGRADES
CHELSEA CREEK HEADWORKS

FIGURE 4
GRADE LEVEL INTERIOR AND EXTERIOR
PCB SAMPLE LOCATION PLAN

DRAWING NO.
KE

3 OF 4

XREFS: G:\PROJECTS\1740453\MWRA Contract No. 7244 – TO#20 PCB\Report\Figures\Chelsea Creek\XREF\7244_KE_TB.dwg IMAGES: G:\PROJECTS\1740453\MWRA Contract No. 7244 – TO#20 PCB\Report\Figures\Chelsea Creek\IMAGES\KE_GLI_REVISION01.11.23.11.tif
User:Ragusa Spec:PIRNIE STANDARD File:G:\PROJECTS\1740453\MWRA Contract No. 7244 – TO#20 PCB\Report\Figures\Chelsea Creek\CHELSEA CREEK GLI&GLE PLAN.DWG Scale:1:1 Date:03/05/2013 Time:14:07 Layout:Layout1



LEGEND

(P) – PRELIMINARY HAZARDOUS MATERIALS EVALUATION: PERFORMED IN FALL 2010
(1) – SAMPLING ROUND 1: PERFORMED IN FALL 2011
(2) – SAMPLING ROUND 2: PERFORMED IN FALL 2012
(3) – SAMPLING ROUND 3: PERFORMED IN FALL 2012

NOTES

1. BACKGROUND INFORMATION WAS COMPILED FROM CHELSEA CREEK HEADWORKS CONSTRUCTION CONTRACT DRAWINGS, MWRA CONTRACT C-216, DECEMBER 1957.
2. PARTS PER MILLION (PPM) = MG/KG
3. ND = NOT DETECTED
4. PAINTED SURFACE WAS NON-POROUS. NO SUBSTRATE SAMPLE COLLECTED.

REDUCED, NOT TO SCALE

MALCOLM PIRNIE | ARCADIS
The Water Division of ARCADIS

NO.	DATE	BY	CHK'D	REVISION

CONTRACT NO. : 7244
CAD FILE NO.
ACCESSION NO. : ACCESSION
SECTION NO. SECTION
DATE: DECEMBER 2011
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SCALE:
APPROVED BY:

MASSACHUSETTS WATER RESOURCES AUTHORITY

PREPARED BY :
MALCOLM PIRNIE, THE WATER DIVISION
OF ARCADIS U.S., INC. (PIRNIE/ARCADIS)

REMOTE HEADWORKS UPGRADES
CHELSEA CREEK HEADWORKS

FIGURE 5
UPPER LEVELS AND PENTHOUSE LEVEL
PCB SAMPLE LOCATION PLAN

DRAWING NO.
KE

4 OF 4

XREFS: G:\PROJECTS\7140453\MWRA Contract No. 7244 – TO#20 PCB\Report\Figures\Chelsea Creek\XREF\7244_KE_TB.dwg IMAGES: G:\PROJECTS\7140453\MWRA Contract No. 7244 – TO#20 PCB\Report\Figures\Chelsea Creek\CHELSEA CREEK UL&PH PLAN.DWG Scale:1:1 Date:03/05/2013 Time:14:11 Layout:Layout1
User:Raguso Spec: PIRNIE STANDARD File: G:\PROJECTS\7140453\MWRA Contract No. 7244 – TO#20 PCB\Report\Figures\Chelsea Creek\KE_UL REVISION01.11.23.11.tif

Massachusetts Water Resources Authority
Remote Headworks Upgrade Design and Construction Administration Services, MWRA Contract No. 7206

Risk Based Disposal Plan – Chelsea Creek Headworks

Appendix B

- Photograph Log

01740453.0000

MALCOLM PIRNIE | ARCADIS

The Water Division of ARCADIS

Photograph #1

Description of Photograph:
View of exterior of ground level of Site building from east

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Photograph #2

Description of Photograph:
View of exterior of ground level of Site building from northwest

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Photograph #3

Description of Photograph:
White walls and columns, and red floors on west end of Lower Level 1.

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Photograph #4

Description of Photograph:
Waste channel on Lower Level 1.

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Photograph #5

Description of Photograph:
Above view of west end on Lower Level 1.

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Photograph #6

Description of Photograph:
White columns and wall, red floor, and escape ladder on northwest end corner of Lower Level 2

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Photograph #7

Description of Photograph:
Blue walls and gray floor at northeast corner of Lower Level 2.

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Photograph #8

Description of Photograph:
White ceiling and red floor on ground floor back hallway

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Photograph #9

Description of Photograph:
White ceiling and red floor of Upper Level 1 storage room

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Photograph #10

Description of Photograph:
White ceiling and walls, and red floor in north room of Upper Level 2, facing south

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Photograph #11

Description of Photograph:
White ceiling, columns, and walls, and red floor in north room of Upper Level 2, with east facing door to roof

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Photograph #12

Description of Photograph:
Elevator room of Upper Level 2

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Photograph #13

Description of Photograph:
View of door to roof caulking on Upper Level 2, and Penthouse from east roof

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Photograph #14

Description of Photograph:
View of door to roof caulking on Upper Level 2, and ladder to penthouse

Site Location:
Chelsea Creek Headworks
Chelsea, MA

Massachusetts Water Resources Authority
Remote Headworks Upgrade Design and Construction Administration Services, MWRA Contract No. 7206

Risk Based Disposal Plan – Chelsea Creek Headworks

Appendix D

- Laboratory Analytical Data Sheets

01740453.0000

MALCOLM PIRNIE | ARCADIS
The Water Division of ARCADIS

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

	Location	Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
Preliminary Hazardous Materials Evaluation - Sampled by Rhode Island Analytical Laboratory															
	KE.PHE.PENTHOUSE.EXT.CAULK.001	11/29/2010	*Result*	ND	ND	ND	ND	ND	**240**	**180**	ND	ND	**420**	1	50
			MDL	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	~	~	~
	KE.LL2.AIR.SUPPLY.DUCT.CAULK.GRAY.002	11/29/2010	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	~	~	~
	KE.LL2.DENSYL.TAPE.003	11/29/2010	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	~	~	~
	KE.UL1.WINDOW.CAULK.004	11/29/2010	*Result*	ND	ND	ND	ND	ND	ND	36	ND	ND	36	1	50
			MDL	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	~	~	~
	KE.LL1.WALL.WHITE.005	11/29/2010	*Result*	ND	ND	ND	ND	ND	**1,100**	**560**	ND	ND	**1,660**	1	50
			MDL	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	~	~	~
	KE.GLE.EXT.CAULK.006	11/29/2010	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	~	~	~
	KE.LL2.WALL.GRAY/BLUE.007	11/29/2010	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	~	~	~
	KE.LL1.FLOOR.RED.008	11/29/2010	*Result*	ND	ND	ND	ND	ND	**21**	**15**	ND	ND	36	1	50
			MDL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	~	~	~
	KE.GLE.GASKET/GROMIN.009	11/29/2010	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	~	~	~
	KE.GLE.LOUVER.CAULK.010	11/29/2010	*Result*	ND	ND	ND	ND	ND	**57**	**34**	ND	ND	**91**	1	50
			MDL	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	~	~	~
	KE.LL2.FLOOR.RED.011	11/29/2010	*Result*	ND	ND	ND	ND	ND	**240**	**58**	ND	ND	**298**	1	50
			MDL	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	~	~	~
	KE.UL2.CEILING.WHITE.012	11/29/2010	*Result*	**8**	ND	ND	ND	ND	**87**	**18**	ND	ND	**113**	1	50
			MDL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	~	~	~
	KE.GLE.EXT.SPACER.CAULK.013	11/29/2010	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	~	~	~
****	KE.LL1.COLUMN.WHITE.014	11/29/2010	*Result*	**1,200**	ND	ND	ND	ND	**15,000**	**7,900**	ND	ND	**24,100**	1	50
			MDL	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	~	~	~
	KE.LL1.MONORAIL.BEAM.YELLOW.015	11/29/2010	*Result*	ND	ND	ND	ND	ND	ND	2	ND	ND	2	1	50
			MDL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	~	~	~
	KE.LL2.ELEVATOR.FRAME.GRAY.016	11/29/2010	*Result*	ND	ND	ND	ND	ND	**3,100**	**1,500**	ND	ND	**4,600**	1	50
			MDL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	~	~	~
	KE.GLI.GARAGE.DOOR.YELLOW.017	11/29/2010	*Result*	ND	ND	ND	ND	ND	**630**	**1,000**	ND	ND	**1,630**	1	50
			MDL	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	~	~	~

See page 15 for notes

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

	Location	Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
Round 1, 2, and 3 Sampling-Sampled by Pirnie/ARCADIS															
	KE.LL1.Ceiling.White.001	10/24/2011	*Result*	ND	ND	ND	ND	ND	**5,900**	**1,400**	ND	ND	**7,300**	1	50
			MDL	500	500	500	500	500	500	500	500	500	~	~	~
	KE.LL1.179.CON. 0-0.5in	9/13/2012	*Result*	ND	ND	ND	ND	25	**100**	ND	ND	ND	**125**	1	50
			MDL	8.7	8.7	8.7	8.7	8.7	9	8.7	8.7	8.7	~	~	~
	KE.LL1.210.CON.0.5-1in	10/22/2012	*Result*	ND	ND	ND	ND	ND	2.1	ND	ND	ND	2	1	50
			MDL	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	~	~	~
	KE.LL1.Wall.White.002	10/24/2011	*Result*	ND	ND	ND	ND	ND	**3,000**	**940**	ND	ND	**3,940**	1	50
			MDL	250	250	250	250	250	250	250	250	250	~	~	~
	KE.LL1.147.CON. 0-0.5in	9/10/2012	*Result*	ND	ND	ND	ND	ND	48	ND	ND	ND	48	1	50
			MDL	5.0	5.0	5.0	5.0	5.0	5	5.0	5.0	5.0	~	~	~
	KE.LL1.Floor.Red.003	10/24/2011	*Result*	46	ND	ND	ND	ND	**140**	21	ND	ND	**207**	1	50
			MDL	9.9	9.9	9.9	9.9	9.9	10	9.9	9.9	9.9	~	~	~
	KE.LL1.151.CON. 0-0.5in	9/10/2012	*Result*	ND	ND	ND	ND	2.7	8.2	ND	ND	ND	10.9	1	50
			MDL	0.91	0.91	0.91	0.91	0.91	1	0.91	0.91	0.91	~	~	~
	KE.LL1.Floor.Red.004	10/24/2011	*Result*	ND	ND	ND	ND	ND	**72**	14	ND	ND	**86**	1	50
			MDL	5.0	5.0	5.0	5.0	5.0	5	5.0	5.0	5.0	~	~	~
	KE.LL1.152.CON. 0-0.5in	9/10/2012	*Result*	ND	ND	ND	ND	ND	3	ND	ND	ND	2.5	1	50
			MDL	0.91	0.91	0.91	0.91	0.91	1	0.91	0.91	0.91	~	~	~
	KE.LL1.Floor.Red.005	10/24/2011	*Result*	ND	ND	ND	ND	ND	**1,600**	**490**	ND	ND	**2,090**	1	50
			MDL	200	200	200	200	200	200	200	200	200	~	~	~
	KE.LL1.153.CON. 0-0.5in	9/10/2012	*Result*	ND	ND	ND	ND	ND	12	ND	ND	ND	12	1	50
			MDL	1.8	1.8	1.8	1.8	1.8	2	1.8	1.8	1.8	~	~	~
	KE.LL1.Ceiling.White.006	10/24/2011	*Result*	**710**	ND	ND	ND	ND	**8,500**	**2,100**	ND	ND	**11,310**	1	50
			MDL	500	500	500	500	500	500	500	500	500	~	~	~
	KE.LL1.180.CON. 0-0.5in	9/13/2012	*Result*	ND	ND	ND	ND	**60**	**220**	ND	ND	ND	**280**	1	50
			MDL	19	19	19	19	19	19	19	19	19	~	~	~
	KE.LL1.209.CON.0.5-1in	10/22/2012	*Result*	ND	ND	ND	ND	ND	17	ND	ND	ND	17	1	50
			MDL	10	10	10	10	10	10	10	10	10	~	~	~
	KE.LL1.Column.White.007	10/24/2011	*Result*	ND	ND	ND	ND	ND	**3,900**	**990**	ND	ND	**4,890**	1	50
			MDL	250	250	250	250	250	250	250	250	250	~	~	~
	KE.LL1.155.CON. 0-0.5in	9/10/2012	*Result*	ND	ND	ND	ND	ND	17	ND	ND	ND	17	1	50
			MDL	1.8	1.8	1.8	1.8	1.8	2	1.8	1.8	1.8	~	~	~
*	KE.LL1.Monorail.Yellow.008	10/24/2011	*Result*	ND	ND	ND	ND	ND	5	1.2	ND	ND	6	1	50
			MDL	0.49	0.49	0.49	0.49	0.49	0	0.49	0.49	0.49	~	~	~
	KE.LL1.Wall.White.009	10/24/2011	*Result*	ND	ND	ND	ND	ND	**8,100**	**2,000**	ND	ND	**10,100**	1	50
			MDL	440	440	440	440	440	440	440	440	440	~	~	~
	KE.LL1.150.CON. 0-0.5in	9/10/2012	*Result*	ND	ND	ND	ND	ND	37	ND	ND	ND	37	1	50
			MDL	4.8	4.8	4.8	4.8	4.8	5	4.8	4.8	4.8	~	~	~

See page 15 for notes

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

	Location	Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
	KE.LL1.Column.White.010	10/24/2011	*Result*	ND	ND	ND	ND	ND	**1,400**	**390**	ND	ND	**1,790**	1	50
			MDL	99	99	99	99	99	99	99	99	99	~	~	~
	KE.LL1.149.CON. 0-0.5in	9/10/2012	*Result*	ND	ND	ND	ND	ND	10	ND	ND	ND	10	1	50
			MDL	1.9	1.9	1.9	1.9	1.9	2	1.9	1.9	1.9	~	~	~
	KE.LL1.Ceiling.White.011	10/24/2011	*Result*	ND	ND	ND	ND	ND	**1,400**	**250**	ND	ND	**1,650**	1	50
			MDL	100	100	100	100	100	100	100	100	100	~	~	~
	KE.LL1.181.CON. 0-0.5in	9/13/2012	*Result*	ND	ND	ND	ND	ND	**96**	ND	ND	ND	**96**	1	50
			MDL	8.7	8.7	8.7	8.7	8.7	9	8.7	8.7	8.7	~	~	~
	KE.LL1.211.CON.0.5-1in	10/22/2012	*Result*	ND	ND	ND	ND	ND	21	ND	ND	ND	21	1	50
			MDL	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	~	~	~
	KE.LL1.Floor.Red.012	10/24/2011	*Result*	ND	ND	ND	ND	ND	**390**	**110**	ND	ND	**500**	1	50
			MDL	25	25	25	25	25	25	25	25	25	~	~	~
	KE.DUP01	10/24/2011	*Result*	ND	ND	ND	ND	ND	**310**	**99**	ND	ND	**409**	1	50
			MDL	25	25	25	25	25	25	25	25	25	~	~	~
	KE.LL1.156.CON. 0-0.5in	9/10/2012	*Result*	ND	ND	ND	ND	ND	1.6	ND	ND	ND	1.6	1	50
			MDL	0.43	0.43	0.43	0.43	0.43	0	0.43	0.43	0.43	~	~	~
	KE.LL1.Floor.Red.013	10/24/2011	*Result*	ND	ND	ND	ND	ND	4.8	1.6	ND	ND	6.4	1	50
			MDL	0.49	0.49	0.49	0.49	0.49	0	0.49	0.49	0.49	~	~	~
	KE.LL1.Floor.Red.014	10/24/2011	*Result*	ND	ND	ND	ND	ND	9.5	2.4	ND	ND	11.9	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	~	~	~
****	KE.LL1.205.CON.0-0.5in	10/22/2012	*Result*	ND	ND	ND	ND	ND	53	ND	ND	ND	**53**	1	50
			MDL	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	~	~	~
****	KE.LL1.206.CON.0.5-1in	10/22/2012	*Result*	ND	ND	ND	ND	ND	1.6	ND	ND	ND	2	1	50
			MDL	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	~	~	~
	KE.LL1.Ceiling.White.015	10/24/2011	*Result*	ND	ND	ND	ND	ND	**1,300**	**350**	ND	ND	**1,650**	1	50
			MDL	100	100	100	100	100	100	100	100	100	~	~	~
	KE.LL1.178.CON. 0-0.5in	9/13/2012	*Result*	ND	ND	ND	ND	ND	7	ND	ND	ND	7	1	50
			MDL	0.91	0.91	0.91	0.91	0.91	1	0.91	0.91	0.91	~	~	~
	KE.LL1.Floor.Red.016	10/24/2011	*Result*	ND	ND	ND	ND	ND	11	2.8	ND	ND	13.8	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	~	~	~
	KE.LL1.Column.White.017	10/24/2011	*Result*	ND	ND	ND	ND	ND	10	2.3	ND	ND	11.8	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	~	~	~
*	KE.LL1.Elevator Frame.Gray.018	10/24/2011	*Result*	ND	ND	ND	ND	ND	**190**	**59**	ND	ND	**249**	1	50
			MDL	32	32	32	32	32	32	32	32	32	~	~	~
	KE.LL1.Wall.White.019	10/24/2011	*Result*	ND	ND	ND	ND	ND	6	1.8	ND	ND	7.8	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	~	~	~
*	KE.LL1.Potable Pipe Insulation.020	10/24/2011	*Result*	ND	ND	ND	ND	ND	**190**	**28**	ND	ND	**218**	1	50
			MDL	6.5	6.5	6.5	6.5	6.5	7	6.5	6.5	6.5	~	~	~

See page 15 for notes

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

	Location	Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
	KE.LL2.Floor.Red.021	10/24/2011	*Result*	10	ND	ND	ND	ND	**180**	**29**	ND	ND	**219**	1	50
			MDL	5	5	5	5	5	5	5	5	5	~	~	~
	KE.LL2.170.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	ND	2	ND	ND	ND	1.5	1	50
			MDL	0.2	0.2	0.2	0.2	0.2	0	0.2	0.2	0.2	~	~	~
	KE.LL1.Wall.White.022	10/24/2011	*Result*	ND	ND	ND	ND	ND	**1,500**	**780**	ND	ND	**2,280**	1	50
			MDL	99	99	99	99	99	99	99	99	99	~	~	~
	KE.LL1.154.CON. 0-0.5in	9/10/2012	*Result*	ND	ND	ND	ND	ND	**56**	ND	ND	ND	**56**	1	50
			MDL	4.8	4.8	4.8	4.8	4.8	5	4.8	4.8	4.8	~	~	~
	KE.LL1.207.CON.0.5-1in	10/22/2012	*Result*	ND	ND	ND	ND	ND	2.6	0.43	ND	ND	3	1	50
			MDL	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	~	~	~
*	KE.LL1.Beam.Gray.023	10/24/2011	*Result*	ND	ND	ND	ND	ND	4	2.4	ND	ND	6.8	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	~	~	~
	KE.LL1.Ceiling.White.024	10/24/2011	*Result*	ND	ND	ND	ND	ND	**960**	**380**	ND	ND	**1,340**	1	50
			MDL	99	99	99	99	99	99	99	99	99	~	~	~
	KE.LL1.177.CON. 0-0.5in	9/13/2012	*Result*	ND	ND	ND	ND	ND	**62**	ND	ND	ND	**62**	1	50
			MDL	9.1	9.1	9.1	9.1	9.1	9	9.1	9.1	9.1	~	~	~
	KE.LL1.208.CON.0.5-1in	10/22/2012	*Result*	ND	ND	ND	ND	ND	8.9	ND	ND	ND	9	1	50
			MDL	7.70	7.70	7.70	7.70	7.70	7.70	7.70	7.70	7.70	~	~	~
*	KE.LL1.Drain Pipe.Gray.025	10/24/2011	*Result*	ND	ND	ND	ND	ND	**4,300**	**1,700**	ND	ND	**6,000**	1	50
			MDL	370	370	370	370	370	370	370	370	370	~	~	~
**	KE.LL1.Ceiling.White.026	10/24/2011	*Result*	ND	ND	ND	ND	ND	87	18	ND	ND	**105**	1	50
			MDL	5.0	5.0	5.0	5.0	5.0	5	5.0	5.0	5.0	~	~	~
**	KE.LL1.Ceiling.White.027	10/24/2011	*Result*	ND	ND	ND	ND	ND	**1,600**	**400**	ND	ND	**2,000**	1	50
			MDL	200	200	200	200	200	200	200	200	200	~	~	~
	KE.LL2.Column.White.028	10/25/2011	*Result*	ND	ND	ND	ND	ND	**4,700**	**1,100**	ND	ND	**5,800**	1	50
			MDL	540	540	540	540	540	540	540	540	540	~	~	~
	KE.LL2.165.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	36	**130**	ND	ND	ND	**166**	1	50
			MDL	17	17	17	17	17	17	17	17	17	~	~	~
	KE.LL2.217.CON.0.5-1in	10/23/2012	*Result*	ND	ND	ND	2.3	ND	6	ND	ND	ND	8	1	50
			MDL	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	~	~	~
	KE.LL2.Wall.White.029	10/25/2011	*Result*	ND	ND	ND	ND	ND	1,600	300	ND	ND	**1,900**	1	50
			MDL	200	200	200	200	200	200	200	200	200	~	~	~
	KE.LL2.163.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	**110**	**360**	ND	ND	ND	**470**	1	50
			MDL	48	48	48	48	48	48	48	48	48	~	~	~
	KE.LL2.216.CON.0.5-1in	10/23/2012	*Result*	ND	ND	ND	ND	ND	25	ND	ND	ND	25	1	50
			MDL	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	~	~	~

See page 15 for notes

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

	Location	Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
	KE.LL2.Floor.Red.030	10/25/2011	*Result*	ND	ND	ND	ND	ND	**84**	17	ND	ND	**101**	1	50
			MDL	5.0	5.0	5.0	5.0	5.0	5	5.0	5.0	5.0	~	~	~
	KE.LL2.164.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	0.24	1	ND	ND	ND	1.17	1	50
			MDL	0.18	0.18	0.18	0.18	0.18	0	0.18	0.18	0.18	~	~	~
	KE.LL2.Column.White.031	10/25/2011	*Result*	ND	ND	ND	ND	ND	**1,700**	**430**	ND	ND	**2,130**	1	50
			MDL	200	200	200	200	200	200	200	200	200	~	~	~
	KE.LL2.159.CON. 0-0.5in	9/11/2012	*Result*	ND	ND	ND	ND	3.7	12	ND	ND	ND	15.7	1	50
			MDL	1.8	1.8	1.8	1.8	1.8	2	1.8	1.8	1.8	~	~	~
	KE.LL2.Wall.White.032	10/25/2011	*Result*	**360**	ND	ND	ND	ND	**2,800**	**610**	ND	ND	**3,770**	1	50
			MDL	250	250	250	250	250	250	250	250	250	~	~	~
	KE.LL2.158.CON. 0-0.5in	9/11/2012	*Result*	ND	ND	ND	ND	**60**	**180**	ND	ND	ND	**240**	1	50
			MDL	18	18	18	18	18	18	18	18	18	~	~	~
	KE.LL2.222.CON.0.5-1in	10/23/2012	*Result*	ND	ND	ND	ND	ND	16	ND	ND	ND	16	1	50
			MDL	8	8	8	8	8	8	8	8	8	~	~	~
	KE.LL2.Ceiling.White.033	10/25/2011	*Result*	ND	ND	ND	ND	ND	**2,200**	**620**	ND	ND	**2,820**	1	50
			MDL	200	200	200	200	200	200	200	200	200	~	~	~
	KE.LL2.175.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	**82**	**350**	ND	ND	ND	**432**	1	50
			MDL	48	48	48	48	48	48	48	48	48	~	~	~
	KE.LL2.227.CON.0.5-1in	10/24/2012	*Result*	ND	ND	ND	14	ND	100	24	ND	ND	**138**	1	50
			MDL	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	~	~	~
	KE.LL2.Floor.Red.034	10/25/2011	*Result*	ND	ND	ND	ND	ND	**79**	16	ND	ND	**95**	1	50
			MDL	5	5	5	5	5	5	5	5	5	~	~	~
	KE.LL2.172.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	ND	3	ND	ND	ND	2.7	1	50
			MDL	0.91	0.91	0.91	0.91	0.91	1	0.91	0.91	0.91	~	~	~
	KE.LL2.Wall.Gray/Blue.035	10/25/2011	*Result*	ND	ND	ND	ND	ND	**7,900**	**2,300**	ND	ND	**10,200**	1	50
			MDL	500	500	500	500	500	500	500	500	500	~	~	~
	KE.LL2.176.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	29	**130**	ND	ND	ND	**159**	1	50
			MDL	19	19	19	19	19	19	19	19	19	~	~	~
	KE.LL2.223.CON.0.5-1in	10/23/2012	*Result*	ND	ND	ND	ND	ND	13	ND	ND	ND	13	1	50
			MDL	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	~	~	~
***	KE.LL2.Wall.Gray/Blue.036	10/25/2011	*Result*	ND	ND	ND	ND	ND	13,000	3,500	ND	ND	**16,500**	1	50
			MDL	990	990	990	990	990	990	990	990	990	~	~	~
	KE.LL2.Wall.White.037	10/25/2011	*Result*	ND	ND	ND	ND	ND	**1,000**	**190**	ND	ND	**1,190**	1	50
			MDL	99	99	99	99	99	99	99	99	99	~	~	~
	KE.LL2.162.CON. 0-0.5in	9/11/2012	*Result*	ND	ND	ND	ND	26	**98**	ND	ND	ND	**124**	1	50
			MDL	17	17	17	17	17	17	17	17	17	~	~	~
	KE.LL2.221.CON.0.5-1in	10/23/2012	*Result*	ND	ND	ND	ND	ND	15	ND	ND	ND	15	1	50
			MDL	7.70	7.70	7.70	7.70	7.70	7.70	7.70	7.70	7.70	~	~	~

See page 15 for notes

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

	Location	Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
*	KE.LL2.Potable Pipe.Blue.038	10/25/2011	*Result*	ND	ND	ND	ND	ND	3	ND	ND	ND	2.7	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	~	~	~
	KE.LL2.Floor.Red.039	10/25/2011	*Result*	ND	ND	ND	ND	ND	**66**	**14**	ND	ND	**80**	1	50
			MDL	5	5	5	5	5	5	5	5	5	~	~	~
	KE.DUP-2	10/25/2011	*Result*	ND	ND	ND	ND	ND	**53**	12	ND	ND	**65**	1	50
			MDL	5.6	5.6	5.6	5.6	5.6	6	5.6	5.6	5.6	~	~	~
	KE.LL2.161.CON. 0-0.5in	9/11/2012	*Result*	ND	ND	ND	ND	2.7	7	ND	ND	ND	10	1	50
			MDL	1.7	1.7	1.7	1.7	1.7	2	1.7	1.7	1.7	~	~	~
*	KE.LL2.Drain Pipe.Gray.040	10/25/2011	*Result*	ND	ND	ND	ND	ND	**8,600**	**3,000**	ND	ND	**11,600**	1	50
			MDL	790	790	790	790	790	790	790	790	790	~	~	~
	KE.LL2.Floor.Red.041	10/25/2011	*Result*	ND	ND	ND	ND	ND	**93**	20	ND	ND	**113**	1	50
			MDL	5.0	5.0	5.0	5.0	5.0	5	5.0	5.0	5.0	~	~	~
	KE.LL2.160.CON. 0-0.5in	9/11/2012	*Result*	ND	ND	ND	ND	ND	3	ND	ND	ND	3	1	50
			MDL	1.8	1.8	1.8	1.8	1.8	2	1.8	1.8	1.8	~	~	~
	KE.LL2.Floor.Red.042	10/25/2011	*Result*	ND	ND	ND	ND	ND	**87**	19	ND	ND	**106**	1	50
			MDL	5.0	5.0	5.0	5.0	5.0	5	5.0	5.0	5.0	~	~	~
	KE.LL2.169.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	ND	2	ND	ND	ND	2.4	1	50
			MDL	0.43	0.43	0.43	0.43	0.43	0	0.43	0.43	0.43	~	~	~
*	KE.LL2.Door.DarkGray.043	10/25/2011	*Result*	ND	ND	ND	ND	ND	16,000	4,500	ND	ND	**20,500**	1	50
			MDL	1200	1200	1200	1200	1200	1,200	1200	1200	1200	~	~	~
	KE.LL2.Column.White.044	10/25/2011	*Result*	ND	ND	ND	ND	ND	2,300	600	ND	ND	**2,900**	1	50
			MDL	230	230	230	230	230	230	230	230	230	~	~	~
	KE.LL2.168.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	ND	**110**	ND	ND	ND	**110**	1	50
			MDL	18	18	18	18	18	18	18	18	18	~	~	~
	KE.LL2.218.CON.0.5-1in	10/23/2012	*Result*	ND	ND	ND	ND	ND	21	ND	ND	ND	21	1	50
			MDL	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	~	~	~
	KE.LL2.Wall.White.045	10/25/2011	*Result*	ND	ND	ND	ND	ND	**4,400**	**1,200**	ND	ND	**5,600**	1	50
			MDL	370	370	370	370	370	370	370	370	370	~	~	~
	KE.LL2.166.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	18	**55**	ND	ND	ND	**73**	1	50
			MDL	9.1	9.1	9.1	9.1	9.1	9	9.1	9.1	9.1	~	~	~
	KE.LL2.219.CON.0.5-1in	10/23/2012	*Result*	ND	ND	ND	0.9	ND	4.5	ND	ND	ND	5.4	1	50
			MDL	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	~	~	~
***	KE.LL2.Floor(Top).Red.046	10/25/2011	*Result*	25	ND	ND	ND	ND	**320**	46	ND	ND	**391**	1	50
			MDL	12	12	12	12	12	12	12	12	12	~	~	~
	KE.LL2.Floor(Bottom).Red.047	10/25/2011	*Result*	23	ND	ND	ND	ND	**430**	**65**	ND	ND	**518**	1	50
			MDL	22	22	22	22	22	22	22	22	22	~	~	~
	KE.LL2.167.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	1.2	5	ND	ND	ND	5.7	1	50
			MDL	0.95	0.95	0.95	0.95	0.95	1	0.95	0.95	0.95	~	~	~

See page 15 for notes

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

	Location	Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
	KE.LL2.Ceiling.White.048	10/25/2011	*Result*	**240**	ND	ND	ND	ND	**2,200**	**430**	ND	ND	**2,870**	1	50
			MDL	200	200	200	200	200	200	200	200	200	~	~	~
	KE.LL2.214.CON. 0-0.5in	10/22/2012	*Result*	ND	ND	ND	ND	ND	170	ND	ND	ND	**170**	1	50
			MDL	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00	43.00	~	~	~
	KE.-LL2.215.CON. 0.5-1in	10/23/2012	*Result*	ND	ND	ND	ND	ND	51	12	ND	ND	**63**	1	50
			MDL	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	~	~	~
*	KE.LL2.Beam.Yellow.049	10/25/2011	*Result*	0.61	ND	ND	ND	ND	8	2.7	ND	ND	11.3	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	~	~	~
***	KE.LL2.Ceiling.White(Top).050	10/25/2011	*Result*	**170**	ND	ND	ND	ND	**1,100**	**220**	ND	ND	**1,490**	1	50
			MDL	99	99	99	99	99	99	99	99	99	~	~	~
	KE.LL2.Ceiling.White(Bottom).051	10/25/2011	*Result*	**330**	ND	ND	ND	ND	**2,800**	**890**	ND	ND	**4,020**	1	50
			MDL	220	220	220	220	220	220	220	220	220	~	~	~
	KE.LL2.212.CON. 0-0.5in	10/22/2012	*Result*	ND	ND	ND	71	ND	310	77	ND	ND	**458**	1	50
			MDL	38	38	38	38	38	38	38	38	38	~	~	~
	KE.LL2.213.CON. 0.5-1in	10/22/2012	*Result*	ND	ND	ND	24	ND	95	20	ND	ND	**139**	1	50
			MDL	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	~	~	~
**	KE.LL2.Ceiling.White.052	10/25/2011	*Result*	**270**	ND	ND	ND	ND	**3,100**	**1,000**	ND	ND	**4,370**	1	50
			MDL	250	250	250	250	250	250	250	250	250	~	~	~
	KE.LL2.Ceiling.White.053	10/25/2011	*Result*	200	ND	ND	ND	ND	1,600	290	ND	ND	**2,090**	1	50
			MDL	130	130	130	130	130	130	130	130	130	~	~	~
	KE.LL2.174.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	**92**	**300**	ND	ND	ND	**392**	1	50
			MDL	45	45	45	45	45	45	45	45	45	~	~	~
	KE.LL2.224.CON. 0.5-1in	10/23/2012	*Result*	ND	ND	ND	**14**	ND	**79**	**14**	ND	ND	**107**	1	50
			MDL	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	~	~	~
	KE.LL2.Ceiling.White.054	10/25/2011	*Result*	ND	ND	ND	ND	ND	**4,100**	**970**	ND	ND	**5,070**	1	50
			MDL	330	330	330	330	330	330	330	330	330	~	~	~
	KE.LL2.173.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	**91**	330	ND	ND	ND	**421**	1	50
			MDL	48	48	48	48	48	48	48	48	48	~	~	~
	KE.LL2.225.CON.0.5-1in	10/23/2012	*Result*	ND	ND	ND	9.9	ND	37	ND	ND	ND	46.9	1	50
			MDL	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	~	~	~
	KE.LL2.Ceiling.White.055	10/25/2011	*Result*	**400**	ND	ND	ND	ND	**2,900**	**1,000**	ND	ND	**4,300**	1	50
			MDL	260	260	260	260	260	260	260	260	260	~	~	~
	KE.LL2.171.CON. 0-0.5in	9/12/2012	*Result*	ND	ND	ND	ND	**65**	**300**	ND	ND	ND	**365**	1	50
			MDL	48	48	48	48	48	48	48	48	48	~	~	~
	KE.LL2.226.CON. 0.5-1in	10/23/2012	*Result*	ND	ND	ND	**14**	ND	**95**	**20**	ND	ND	**129**	1	50
			MDL	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	8.70	~	~	~
	KE.GLI.Floor.Red.056	10/26/2011	*Result*	ND	ND	ND	ND	ND	4	1.2	ND	ND	5.0	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	~	~	~

See page 15 for notes

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

	Location	Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
*	KE.GLI.Potable Pipe.Blue.057	10/26/2011	*Result*	ND	ND	ND	ND	ND	4	1.3	ND	ND	4.9	1	50
			MDL	0.54	0.54	0.54	0.54	0.54	1	0.54	0.54	0.54	~	~	~
	KE.GLI.Floor.Red.058	10/26/2011	*Result*	ND	ND	ND	ND	ND	32	3.1	ND	ND	35.1	1	50
			MDL	2.5	2.5	2.5	2.5	2.5	3	2.5	2.5	2.5	~	~	~
	KE.GLI.Wall.White.059	10/26/2011	*Result*	ND	ND	ND	ND	ND	**470**	**170**	ND	ND	**640**	1	50
			MDL	25	25	25	25	25	25	25	25	25	~	~	~
	KE.GLI.240.CON. 0-0.5in	10/24/2012	*Result*	ND	ND	ND	ND	ND	15	ND	ND	ND	15	1	50
			MDL	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	~	~	~
	KE.GLI.241.CON. 0.5-1in	10/24/2012	*Result*	ND	ND	ND	4.4	ND	4	ND	ND	ND	8	1	50
			MDL	1	1	1	1	1	1	1	1	1	~	~	~
	KE.GLI.Wall.White.060	10/26/2011	*Result*	ND	ND	ND	ND	ND	**1,400**	**390**	ND	ND	**1,790**	1	50
			MDL	100	100	100	100	100	100	100	100	100	~	~	~
	KE.GLI.238.CON. 0-0.5in	10/24/2012	*Result*	ND	ND	ND	ND	ND	22	ND	ND	ND	22	1	50
			MDL	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	~	~	~
	KE.GLI.239.CON. 0.5-1in	10/24/2012	*Result*	ND	ND	ND	11	ND	3.1	ND	ND	ND	14	1	50
			MDL	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	~	~	~
*	KE.GLI.Window Frame.Gray.061	10/26/2011	*Result*	ND	ND	ND	ND	ND	**7,600**	**2,200**	ND	ND	**9,800**	1	50
			MDL	700	700	700	700	700	700	700	700	700	~	~	~
	KE.GLI.Wall.White.062	10/26/2011	*Result*	ND	ND	ND	ND	ND	**2,100**	**610**	ND	ND	**2,710**	1	50
			MDL	250	250	250	250	250	250	250	250	250	~	~	~
	KE.GLI.236.CON. 0-0.5in	10/24/2012	*Result*	ND	ND	ND	**8.8**	ND	**43**	ND	ND	ND	**52**	1	50
			MDL	8	8	8	8	8	8	8	8	8	~	~	~
	KE.GLI.237.CON. 0.5-1in	10/24/2012	*Result*	ND	ND	ND	ND	ND	23	ND	ND	ND	23	1	50
			MDL	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	~	~	~
*	KE.GLI.Elevator Frame.Gray.063	10/26/2011	*Result*	ND	ND	ND	ND	ND	**1,500**	**530**	ND	ND	**2,030**	1	50
			MDL	250	250	250	250	250	250	250	250	250	~	~	~
	KE.GLI.Wall.White.064	10/26/2011	*Result*	ND	ND	ND	ND	ND	23	4.1	ND	ND	27.1	1	50
			MDL	2.0	2.0	2.0	2.0	2.0	2	2.0	2.0	2.0	~	~	~
	KE.GLI.Floor.Red.065	10/26/2011	*Result*	ND	ND	ND	ND	ND	3	ND	ND	ND	3.0	1	50
			MDL	1.0	1.0	1.0	1.0	1.0	1	1.0	1.0	1.0	~	~	~
	KE.GLI.Floor.Yellow.066	10/26/2011	*Result*	ND	ND	ND	ND	ND	2	ND	ND	ND	1.7	1	50
			MDL	0.79	0.79	0.79	0.79	0.79	1	0.79	0.79	0.79	~	~	~
*	KE.GLI.Drain Pipe.Tan.067	10/26/2011	*Result*	ND	ND	ND	ND	ND	8	ND	ND	ND	7.9	1	50
			MDL	1.2	1.2	1.2	1.2	1.2	1	1.2	1.2	1.2	~	~	~

See page 15 for notes

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

	Location	Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
	KE.GLI.Wall.White.068	10/26/2011	*Result*	ND	ND	ND	ND	ND	**1,100**	**320**	ND	ND	**1,420**	1	50
			MDL	91	91	91	91	91	91	91	91	91	~	~	~
	KE.GLI.232.CON. 0-0.5in	10/24/2012	*Result*	ND	ND	ND	ND	ND	5.3	1.4	ND	ND	7	1	50
			MDL	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	~	~	~
	KE.GLI.233.CON. 0.5-1in	10/24/2012	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	~	~	~
*	KE.GLI.DoorFrame.Gray.069	10/26/2011	*Result*	ND	ND	ND	ND	ND	**7,900**	**1,900**	ND	ND	**9,800**	1	50
			MDL	1300	1300	1300	1300	1300	1,300	1300	1300	1300	~	~	~
	KE.GLI.Floor.Red.070	10/26/2011	*Result*	ND	ND	ND	ND	ND	14	3.4	ND	ND	17.4	1	50
			MDL	1.3	1.3	1.3	1.3	1.3	1	1.3	1.3	1.3	~	~	~
	KE.GLI.Floor.Red.071	10/26/2011	*Result*	ND	ND	ND	ND	ND	5	ND	ND	ND	4.5	1	50
			MDL	2.1	2.1	2.1	2.1	2.1	2	2.1	2.1	2.1	~	~	~
	KE.GLI.Column.White.072	10/26/2011	*Result*	ND	ND	ND	ND	ND	**7,800**	**2,600**	ND	ND	**10,400**	1	50
			MDL	940	940	940	940	940	940	940	940	940	~	~	~
	KE.GLI.228.CON. 0-0.5in	10/24/2012	*Result*	ND	ND	ND	ND	ND	13	ND	ND	ND	13	1	50
			MDL	10	10	10	10	10	10	10	10	10	~	~	~
	KE.GLI.229.CON. 0.5-1in	10/24/2012	*Result*	ND	ND	ND	ND	ND	1.4	ND	ND	ND	1	1	50
			MDL	0.48	0.48	0.48	0.48	0.48	1.4	0.48	0.48	0.48	~	~	~
	KE.UL1.Floor.Red.073	10/26/2011	*Result*	ND	ND	ND	ND	ND	15	3.3	ND	ND	18.3	1	50
			MDL	1.2	1.2	1.2	1.2	1.2	1	1.2	1.2	1.2	~	~	~
*	KE.Wall.White.074	10/26/2011	*Result*	ND	ND	ND	ND	ND	**790**	**150**	ND	ND	**940**	1	50
			MDL	100	100	100	100	100	100	100	100	100	~	~	~
	KE.UL1.Column.White.075	10/26/2011	*Result*	ND	ND	ND	ND	ND	**4,500**	**1,100**	ND	ND	**5,600**	1	50
			MDL	450	450	450	450	450	450	450	450	450	~	~	~
	KE.UL1.182.CON. 0-0.5in	9/14/2012	*Result*	ND	ND	ND	ND	**36**	**160**	ND	ND	ND	**196**	1	50
			MDL	18	18	18	18	18	18	18	18	18	~	~	~
	KE,ULI.242.CON. 0.5-1in	10/25/2012	*Result*	ND	ND	ND	ND	ND	14	ND	ND	ND	14	1	50
			MDL	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	~	~	~
	KE.UL1.Floor.Red.076	10/26/2011	*Result*	6.5	ND	ND	ND	ND	**150**	**61**	ND	ND	**218**	1	50
			MDL	5.0	5.0	5.0	5.0	5.0	5	5.0	5.0	5.0	~	~	~
	KE.UL1.183.CON. 0-0.5in	9/14/2012	*Result*	ND	ND	ND	ND	ND	12	ND	ND	ND	12	1	50
			MDL	1	1	1	1	1	1	1	1	1	~	~	~
*	KE.UL1.Elevator Frame.Gray.077	10/26/2011	*Result*	ND	ND	ND	ND	ND	**8,800**	**2,900**	ND	ND	**11,700**	1	50
			MDL	1100	1100	1100	1100	1100	1,100	1100	1100	1100	~	~	~
*	KE.UL1.Drain Pipe.Gray.078	10/26/2011	*Result*	ND	ND	ND	ND	ND	11	1.8	ND	ND	12.8	1	50
			MDL	0.57	0.57	0.57	0.57	0.57	1	0.57	0.57	0.57	~	~	~

See page 15 for notes

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

	Location	Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
	KE.UL1.Wall.White.079	10/26/2011	*Result*	ND	ND	ND	ND	ND	31	7.1	ND	ND	38.1	1	50
			MDL	5.0	5.0	5.0	5.0	5.0	5	5.0	5.0	5.0	~	~	~
	KE.UL1.Floor.Red.080	10/26/2011	*Result*	ND	ND	ND	ND	ND	89	27	ND	ND	**116**	1	50
			MDL	4.9	4.9	4.9	4.9	4.9	5	4.9	4.9	4.9	~	~	~
	KE.UL1.184.CON. 0-0.5in	9/14/2012	*Result*	ND	ND	ND	ND	0.11	1	ND	ND	ND	0.68	1	50
			MDL	0.091	0.091	0.091	0.091	0.091	0	0.091	0.091	0.091	~	~	~
	KE.UL1.Wall.White.081	10/26/2011	*Result*	ND	ND	ND	ND	ND	**1,500**	**320**	ND	ND	**1,820**	1	50
			MDL	250	250	250	250	250	250	250	250	250	~	~	~
	KE.UL1.186.CON. 0-0.5in	9/14/2012	*Result*	ND	ND	ND	ND	4.8	11	ND	ND	ND	15.8	1	50
			MDL	0.91	0.91	0.91	0.91	0.91	1	0.91	0.91	0.91	~	~	~
	KE.UL1.Wall.White.082	10/26/2011	*Result*	ND	ND	ND	ND	ND	**1,700**	**380**	ND	ND	**2,080**	1	50
			MDL	250	250	250	250	250	250	250	250	250	~	~	~
	KE.UL1.185.CON. 0-0.5in	9/14/2012	*Result*	ND	ND	ND	ND	ND	4	ND	ND	ND	4.3	1	50
			MDL	0.43	0.43	0.43	0.43	0.43	0	0.43	0.43	0.43	~	~	~
*	KE.UL1.WindowFrame.Gray.083	10/26/2011	*Result*	ND	ND	ND	ND	ND	1,100	280	ND	ND	**1,380**	1	50
			MDL	99	99	99	99	99	99	99	99	99	~	~	~
*	KE.UL1.Potable Pipe.Blue.084	10/26/2011	*Result*	ND	ND	ND	ND	ND	36	9.1	ND	ND	45.1	1	50
			MDL	2.5	2.5	2.5	2.5	2.5	3	2.5	2.5	2.5	~	~	~
	KE.PHI.Wall.Blue.085	10/31/2011	*Result*	ND	ND	ND	ND	ND	1	1.4	ND	ND	2.7	1	50
			MDL	0.49	0.49	0.49	0.49	0.49	0	0.49	0.49	0.49	~	~	~
	KE.PHI.Floor.Gray.086	10/31/2011	*Result*	ND	ND	ND	ND	ND	**330**	**93**	ND	ND	**423**	1	50
			MDL	25	25	25	25	25	25	25	25	25	~	~	~
	KE.PHI.252-CON 0-0.5in	10/25/2012	*Result*	ND	ND	ND	ND	ND	1.7	0.62	ND	ND	2	1	50
			MDL	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	~	~	~
	KE.PHI.253.CON. 0.5-1in	10/25/2012	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	~	~	~
	KE.GLI.Wall.White.Top.087	10/26/2011	*Result*	ND	ND	ND	ND	ND	26	5.9	ND	ND	31.9	1	50
			MDL	2.2	2.2	2.2	2.2	2.2	2	2.2	2.2	2.2	~	~	~
	KE.GLI.Wall.Blue.Bottom.088	10/26/2011	*Result*	4.3	ND	ND	ND	ND	19	5.1	ND	ND	28.4	1	50
			MDL	1.5	1.5	1.5	1.5	1.5	2	1.5	1.5	1.5	~	~	~
*	KE.PHI.Window Frame.Gray.089	10/31/2011	*Result*	ND	ND	ND	ND	ND	23	5.5	ND	ND	28.5	1	50
			MDL	2.5	2.5	2.5	2.5	2.5	3	2.5	2.5	2.5	~	~	~
*	KE.PHE.Siding.Pink.090	10/31/2011	*Result*	ND	ND	ND	ND	ND	8	ND	ND	ND	8.4	1	50
			MDL	1	1	1	1	1	1	1	1	1	~	~	~

See page 15 for notes

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

	Location	Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
*	KE.PHE.Siding.White.091	10/31/2011	*Result*	ND	ND	ND	ND	ND	1	ND	ND	ND	1.3	1	50
			MDL	0.75	0.75	0.75	0.75	0.75	1	0.75	0.75	0.75	~	~	~
	KE.UL2.Floor.Red.092	10/31/2011	*Result*	ND	ND	ND	ND	ND	**310**	**86**	ND	ND	**396**	1	50
			MDL	12	12	12	12	12	12	12	12	12	~	~	~
	KE.UL2.199.CON.0-0.5in	9/17/2012	*Result*	ND	ND	ND	ND	0.63	2	ND	ND	ND	3.0	1	50
			MDL	0.48	0.48	0.48	0.48	0.48	0	0.48	0.48	0.48	~	~	~
	KE.UL2.Floor.Red.093	10/31/2011	*Result*	ND	ND	ND	ND	ND	**210**	**66**	ND	ND	**276**	1	50
			MDL	5	5	5	5	5	5	5	5	5	~	~	~
	KE.UL2.197.CON.0-0.5in	9/17/2012	*Result*	ND	ND	ND	ND	1.8	7	ND	ND	ND	9.1	1	50
			MDL	0.87	0.87	0.87	0.87	0.87	1	0.87	0.87	0.87	~	~	~
	KE.UL2.Column.Blue.094	10/31/2011	*Result*	ND	ND	ND	ND	ND	**7,500**	**3,100**	ND	ND	**10,600**	1	50
			MDL	1000	1000	1000	1000	1000	1,000	1000	1000	1000	~	~	~
	KE.UL2.196.CON.0-0.5in	9/17/2012	*Result*	ND	ND	ND	ND	**17**	**64**	ND	ND	ND	**81**	1	50
			MDL	9.1	9.1	9.1	9.1	9.1	9	9.1	9.1	9.1	~	~	~
	KE.UL2.245.CON. 0.5-1in	10/25/2012	*Result*	ND	ND	ND	0.97	ND	3.8	0.61	ND	ND	5	1	50
			MDL	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	~	~	~
	KE.UL2.Column.White.095	10/31/2011	*Result*	ND	ND	ND	ND	ND	**11,000**	**4,300**	ND	ND	**15,300**	1	50
			MDL	1500	1500	1500	1500	1500	1,500	1500	1500	1500	~	~	~
	KE.UL2.198.CON.0-0.5in	9/17/2012	*Result*	ND	ND	ND	ND	11	43	ND	ND	ND	**54**	1	50
			MDL	4.8	4.8	4.8	4.8	4.8	5	4.8	4.8	4.8	~	~	~
	KE.UL2.247.CON. 0.5-1in	10/25/2012	*Result*	ND	ND	ND	0.62	ND	3.5	0.82	ND	ND	5	1	50
			MDL	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	~	~	~
	KE.UL2.DrainPipe.Gray.096	10/31/2011	*Result*	ND	ND	ND	ND	ND	**1,500**	**430**	ND	ND	**1,930**	1	50
			MDL	180	180	180	180	180	180	180	180	180	~	~	~
	KE.UL2.Wall.White.097	10/31/2011	*Result*	ND	ND	ND	ND	ND	**2,200**	**810**	ND	ND	**3,010**	1	50
			MDL	250	250	250	250	250	250	250	250	250	~	~	~
	KE.UL2.194.CON.0-0.5in	9/17/2012	*Result*	ND	ND	ND	ND	38	**130**	ND	ND	ND	**168**	1	50
			MDL	18	18	18	18	18	18	18	18	18	~	~	~
	KE.UL2.243.CON. 0.5-1in	10/25/2012	*Result*	ND	ND	ND	4.3	ND	5.6	ND	ND	ND	10	1	50
			MDL	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	~	~	~
*	KE.UL2.Elevator Frame.098	10/31/2011	*Result*	ND	ND	ND	ND	ND	**5,700**	**2,600**	ND	ND	**8,300**	1	50
			MDL	1100	1100	1100	1100	1100	1,100	1100	1100	1100	~	~	~
	KE.UL2.Floor.Red.099	10/26/2011	*Result*	ND	ND	ND	ND	ND	**160**	39	ND	ND	**199**	1	50
			MDL	5	5	5	5	5	5	5	5	5	~	~	~
	KE.UL2.195.CON.0-0.5in	9/17/2012	*Result*	ND	ND	ND	ND	1.2	5	ND	ND	ND	6.10	1	50
			MDL	0.87	0.87	0.87	0.87	0.87	1	0.87	0.87	0.87	~	~	~

See page 15 for notes

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

	Location	Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
	KE.UL2.Floor.Red.100	10/26/2011	*Result*	ND	ND	ND	ND	ND	**61**	16	ND	ND	**77**	1	50
			MDL	5	5	5	5	5	5	5	5	5	~	~	~
	KE.UL2.191.CON. 0-0.5in	9/17/2012	*Result*	ND	ND	ND	ND	0.37	2	ND	ND	ND	2	1	50
			MDL	0.18	0.18	0.18	0.18	0.18	0	0.18	0.18	0.18	~	~	~
	KE.UL2.Floor.Red.101	10/31/2011	*Result*	ND	ND	ND	ND	ND	**1,700**	**620**	ND	ND	**2,320**	1	50
			MDL	200	200	200	200	200	200	200	200	200	~	~	~
	KE.UL2.193.CON.0-0.5in	9/17/2012	*Result*	ND	ND	ND	ND	ND	0	ND	ND	ND	0.32	1	50
			MDL	0.095	0.095	0.095	0.095	0.095	0	0.095	0.095	0.095	~	~	~
	KE.UL2.Column.White.102	10/31/2011	*Result*	ND	ND	ND	ND	ND	**2,300**	**580**	ND	ND	**2,880**	1	50
			MDL	250	250	250	250	250	250	250	250	250	~	~	~
	KE.UL2.192.CON. 0-0.5in	9/17/2012	*Result*	ND	ND	ND	ND	7.3	29	ND	ND	ND	36	1	50
			MDL	4.8	4.8	4.8	4.8	4.8	5	4.8	4.8	4.8	~	~	~
*	KE.UL2.Window Frame.Gray.103	10/26/2011	*Result*	ND	ND	ND	ND	ND	**2,900**	**850**	ND	ND	**3,750**	1	50
			MDL	500	500	500	500	500	500	500	500	500	~	~	~
*	KE.UL2.Wall.White.104	10/26/2011	*Result*	ND	ND	ND	ND	ND	1,800	440	ND	ND	**2,240**	1	50
			MDL	250	250	250	250	250	250	250	250	250	~	~	~
	KE.UL2.Ceiling.White.105	10/31/2011	*Result*	13	ND	ND	ND	ND	**120**	21	ND	ND	**154**	1	50
			MDL	10	10	10	10	10	10	10	10	10	~	~	~
	KE.UL2.203.CON.0-0.5in	9/19/2012	*Result*	ND	ND	ND	ND	0.7	2	ND	ND	ND	2.4	1	50
			MDL	0.36	0.36	0.36	0.36	0.36	0	0.36	0.36	0.36	~	~	~
	KE.UL2.Ceiling.White.106	10/31/2011	*Result*	7.6	ND	ND	ND	ND	110	20	ND	ND	**138**	1	50
			MDL	5	5	5	5	5	5	5	5	5	~	~	~
	KE.UL2.204.CON. 0-0.5 in	9/19/2012	*Result*	ND	ND	ND	ND	0.31	1.8	ND	ND	ND	2.1	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	~	~	~
	KE.UL2.244.CON. 0.5-1in	10/25/2012	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	~	~	~
	KE.UL2.Ceiling.White.107	10/31/2011	*Result*	ND	ND	ND	ND	ND	**5,300**	**1,200**	ND	ND	**6,500**	1	50
			MDL	500	500	500	500	500	500	500	500	500	~	~	~
	KE.UL2.202.CON.0-0.5in	9/17/2012	*Result*	ND	ND	ND	ND	**58**	**230**	ND	ND	ND	**288**	1	50
			MDL	38	38	38	38	38	38	38	38	38	~	~	~
	KE.UL2.246.CON. 0.5-1in	10/25/2012	*Result*	ND	ND	ND	3.2	ND	10	ND	ND	ND	13	1	50
			MDL	2	2	2	2	2	2	2	2	2	~	~	~
	KE.UL2.Ceiling.White.108	10/31/2011	*Result*	ND	ND	ND	ND	ND	**5,200**	**1,500**	ND	ND	**6,700**	1	50
			MDL	500	500	500	500	500	500	500	500	500	~	~	~
	KE.UL2.201.CON.0-0.5in	9/17/2012	*Result*	ND	ND	ND	ND	**43**	**120**	ND	ND	ND	**163**	1	50
			MDL	17	17	17	17	17	17	17	17	17	~	~	~
	KE.UL2.248.CON. 0.5-1in	10/25/2012	*Result*	ND	ND	ND	2.6	ND	9.2	ND	ND	ND	12	1	50
			MDL	2	2	2	2	2	2	2	2	2	~	~	~

See page 15 for notes

Location		Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
	KE.UL2.Ceiling.White.109	10/31/2011	*Result*	ND	ND	ND	ND	ND	**1,600**	**490**	ND	ND	**2,090**	1	50
			MDL	290	290	290	290	290	290	290	290	290	~	~	~
	KE.UL2.200.CON.0-0.5in	9/17/2012	*Result*	ND	ND	ND	ND	**100**	**330**	ND	ND	ND	**430**	1	50
			MDL	48	48	48	48	48	48	48	48	48	~	~	~
	KE.UL2.249.CON. 0.5-1in	10/25/2012	*Result*	ND	ND	ND	ND	ND	38	ND	ND	ND	38	1	50
			MDL	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	~	~	~
	KE.UL1.Ceiling.White.110	10/31/2011	*Result*	ND	ND	ND	ND	ND	37	7	ND	ND	44	1	50
			MDL	5	5	5	5	5	5	5	5	5	~	~	~
	KE.UL1.Ceiling.White.111	10/31/2011	*Result*	6.2	ND	ND	ND	ND	**63**	8.3	ND	ND	**78**	1	50
			MDL	5	5	5	5	5	5	5	5	5	~	~	~
	KE.UL1.188.CON. 0-0.5in	9/14/2012	*Result*	ND	ND	ND	ND	ND	1	ND	ND	ND	0.6	1	50
			MDL	0.091	0.091	0.091	0.091	0.091	0	0.091	0.091	0.091	~	~	~
	KE.UL1.Ceiling.White.112	10/31/2011	*Result*	5.7	ND	ND	ND	ND	**110**	21	ND	ND	**137**	1	50
			MDL	5	5	5	5	5	5	5	5	5	~	~	~
	KE.UL1.189.CON. 0-0.5in	9/14/2012	*Result*	ND	ND	ND	ND	0.44	0.95	ND	ND	ND	1.39	1	50
			MDL	0.091	0.091	0.091	0.091	0.091	0	0.091	0.091	0.091	~	~	~
	KE.UL1.Ceiling.White.113	10/31/2011	*Result*	ND	ND	ND	ND	ND	41	6.1	ND	ND	47	1	50
			MDL	4.9	4.9	4.9	4.9	4.9	5	4.9	4.9	4.9	~	~	~
	KE.UL1.190.CON. 0-0.5in	9/17/2012	*Result*	ND	ND	ND	ND	0.41	0.55	ND	ND	ND	0.96	1	50
			MDL	0.087	0.087	0.087	0.087	0.087	0	0.087	0.087	0.087	~	~	~
	KE.UL1.Ceiling.White.114	10/31/2011	*Result*	ND	ND	ND	ND	ND	**240**	**91**	ND	ND	**331**	1	50
			MDL	9.9	9.9	9.9	9.9	9.9	10	9.9	9.9	9.9	~	~	~
	KE.GLI.230.CON. 0-0.5in	10/24/2012	*Result*	ND	ND	ND	ND	ND	2.3	0.56	ND	ND	3	1	50
			MDL	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	~	~	~
	KE.GLI.231.CON. 0.5-1 in	10/24/2012	*Result*	ND	ND	ND	ND	ND	0.5	ND	ND	ND	1	1	50
			MDL	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	~	~	~
	KE.UL1.Ceiling.White.115	10/31/2011	*Result*	ND	ND	ND	ND	ND	**100**	45	ND	ND	**145**	1	50
			MDL	5.5	5.5	5.5	5.5	5.5	6	5.5	5.5	5.5	~	~	~
	KE.GLI.234.CON. 0-0.5in	10/24/2012	*Result*	ND	ND	ND	0.64	ND	3.6	0.6	ND	ND	5	1	50
			MDL	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	~	~	~
	KE.GLI.235.CON. 0.5-1in	10/24/2012	*Result*	ND	ND	ND	ND	ND	1	ND	ND	ND	1	1	50
			MDL	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	~	~	~
	KE.UL1.Ceiling.White.116	10/31/2011	*Result*	ND	ND	ND	ND	ND	17	3.4	ND	ND	20	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	~	~	~

See page 15 for notes

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

Location		Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
	KE.GLI.Ceiling.White.117	10/31/2011	*Result*	ND	ND	ND	ND	ND	**690**	**130**	ND	ND	**820**	1	50
			MDL	50	50	50	50	50	50	50	50	50	~	~	~
	KE.GLI.254.CON. 0-0.5in	10/26/2012	*Result*	ND	ND	ND	ND	ND	88	14	ND	ND	**102**	1	50
			MDL	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	~	~	~
	KE.GLI.255.CON. 0.5-1in	10/26/2012	*Result*	ND	ND	ND	ND	ND	40	ND	ND	ND	40	1	50
			MDL	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	~	~	~
	KE.GLE.Door Frame.GrayCaulk.118	11/01/2011	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	0.83	0.83	0.83	0.83	0.83	1	0.83	0.83	0.83	~	~	~
	KE.GLE.Escape Hatch.White Caulk.119	11/01/2011	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	0.77	0.77	0.77	0.77	0.77	1	0.77	0.77	0.77	~	~	~
	KE.GLE.Window Frame.Gray Caulk.120	11/01/2011	*Result*	ND	ND	ND	ND	ND	2	ND	ND	ND	2	1	50
			MDL	50	50	50	50	50	50	50	50	50	~	~	~
	KE.GLE.Escape Hatch.Gray Caulk.121	11/01/2011	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	0.49	0.49	0.49	0.49	0.49	0	0.49	0.49	0.49	~	~	~
	KE.GLE.Louver Frame.Gray Caulk.122	11/01/2011	*Result*	ND	ND	ND	ND	ND	**660**	**140**	ND	ND	**800**	1	50
			MDL	33	33	33	33	33	33	33	33	33	~	~	~
	KE.GLE.Louver Frame.Brown Caulk.123	11/01/2011	*Result*	ND	ND	ND	ND	ND	1	ND	ND	ND	1.2	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	~	~	~
	KE.GLE.Wall Spacer.Gray Caulk.124	11/01/2011	*Result*	ND	ND	ND	ND	ND	6	1.6	ND	ND	7.9	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	~	~	~
	KE.GLE.Wall Spacer.White Caulk.125	11/01/2011	*Result*	ND	ND	ND	ND	ND	7	13	ND	ND	20	1	50
			MDL	1.7	1.7	1.7	1.7	1.7	2	1.7	1.7	1.7	~	~	~
	KE.GLE.Window Frame.White Caulk.126	11/01/2011	*Result*	ND	ND	ND	ND	ND	34	9.6	ND	ND	44	1	50
			MDL	5	5	5	5	5	5	5	5	5	~	~	~
	KE.GLE.Window Frame.Gray Caulk.127	11/01/2011	*Result*	ND	ND	ND	ND	ND	21	9.6	ND	ND	31	1	50
			MDL	5.0	5.0	5.0	5.0	5.0	5	5.0	5.0	5.0	~	~	~
	KE.GLE.Wall Spacer.Gray Caulk.128	11/01/2011	*Result*	3.4	ND	ND	ND	ND	24	4.4	ND	ND	32	1	50
			MDL	0.99	0.99	0.99	0.99	0.99	1	0.99	0.99	0.99	~	~	~
	KE.ULE.Roof Spacer.White Caulk.129	11/01/2011	*Result*	ND	ND	ND	ND	ND	**130**	14	ND	ND	**144**	1	50
			MDL	4.9	4.9	4.9	4.9	4.9	5	4.9	4.9	4.9	~	~	~
	KE.UL2.250.CON. 0-0.5in	10/25/2012	*Result*	ND	ND	ND	ND	ND	0.27	ND	ND	ND	ND	1	50
			MDL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	~	~	~
	KE.ULE.251.CON. 0.5-1in	10/25/2012	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	~	~	~
	KE.ULE.Window Frame.Gray Caulk.130	11/01/2011	*Result*	ND	ND	ND	ND	ND	**130**	**97**	ND	ND	**227**	1	50
			MDL	5.0	5.0	5.0	5.0	5.0	5	5.0	5.0	5.0	~	~	~
	KE.PHE.Window Frame.Gray Caulk.131	11/01/2011	*Result*	ND	ND	ND	ND	ND	**130**	43	ND	ND	**173**	1	50
			MDL	13.0	13.0	13.0	13.0	13.0	13	13.0	13.0	13.0	~	~	~

See page 15 for notes

Summary of PCB Analytical Results
Chelsea Creek Headworks
MWRA Contract No. 7206

	Location	Sampling Date	PCBs	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268	Total PCBs (mg/kg)	High Occupancy Use Standard	Excluded PCB Product Threshold
	KE.ULE.Window Frame.Gray Caulk.132	11/01/2011	*Result*	ND	ND	ND	ND	13	4	ND	ND	ND	17	1	50
			MDL	2.6	2.6	2.6	2.6	2.6	3	2.6	2.6	2.6	~	~	~
	KE.GLI.Wall.Noise Control Panel.133	11/01/2011	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	0.57	0.57	0.57	0.57	0.57	1	0.57	0.57	0.57	~	~	~
	KE.GLI.Wall.Noise Control Panel Mastic.134	11/01/2011	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	~	~	~
	KE.GLI.Lounge.Filter.135	11/01/2011	*Result*	ND	ND	ND	ND	ND	5	ND	ND	ND	5	1	50
			MDL	0.87	0.87	0.87	0.87	0.87	1	0.87	0.87	0.87	~	~	~
	KE.GLI.Control Room.Filter.136	11/01/2011	*Result*	ND	ND	ND	ND	ND	2	ND	ND	ND	2	1	50
			MDL	0.78	0.78	0.78	0.78	0.78	1	0.78	0.78	0.78	~	~	~
***	KE.UL2.Wall.Blue(Top).139	11/01/2011	*Result*	ND	ND	ND	ND	ND	**1,900**	**780**	ND	ND	**2,680**	1	50
			MDL	130	130	130	130	130	130	130	130	130	~	~	~
	KE.LL2.Wall.Yellow(Bottom).140	11/01/2011	*Result*	ND	ND	ND	ND	ND	**45,000**	**15,000**	ND	ND	**60,000**	1	50
			MDL	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	~	~	~
	KE.LL2.157.CON. 0-0.5in	9/11/2012	*Result*	ND	ND	ND	ND	19	**73**	ND	ND	ND	**92**	1	50
			MDL	9.5	9.5	9.5	9.5	9.5	10	9.5	9.5	9.5	~	~	~
	KE.UL1.Floor.Red(Top).141	11/01/2011	*Result*	ND	ND	ND	ND	ND	47	15	ND	ND	**62**	1	50
			MDL	5.0	5.0	5.0	5.0	5.0	5	5.0	5.0	5.0	~	~	~
	KE.LL1.Floor.Red(Bottom).142	11/01/2011	*Result*	ND	ND	ND	ND	ND	**190**	**51**	ND	ND	**241**	1	50
			MDL	5.0	5.0	5.0	5.0	5.0	5	5.0	5.0	5.0	~	~	~
	KE.LL1.148.CON. 0-0.5in	9/10/2012	*Result*	ND	ND	ND	ND	ND	7	ND	ND	ND	7	1	50
			MDL	0.91	0.91	0.91	0.91	0.91	1	0.91	0.91	0.91	~	~	~
*	KE.GLE.Flag Pole.White.143	11/01/2011	*Result*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	50
			MDL	0.83	0.83	0.83	0.83	0.83	1	0.83	0.83	0.83	~	~	~
*	KE.GLE.Communications Tower.Orange.144	11/01/2011	*Result*	ND	ND	ND	ND	ND	9	2.9	ND	ND	12	1	50
			MDL	0.49	0.49	0.49	0.49	0.49	0	0.49	0.49	0.49	~	~	~
	KE.UL1.Ceiling.White.145	10/24/2011	*Result*	6.5	ND	ND	ND	ND	**60**	7.6	ND	ND	**74**	1	50
			MDL	2.6	2.6	2.6	2.6	2.6	3	2.6	2.6	2.6	~	~	~
	KE.UL1.187.CON. 0-0.5in	9/14/2012	*Result*	ND	ND	ND	ND	ND	0	ND	ND	ND	0.1	1	50
			MDL	0.095	0.095	0.095	0.095	0.095	0	0.095	0.095	0.095	~	~	~
	KE.GLI.UL1.Locker Room.Filter.146	10/24/2011	*Result*	ND	ND	ND	ND	ND	2	ND	ND	ND	2	1	50
			MDL	0.88	0.88	0.88	0.88	0.88	1	0.88	0.88	0.88	~	~	~

1. ND = Not Detected
2. MDL = Method Detection Limit
3. High Occupancy Use is defined in CFR Vol. 63, No. 124, Section 761.3, p. 35437
4. * = Painted surface was non-porous, no substrate sample collected
5. **= No substrate sample collected due to inaccessibility of sample locations
6. *** = No substrate sample collected due to proximity to other substrate sample locations
7. **** = Substrate sample collected from 2010 location

See page 15 for notes

Massachusetts Water Resources Authority
Remote Headworks Upgrade Design and Construction Administration Services, MWRA Contract No. 7206

Risk Based Disposal Plan – Chelsea Creek Headworks

Appendix F

- Quality Assurance Report

01740453.0000

MALCOLM PIRNIE | ARCADIS
The Water Division of ARCADIS

MWRA Chelsea Creek PCB Data: R.I. Analytical Laboratories Work Order 1012-23784

A modified Tier I validation was performed on the analytical results for the PCB analyses of seventeen solid samples of various building materials collected December 1, 2010 at the MWRA Chelsea Creek Headworks. Samples included a variety of paints, caulks, Densil tape and frame materials. Samples were submitted to R.I. Analytical Laboratories, Warwick, RI for analyses for PCBs as Aroclors in accordance with EPA Method 8082A. The data review was performed to evaluate reported results of quality assurance measures and qualify the data if appropriate. Laboratory summary reports were used for the validation; raw data have not been reviewed. Elements reviewed included:

Holding Times
All samples were extracted within the 14 day holding time for solids and analyzed within the 40 day holding time.

Surrogate Recoveries
Surrogate recoveries were acceptable for all samples.

Based on reported quality assurance measures, results are acceptable as reported.

ARCADIS
Chelmsford, MA

EMSL Report: Work Order 01105574 MWRA Chelsea Creek

A modified Tier II validation was performed on the analytical results for the PCB analyses of one hundred sixty two (162) solid samples and six hexane equipment blanks collected during the period October 24 through November 1, 2011. Samples included a variety of building materials and paint from floors, ceilings, walls and windows. Samples were submitted to EMSL Analytical, Westmont, NJ for analyses for PCBs as Aroclors in accordance with EPA Method 8082A. The data validation was performed to evaluate reported results of quality assurance measurements and qualify the data if appropriate. Laboratory summary reports were used for the validation; raw data have not been reviewed.

Elements reviewed included:

Holding Times
All samples were extracted within the 14 day holding time for solids and analyzed within the 40 day holding time.

Laboratory Control Samples/Laboratory Control Duplicate Samples (LCS/LCSD)
All PCB LCS/LCS duplicate sets prepared and analyzed with the samples met method acceptance criteria. Recoveries from the LCS/LCSD for the hexane equipment blank samples were also within control limits. No data qualifications were required.

Method and Equipment Blanks
A low level of Aroclor 1254, 1 mg/kg, was present in the equipment blank KE.EB.02. This blank was collected on October 25, 2012. All detections of Aroclor 1254 in samples from that date were greater than 10 times the blank. No data were qualified. One method blank also had detectable Aroclor 1254 at 0.057 mg/kg. The level in the blank was below the reporting limit for program samples, and no detections were reported within a factor of 10 of the blank. No Aroclors were detected in the other PCB method blanks or the other the equipment blanks.

Surrogate Recoveries
With limited exceptions, samples in this set contained PCBs at levels that meant sample extracts had to be diluted before analysis. The dilutions placed the surrogates below reporting limits, and in most samples, recoveries could not be determined. All recoveries of surrogates in those building material samples where they could be reported were acceptable. Recoveries of one of the two surrogates in two of the equipment blanks fell below the control limit, but no PCBs were detected in the blanks and no data were qualified.

Interferences
No interferences were reported for sample analyses.

Matrix Spikes/Matrix Spike Duplicate Analyses (MS/MSD)
Matrix spike/matrix spike duplicate samples were prepared from samples KE.LL1.Wall White 009, KE. MS01, KE.MS02, KE.MSD.03, KE.MS04, KE.MS05, KE.MS06, and KE.LL1.Floor Red 073. All samples contained native Aroclors and required dilution for analysis. After dilution, the spike levels for Aroclors

1016 and 1260 fell below the reporting limits for the sample and/or below 1/4th the sample concentration. Control limits for recoveries and precision are not applicable in these instances. Apparent recoveries of the spiked PCBs were elevated due to contributions to the peaks from the native PCBs. Data are not qualified since the level of the spikes was significantly lower than detected Aroclors in the samples.

Field Duplicates

Field duplicates of KE.LL1.Floor.Red.012, KE.LL2.Floor.Red.039, KE.GLI.Column.White.072, KE.UL1.Floor.Red.080, KE.UL2.Wall.White.097, and KE.UL2.Ceiling.White.105 were included in this set. Relative percent differences (RPDs) for detected Aroclors were above the EPA recommended limit of 50% for Aroclors 1254 and 1260 in KE.LL2.Floor.Red.039 and KE.GLI.Column.White.072 and for Aroclors 1016, 1254 and 1260 in KE.UL2.Ceiling.White.105. Results for the affected Aroclors in the parent samples have been qualified as estimated (J). The precision of detected Aroclors in the other field duplicate samples was within 50% RPD.

Additionally, extra portions of samples submitted by Arcadis that were intended for matrix spike/matrix spike duplicate analyses were also analyzed prior to the addition of Aroclors for the MS/MSD analyses. This resulted in an additional set of duplicate analyses. All results in these duplicates fell within 50% RPD.

Based on reported quality assurance measures, results are acceptable as qualified above.

ARCADIS
Chelmsford, MA

MWRA PCB Data Review: con-test Report for Work Order 12J1124

A modified Tier II validation was performed on the analytical results for the PCB analyses of fifty-four (54) concrete samples and three hexane equipment blanks collected during the period October 22 through 26, 2012. Samples were submitted to con-test Analytical, East Longmeadow, MA. Analyses were conducted for PCBs as Aroclors by dual column gas chromatography with electron capture detection in accordance with EPA Method 8082A. Data validation was conducted by Arcadis to evaluate reported results of quality assurance measurements and to qualify sample data if warranted. Laboratory summary reports were used for the validation; raw data have not been reviewed.

Elements reviewed included:

Holding Times
The concrete samples were extracted within the 14 day holding time for solids and analyzed within the 40 day holding time.

Laboratory Control Samples and Laboratory Control Duplicates (LCS/LCSD)
PCB laboratory control samples and their duplicates that were prepared and analyzed with the concrete samples met method acceptance criteria. Recoveries from the LCS/LCSD for the hexane equipment blank samples were also within control limits. No data qualifications were required.

Method and Equipment Blanks
No Aroclors were detected in the PCB method blanks for samples or in the equipment blanks.

Surrogate Recoveries
PCB surrogates recovered within method limits for those samples that did not require dilution due to elevated levels of PCBs. Surrogates were diluted out in several samples as listed below:

KE.LL1.205.CON 0-0.5
KE.LL1.208.CON 0-0.5
KE.LL1.209.CON 0-0.5
KE.LL1.211.CON 0-0.5
KE.LL2.212.CON 0-0.5
KE.LL2.213.CON 0-0.5
KE.LL2.214.CON 0-0.5
KE.LL2.215.CON 0-0.5
KE.LL2.216.CON 0-0.5
KE.LL2.218.CON 0-0.5
KE.LL2.221.CON 0-0.5
KE.LL2.222.CON 0-0.5
KE.LL2.223.CON 0-0.5
KE.LL2.224.CON 0-0.5
KE.LL2.225.CON 0-0.5
KE.UL2.202.CON.0-0.5
KE.LL2.226.CON 0-0.5
KE.LL2.227.CON 0-0.5
KE.GLI.228.CON 0-0.5
KE.GLI.236.CON 0-0.5
KE.GLI.237.CON 0-0.5
KE.GLI.238.CON 0-0.5
KE.GLI.240.CON 0-0.5
KE.ULI.242.CON 0-0.5
KE.UL2.249.CON 0-0.5
KE.GLI.254.CON 0-0.5
KE.GLI.255.CON 0-0.5
KE DUP 304
KE DUP 305

These samples had elevated levels of PCBs. No qualifications were required.

Interferences

The laboratory noted that several samples in this set had incompletely resolved Aroclors. Aroclor 1242 was determined to be the closest pattern match, so results were quantified and reported as 1242. Results for Aroclor 1242 in samples as listed below are qualified as estimated (J) based on interferences and the uncertain Aroclor identification.

KE.LL2.212.CON.0-0.5
KE.LL2.213.CON.0-0.5
KE.LL2.219.CON.0-0.5
KE.LL2.220.CON.0-0.5
KE.LL2.213.CON.0-0.5
KE.LL2.219.CON.0-0.5
KE.LL2.220.CON.0-0.5
KE.LL2.224.CON.0-0.5
KE.LL2.225.CON.0-0.5
KE.LL2.226.CON.0-0.5
KE.LL2.227.CON.0-0.5
KE.GLI.234.CON.0-0.5
KE.GLI.236.CON.0-0.5
KE.GLI.239.CON.0-0.5
KE.GLI.241.CON.0-0.5
KE.GLI.243.COK0-0.5
KE.UL2.245.CON.0-0.5
KE.UL2.246.CON.0-0.5

Matrix Spikes

Matrix spike/matrix spike duplicate samples were prepared from samples KE.LL1.205.CON,0-0.5, KE.GLI.232.con.0-0.5, and KE.GLI.238.CON.0-0.5. All selected samples contained native Aroclors and due to required dilutions, the reporting limits were at or above the level of the spikes. Apparent recoveries of the spiked PCBs were above control limits due to contributions to the peaks from the native Aroclors. Recovery and precision criteria are not applicable when the spiking level falls at or below the sample reporting limit, and data have not been qualified.

Field Duplicates

Field duplicates for KE.GLI.232.CON.0-0.5 and KE.GLI.238.CON.0-0.5 were included in this set. Aroclor 1254 differed in the KE.GLI.238 sample by greater than 100%, but results fell below 5 times the sample reporting limit. Control limits are not applicable in this instance. Precision for detected all other Aroclors fell within EPA's recommended range of 50% relative percent difference (RPD).

Summary

Based on reported quality assurance measures, results are acceptable as qualified above.

ARCADIS

Chelmsford, MA

MWRA PCB Data Review: con-test Report for Work Order 12I0648

A modified Tier II validation was performed on the analytical results for the PCB analyses of sixteen (16) concrete samples collected on September 10 and 11, 2012. Samples were submitted to con-test Analytical , East Longmeadow, MA for analyses for PCBs as Aroclors in accordance with EPA Method 8082A. Dta validation was conducted by Arcadis to evaluate reported results of quality assurance measurements and to qualify sample data if warranted. Laboratory summary reports were used for validation; raw data have not been reviewed.

Elements reviewed included:

Holding Times
The concrete samples were extracted within the 14 day holding time for solids and analyzed within the 40 day holding time.

Laboratory Control Sample/Laboratory Control Sample Duplicate(LCS/LCSD)
The PCB LCS/LCS duplicate met acceptance criteria for recovery and precision. No qualifications were required.

Method and Equipment Blanks
The PCB method blank was below reporting limit for the target analytes. No qualifications were applied.

No equipment blank samples were submitted with the sample delivery group.

Surrogate Recoveries
PCB surrogates recovered within method limits for those samples that did not require dilution due to elevated levels of PCBs. Surrogates were diluted out in samples as listed below:

KE.LL1.147.CON 0-0.5	KE.LL2.157.CON 0-0.5
KE.LL1.150.CON 0-0.5	KE.LL2.158.CON 0-0.5
KE.LL1.154.CON 0-0.5	KE.DUP301

No qualifications were applied.

Matrix Spikes
PCB matrix spike/matrix spike duplicates prepared from KE.LL2.158 0-0.5m were analyzed. Aroclor 1260 spiked into the samples demonstrated apparent high recoveries that can be attributed to overlap of peaks from the Aroclor 1254 native in the sample. The level spiked fell below the reporting limit for the sample which was diluted prior to analysis. Recovery and precision criteria are not applicable in this case. Sample data were not qualified.

Field Duplicates
Field duplicates from KE.LL2.158.CON,0-0.5 were included in the set. submitted with the sample delivery group. Results for detected Aroclors agreed within EPA's recommended range of 50& relative difference for solids.

Interferences
The laboratory noted that all samples had incompletely resolved Aroclors. Aroclor 1254 was noted to have the closest pattern match, so results were quantified and reported as 1254. Results for Aroclor 1254 are qualified as estimated (J) in all samples from this set based on interferences and the equivocal identification

Based on reported quality assurance measures, results are acceptable as qualified above.

.

ARCADIS
Chelmsford, MA

MWRA PCB Data Review: con-test Report for Work Order 12I0649

A modified Tier II validation was performed on the analytical results for the PCB analyses of fifteen (15) concrete samples and one hexane equipment blank collected on September 11 and 12, 2012. Samples were submitted to con-test Analytical for analyses for PCBs as Aroclors in accordance with EPA Method 8082A. The data validation was performed to evaluate reported results of quality assurance measurements and qualify the data if appropriate. Laboratory summary reports were used for the validation; raw data have not been reviewed.

Elements reviewed included:

Holding Times
The polychlorinated biphenyl (PCB) samples were extracted within the 14 day holding time for solids and analyzed within the 40 day holding time.

Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD)
The PCB LCS/LCSD prepared and analyzed with the concrete samples met method acceptance criteria for recovery and precision. Recoveries of spikes and surrogates from the LCS/LCSD prepared with the hexane blank were above control limits. No Aroclors were detected in the hexane blank and no qualifications were applied.

Method and Equipment Blanks
No Aroclors were detected in either the PCB method blank or the hexane equipment blank.

Surrogate Recoveries
PCB surrogates recovered within method limits for those samples that did not require dilution due to elevated levels of PCBs. Surrogates were diluted out in samples as listed below:

KE.LL2.162.CON 0-0.5	KE.LL2.172.CON 0-0.5
KE.LL2.163.CON 0-0.5	KE.LL2.173.CON 0-0.5
KE.LL2.165.CON 0-0.5	KE.LL2.174.CON 0-0.5
KE.LL2.168.CON 0-0.5	KE.LL2.175.CON 0-0.5
KE.LL2.171.CON 0-0.5	KE.LL2.176.CON 0-0.5

No qualifications were applied.

Interferences
The laboratory noted that all samples in this set had incompletely resolved Aroclors. Aroclor 1254 was determined to be the closest pattern match, so results were quantified and reported as 1254. Results for Aroclor 1254 in all samples are qualified as estimated (J) based on interferences and the uncertain identification.

Matrix Spikes
PCB matrix spike/matrix spike duplicate samples were prepared from KE.LL2.70 0-0.5m. Aroclors 1016 and 1260 that were spiked into the samples demonstrated apparent high recoveries. The lab attributed this to overlap of PCB peaks from the Aroclors native in the sample. Aroclor 1254, the only PCB reported

in the sample, was already qualified as estimated due to interferences. No further qualifications were applied.

Field Duplicates
A field duplicate for KE.LL2.170.CON.0-0.5, (KE. 302DUP) was included in the sample set reported under con-test 12I0651. Results for Aroclor 1254 compared within 18% relative difference. Aroclor 1248 was detected in the field duplicate below 5 times the reporting limit but not detected in the parent sample. Precision criteria are not applicable at this low level.

Based on reported quality assurance measures, results are acceptable as qualified above.

ARCADIS

Chelmsford, MA

MWRA Data review: con-test Report for Work Order 12I0650

A modified Tier II validation was performed on the analytical results for the PCB analyses of sixteen (16) concrete samples collected on September 13 and 14, 2012. Samples were submitted to con-test Analytical in East Longmeadow, MA for analyses for PCBs as Aroclors in accordance with EPA Method 8082A. Data validation was conducted by Arcadis to evaluate reported results of quality assurance measurements and qualify sample data if warranted. Laboratory summary reports were used for the validation; raw data have not been reviewed.

Elements reviewed included:

Holding Times
The polychlorinated biphenyl (PCB) samples were extracted within the 14 day holding time for solids and analyzed within the 40 day holding time.

Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD)
The PCB laboratory control sample and duplicate prepared and analyzed with the concrete samples met method acceptance criteria for recovery and precision.

Method and Equipment Blanks
No Aroclors were detected in the PCB method blank. No field or equipment blank was included in this set.

Surrogate Recoveries
PCB surrogates recovered within method limits for those samples that did not require dilution due to elevated levels of PCBs. Surrogates were diluted out in samples as listed below:

KE.LL1.177.CON 0-0.5
KE.LL1.179.CON 0-0.5
KE.LL1.180.CON 0-0.5
KE.LL1.181.CON 0-0.5
KE.UL1.182.CON 0-0.5
KE.UL2.192.CON 0-0.5

No qualifications were applied.

Interferences
The laboratory noted that all samples in this set had incompletely resolved Aroclors. Aroclor 1254 was determined to be the closest pattern match, so results were quantified and reported as 1254. Results for Aroclor 1254 are qualified as estimated (J) in all samples based on interferences and the uncertain identification.

Matrix Spikes
A PCB matrix spike and matrix spike duplicate samples were prepared from KE.UL1.183. 0-0.5m. Aroclors 1016 and 1260 that were spiked into the samples demonstrated apparent high recoveries. The laboratory attributed this to overlap of peaks from the Aroclors native in the sample. In addition, the spike level for both Aroclors fell below the sample reporting limit, and recovery and precision criteria are

not applicable at this level. Aroclor 1254 was the only PCB reported in the sample and this result was already qualified as estimated due to interferences. No further qualifications were applied.

Field Duplicates
No field duplicates were included in this set.

Based on reported quality assurance measures, results are acceptable as qualified above.

ARCADIS

Chelmsford, MA

MWRA PCB Data Review: con-test Report for Work Order 12I0651

A modified Tier II validation was performed on the analytical results for the PCB analyses of fourteen(14) concrete samples and two hexane equipment blanks collected during the period September 12 through 19, 2012. Samples were submitted to con-test Analytical, East Longmeadow, MA for analyses for PCBs as Aroclors in accordance with EPA Method 8082A. The data validation was performed to evaluate reported results of quality assurance measurements and qualify the data if appropriate. Laboratory summary reports were used for the validation; raw data have not been reviewed.

Elements reviewed included:

Holding Times
The concrete and equipment blank samples were extracted within the 14 day holding time for solids and analyzed within the 40 day holding time.

Laboratory Control Sample/Laboratory Control Sample Duplicate
The PCB laboratory control sample and its duplicate prepared and analyzed with the concrete samples met method acceptance criteria for recovery and precision. Recoveries from the LCS/LCSD for the hexane equipment blank samples were above control limits for both Aroclors spiked and for the surrogates. Since no Aroclors were detected in the equipment blanks, no data qualifications were required.

Method and Equipment Blanks
No Aroclors were detected in the PCB method blank for samples or the equipment blanks.

Surrogate Recoveries
PCB surrogates recovered within method limits for those samples that did not require dilution due to elevated levels of PCBs. Surrogates were diluted out in samples listed below:

KE.UL2.194.CON 0-0.5
KE.UL2.196.CON 0-0.5
KE.UL2.198.CON 0-0.5
KE.UL2.200.CON 0-0.5
KE.UL2.201.CON 0-0.5
KE.UL2.202.CON.0-0.5
KE.UL2.192.CON 0-0.5

No qualifications were applied.

Interferences
Measurements of Aroclor 1248 on the two columns differed more than the control limit of 40% relative difference (RPD) in the following samples:

KE.UL2.196.CON.0-0.5
KE.UL2.197.CON.0-0.5
KE.UL2.198.CON.0-0.5
KE.UL2.199.CON.0-0.5

The laboratory reported the higher concentration from the two columns. These results likely include contributions from interferences and data have been qualified as estimated.

The laboratory further noted that all samples in this set except KE. UL2. CON 193.0-0.5 had incompletely resolved Aroclors. Aroclor 1254 was determined to be the closest pattern match, so results were quantified and reported as 1254. Results for Aroclor 1254 are qualified as estimated (J) in all samples due to noted interferences and uncertain identification.

Matrix Spikes
No PCB matrix spike/matrix spike duplicate samples were prepared from samples in this set.

Field Duplicates
Field duplicates for two concrete samples were included in this set. The related field samples were reported under different work orders and results are discussed in those validation summaries.

Based on reported quality assurance measures, results are acceptable as qualified above.

ARCADIS
Chelmsford, MA

Massachusetts Water Resources Authority
Remote Headworks Upgrade Design and Construction Administration Services, MWRA Contract No. 7206

Risk Based Disposal Plan – Chelsea Creek Headworks

Appendix G

- Laboratory Analytical Data Sheets – January 2011 Air Sampling

01740453.0000

MALCOLM PIRNIE | ARCADIS
The Water Division of ARCADIS

GALSON LABORATORIES

Data Coordinator
Environmental Health & Engineering
117 Fourth Avenue
Needham Heights, MA 02494

February 09, 2011

DOH ELAP# 11626 Account# 12151 Login# L232964

Dear Data Coordinator:

Enclosed are the revised analytical results for the samples received by our laboratory on February 01, 2011. Per your request, filter and tube results are now reported together. Please note that this revision replaces the previous version of this report. All test results meet the quality control requirements of AIHA and NELAC unless otherwise stated in this report. All samples on the chain of custody were received in good condition unless otherwise noted.

Results in this report are based on the sampling data provided by the client and refer only to the samples as they were received at the laboratory.

Please contact Amanda Frateschi at (877) 482-5227, if you would like any additional information regarding this report.

Thank you for using Galson Laboratories.

Sincerely,

Galson Laboratories

Mary G Unangst

Mary G. Unangst
Laboratory Director

Enclosure(s)

GALSON LABORATORIES

LABORATORY ANALYSIS REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.galsonlabs.com

Client : Environmental Health & Engineering
Site : NS
Project No. : 17604

Date Sampled : 28-JAN-11
Date Received : 01-FEB-11
Date Analyzed : 02-FEB-11 - 03-FEB-11
Report ID : 679954

Account No.: 12151
Login No. : L232964

Polychlorinated Biphenyls

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3
120715	L232964-1	1244	<0.05	<0.05	<0.06	<0.00005
120716	L232964-2	1206	<0.05	<0.05	<0.06	<0.00005
120717	L232964-3	1711	<0.05	<0.05	<0.06	<0.00003
120718	L232964-4	1681	<0.05	<0.05	<0.06	<0.00003
120719	L232964-5	1482	<0.05	<0.05	<0.06	<0.00004
120720	L232964-6	1692	<0.05	<0.05	<0.06	<0.00003
120721	L232964-7	1530	<0.05	<0.05	<0.06	<0.00004
120722	L232964-8	1581	<0.05	<0.05	<0.06	<0.00004
120731	L232964-9	NA	<0.05	<0.05	<0.06	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 0.05 ug
Analytical Method : mod. NIOSH 5503; GC-ECD
OSHA PEL (TWA) : NA
Collection Media : Filter & Tube

Submitted by: mlr
Approved by : nkp
Date : 07-FEB-11 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

GALSON LABORATORIES

LABORATORY FOOTNOTE REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.galsonlabs.com

Client Name : Environmental Health & Engineering
Site :
Project No. : 17634

Date Sampled : 28-JAN-11
Date Received: 01-FEB-11
Date Analyzed: 02-FEB-11 - 03-FEB-11

Account No.: 12151
Login No. : L232964

Unless otherwise noted below, all quality control results associated with the samples were within established control limits.

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceeding the final result column may have been rounded in order to fit the report format and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

L232964 (Report ID: 679996):
Total ug corrected for a desorption efficiency of 89%.
Samples were analyzed for the following 8 Aroclors: 1016, 1221, 1232, 1242, 1248, 1254, 1260 and 1268.
SOPs: GC-SOP-18151

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

DATE: 1/28/11

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

TO: Galson Labs

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # SL ~~16682~~ 17604

The cost of this analysis will be covered by EH&E Purchase Order # ~~1800592~~ 1001694

For EH & E Data Coordinator - URGENT DATA ☐ 226-391 filter

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
120715	Air	NIOSH 5503 for	1,244 Liters
120716		PCBs	1,206
120717			1,711
120718			1,681
120719			1,482
120720			1,692
120721			1,530
120722			1,581
120731			∅

Special instructions:

☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES** ☒ Electronic transfer - datacoordinator@eheinc.com

☒ Additional report recipient Sletourneau@eheinc.com

Each signatory please return one copy of this form to the above address

Relinquished by: [signature] of Environmental Health & Engineering, Inc. Date: 1/28/11

Received by: [signature] of (company name) Galson Date: 2/1/11 1107

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Lab Data

Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

Page 1 of 1

WHITE-EH&E FILE COPY YELLOW-LAB COPY PINK-PROJECT MANAGER COPY GOLD-DATA COORDINATOR COPY

Massachusetts Water Resources Authority
Remote Headworks Upgrade Design and Construction Administration Services, MWRA Contract No. 7206

Risk Based Disposal Plan – Chelsea Creek Headworks

Appendix H

- Specification Sheet for Encapsulation

01740453.0000

MALCOLM PIRNIE | ARCADIS
The Water Division of ARCADIS

Construction

Sikagard® 550W Elastocolor

High performance, anti-carbonation, crack-bridging coating

Description	Sikagard 550W Elastocolor is a elastomeric, crack-bridging, anti-carbonation, acrylic protective coating. Sikagard 550W Elastocolor provides protection to reinforced concrete from the ingress of carbon dioxide and other aggressive gasses. It offers high resistance to chlorides and other waterborne salts and excellent UV light resistance. Sikagard 550W Elastocolor will not act as vapor barrier and will enhance the aesthetic appearance of the structure.
Where to Use	Protective, crack-bridging coating for concrete, mortar, stucco, masonry, and exterior finishing systems subject to cracking/dynamic movement. On building and civil engineering structures subject to cracking. As the top coat in complete repair and protection systems.
Advantages	■ Can bridge dynamically moving cracks ■ Excellent carbonation barrier ■ Water vapor permeable ■ Provides resistance to weathering, frost and deicing salts ■ Crack bridging properties maintained at low temperatures ■ Excellent long term UV light resistance ■ Can be applied by brush, roller, or airless spray ■ Good color stability ■ Extremely resistant to dirt pick up and mildew ■ Nontoxic, nonflammable as a system ■ Easily maintained silk finish
Coverage	Theoretical yield per coat: 100 sq. ft./gal/coat. Recommended 'wet' film thickness: 16 mils/coat. Recommended 'dry' film thickness: 8 mils/coat. Normal coating system is two coats at a total dry film thickness of 16 mils. Consumption is dependent on porosity of substrate. In addition, allowance must be made for surface profile, unavoidable variation in applied film thickness, loss and waste. Sikagard Elastic Base Coat can be used as a first coat in a two coat system of Sikagard 550W Elastocolor.
Packaging	5 gallon, re-closable plastic pails.

Typical Data *(Material and curing conditions at 73°F (23°C) and 50% R.H.)*

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf Life	2 years in original unopened container.
Storage Conditions	Store dry at 40°-95°F (4°-35°C) Condition material to 60°-75°F (15°-25° C) before using. Protect from freezing. If frozen discard.
Colors	469 standard colors. Custom color-matching available.
Pot Life	Indefinite, provided proper care is taken in protecting the system from moisture, freezing, contamination, or evaporation.

Solids Content	**by weight**	**by volume**
Smooth 550W	62%	55%
Sikagard 552W	20%	17%

Tensile Properties (ASTM D-412 modified)

Tensile Strength	190 psi
Elongation at Break	820% at 73°F (23°C)
Tensile Strength at 0°F (-18°C)	1000 psi
Elongation at Break at 0°F (-18°C)	340%

Waiting Time (between coats) and Curing Rates	**45°F (8°C)**	**68°F (20°C)**	**85°F (30°C)**
Sikagard 552W Primer+Sikagard 550W	24 hours	12 hours	6 hours
Sikagard 550W	12 hours	8 hours	6 hours
Rain resistant (at 75% R.H.)	24 hours	4 hours	2 hours

(Note: Overcoating old coatings will increase the waiting times by 100%)

Water Vapor Diffusion (at 16 mils = 400 microns dry film thickness)
μ - value H_2O (diffusion coefficient) = 2,146
SdH_2O (equivalent air thickness) = 2.6 ft. (0.8 m)

Carbon dioxide diffusion (at 16 mils = 400 microns dry film thickness)

	***After 2,000 hours**
μ - value CO_2 (diffusion coefficient) =	214,000
R (equivalent air thickness) =	299 ft. (91 m)
Sc (Equivalent concrete thickness) =	9 inches (23 cm)

*accelerated weathering

Crack-Bridging (at 16 mils = 400 microns DFT)

Static (at -4°F/-20°C)	30 mils (0.75 mm)
Dynamic>1000 cycles (at -4°F/-20°C)	12 mils (0.3 mm)

Moisture Vapor Permeability (ASTM E-96) 14.5 Perms

Resistance to Wind Driven Rain (TT-C-555B) No passage of water through the coating

Flame Spread and Smoke Development (ASTM E-84-94)
Flame Spread: 5 Smoke Development: 5 Class Rating: A

Weathering (ASTM G-23) 10,000 hours Excellent, no chalking or cracking

Construction

How to Use

Surface preparation

All surfaces to be coated must be dry, clean, sound, and frost free with curing compound residues and any other foreign matter removed. An open textured sandpaper like surface is ideal (CSP-3). Where necessary, surfaces should be prepared mechanically by blast cleaning or high speed pressure waterjetting. Allow adequate time for drying. Bugholes, cracks or irregularities of substrate should be filled and leveled with SikaTop, MonoTop or acrylic surface fillers as appropriate.

Priming

All porous areas or concrete with excessive porosity should be primed using Sikagard 552W Primer or SikaLatex R to allow easy application of Sikagard 550W Elastocolor.

Mixing

Stir all materials to ensure uniformity using a slow speed (400-600 rpm) drill and ½" jiffy style mixing paddle. To minimize color variation when using multiple units, blend two pails of Sikagard 550W Elastocolor. Use one pail and maintain the second pail to repeat this procedure (boxing) for the entire application.

Application

Any areas of glass or other surfaces should be masked. Recommended application temperatures (ambient and substrate) 45° - 95°F (7°-35°C). Sikagard 550W Elastocolor can be applied by brush, roller, or spray over entire area moving in one direction. At lower temperatures and high humidity, waiting time will be prolonged. At higher temperatures, work carefully to maintain a wet edge. As with all coatings job site mock-ups should always be completed to confirm acceptability of workmanship and material.

NOTE: To achieve a dry film thickness of 16 mils, two coats should be anticipated. For maximum adhesion, (especially on porous substrates) the use of Sikagard 552W is recommended. Sikagard 552W primer can be applied by brush or roller. Brushing provides more even and pore free coats and better penetration.

Limitations

- Not designed for use as a traffic bearing surface
- Substrates must be dry prior to application
- Minimum age of concrete prior to application is 14 days, depending on curing and drying conditions (moisture content must be below 5%)
- Minimum age of SikaTop or MonoTop prior to application is three days, depending on curing and drying conditions (moisture content must be below 5%)
- Allow sufficient time for substrate to dry after rain or other inclement conditions
- Protect from freezing. If frozen, discard
- Sikagard 550W Elastocolor should not be applied at relative humidity greater than 90%, or if rain is forecast within the specified rain resistance period
- Maximum crack width 1/32"
- During application, regular monitoring of the wet film thickness and material consumption is advised to ensure that the correct layer thickness is achieved. When over-coating existing coatings, compatibility and adhesion testing is recommended
- When over-coating Sikaflex sealants, a prime coat of Sikagard 550W Elastocolor accent base coat may be necessary over the sealant to minimize dirt pick up on cured coating.
- Do not store Sikagard 550W Elastocolor in direct sunlight for prolonged periods
- Strong winds can cause shrinkage if material is applied at lower temperatures
- Ensure that the primer is thoroughly dry before over-coating to prevent formation of bubbles and blisters, particularly in warmer weather
- Not recommended for roofing

Caution

IRRITANT: Contains Zinc Oxide (CAS #1314-13-2). May cause eye/skin/respiratory irritation. May be harmful if swallowed. **Strictly follow all usage, handling and storage instructions.**

Handling and Storage

Avoid direct contact. Wear personal protective equipment (chemical resistant goggles/gloves/clothing) to prevent direct contact with skin and eyes. Use only in well ventilated areas. Open doors and windows during use. Use a properly fitted NIOSH respirator if ventilation is poor. Wash thoroughly with soap and water after use. Remove contaminated clothing and launder before reuse.

First Aid

Eyes: Hold eyelids apart and flush thoroughly with water for 15 minutes. **Skin:** Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. **Inhalation:** Remove to fresh air. **Ingestion:** Do not induce vomiting. Dilute with water. Contact physician. **In all cases contact a physician immediately if symptoms persist.**

Clean Up

Use personal protective equipment (chemical resistant gloves/ goggles/clothing). Without direct contact, remove spilled or excess product and placed in suitable sealed container. Dispose of excess product and container in accordance with applicable environmental regulations.

KEEP CONTAINER TIGHTLY CLOSED • KEEP OUT OF REACH OF CHILDREN • NOT FOR INTERNAL CONSUMPTION • FOR INDUSTRIAL USE ONLY

All information provided by Sika Corporation ("Sika") concerning Sika products, including but not limited to, any recommendations and advice relating to the application and use of Sika products, is given in good faith based on Sika's current experience and knowledge of its products when properly stored, handled and applied under normal conditions in accordance with Sika's instructions. In practice, the differences in materials, substrates, storage and handling conditions, actual site conditions and other factors outside of Sika's control are such that Sika assumes no liability for the provision of such information, advice, recommendations or instructions related to its products, nor shall any legal relationship be created by or arise from the provision of such information, advice, recommendations or instructions related to its products. The user of the Sika product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with the full application of the product(s). Sika reserves the right to change the properties of its products without notice. All sales of Sika product(s) are subject to its current terms and conditions of sale which are available at **www.sikausa.com** or by calling 800-933-7452.

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Technical Data Sheet, product label and Material Safety Data Sheet which are available online at www.sikausa.com or by calling Sika's Technical Service Department at 800-933-7452. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Technical Data Sheet, product label and Material Safety Data Sheet prior to product use.

LIMITED WARRANTY: Sika warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Technical Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

Visit our website at www.sikausa.com **1-800-933-SIKA NATIONWIDE**

Regional Information and Sales Centers. For the location of your nearest Sika sales office, contact your regional center.

Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: 800-933-7452
Fax: 201-933-6225

Sika Canada Inc.
601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697-2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537

Sika and Sikagard, SikaTop and MonoTop are registered trademarks. Printed in Camada.

Massachusetts Water Resources Authority
Remote Headworks Upgrade Design and Construction Administration Services, MWRA Contract No. 7206

Risk Based Disposal Plan – Chelsea Creek Headworks

Appendix I

- Written Certification

01740453.0000

MALCOLM PIRNIE | ARCADIS
The Water Division of ARCADIS

Massachusetts Water Resources Authority

Risk-Based Disposal Plan, Chelsea Creek Headworks
MWRA Contract No. 7206
Owner Certification

The Massachusetts Water Resources Authority, the owner of the property where the cleanup Site is located and the party conducting the cleanup certify that all sampling plans documenting sampling collection procedures, sample preparation procedures, extraction procedures and instrumental/chemical analysis procedures used to assess and/or characterize the polychlorinated biphenyl (PCB) contamination at the cleanup Site, are stored on file and available for United States Environmental Protection Agency (USEPA) inspection, as described below:

Document Storage Location:

Control Room
Chelsea Creek Headworks Facility
340 Marginal Street
Chelsea, Massachusetts

Property Owner & Party Conducting Cleanup

_____
Authorized Signature

_____
Name of Authorized Representative

_____
Title