Tables

Table 1-1: E.W. Brown Station Summary of Completed Interim Remedial Measures (IRM)
Herrington Lake Phase I Field Sampling Technical Memorandum
Mercer County, Kentucky

Area	IRM Description	Schedule of Implementation
Gypsum Processing Plant (GPP)	Installed a liner for the Gypsum Pond and the area draining to the pond (55,600 SF total) to prevent infiltration of gypsum-impacted water in the area of the GPP Liner system consists of the following, from bottom to top: 4 inches of dense graded aggregate (DGA) over grade (rough rock surface) – to support membrane 60-mil LLDPE flexible membrane liner between two geotextile layers 6-inch fabric form concrete mat	Completed: Late 2015
West Quarry (non-Coal Cumbustion Residue (CCR))	Drained accumulated storm water Filled the quarry with inert structural fill (i.e., soil and rock) Graded surface to promote drainage Covered surface with topsoil and vegetated to minimize erosion	Completed: April 2016
Auxiliary Pond Discharge Pipeline	Replaced existing sections of the HDPE pipeline and manholes (based on 2014 evaluation by AMEC) Reduced the number of manholes Tightness tested system on completion.	Completed: November 2016
Main Pond	Final Capping of Existing CCR Installation of the cap will be phased so that it is integrated into construction of the new lined landfill over the top of the covered existing CCR See Main Ash Pond Closure Plan (AMEC 2014) for final design details	Phases I, II, and III of the capping work is complete
	Abutment Drain Collection[1] Installed pumping station to capture the north abutment drain discharge and transfer it to the Auxiliary Pond[1]	Complete: July 2014
	Toe Drain Collection[1] Installed collection system for discharges at the toe of the Main Pond Dam and to transfer them to the Auxiliary Pond[1] Constructed a cut-off wall across the valley downstream of the toe	Completed: April 2016

Notes:

1. Transfer of discharges to the Auxiliary Pond is intended as a short-term IRM. Once the design and construction of a new wastewater treatment unit for certain wastewater streams from the plant are completed to comply with newly promulgated effluent limitation guidelines, water pumped from the toe of the dam will likely be treated with other remaining wastewater streams (AMEC 2015a) as necessary to comply with Kentucky Pollution Discharge Elimination System [KPDES] discharge requirements).

Table 2-1. Herrington Lake CAP Targeted Field Sampling Plan Summary
Herrington Lake Phase I Technical Memorandum and Phase II Plan
Mercer County, Kentucky

Herrington Lake Areas		Targeted Number of Sample Transects, Locations, and Sampling Areas						Sum of Samples By Media				Targeted Sum of Samples
Phase I: Lower Herrington Lake (LHL)												
Area	Transect ID	SW Transects	SD Locations	PW Locations	AV Locations	AI Locations	Fish Sampling Areas	SW Samples (Stratified)[a]	SW Samples (Overturn)[a]	Fish Samples[b]	PW, AV, AI, SD Samples	Sum of Samples (All Media)
Rocky Run Embayment	LHL-1	1	2	0	1	1	1	2	1	6	4	13
Dix River Dam	LHL-2	1	2	0	1	1	1	2	1	6	4	13
Dix River Main Channel	LHL-3, 4, 6	3	6	0	3	3	3	6	3	18	12	39
Cane Run Embayment	LHL-5	1	2	0	1	1	1	2	1	6	4	13
Curds Inlet	CI-1,2,3,4; Curds-1, 2; Curds NB	4	12	15	4	4	1	4	4	6	35	49
HQ Inlet	HQ-1	1	3	3	1	1	1	1	1	2	8	12
Hardin Inlet	Hardin-1	1	0	3	0	0	0	1	1	0	3	5
Target number of samples for this area		12	27	21	11	11	8	18	12	44	70	144
Phase I: Middle Herrington Lake (MHL)												
Area	Transect ID	SW Transects	SD Locations	PW Locations	AV Locations	AI Locations	Fish Sampling Areas	SW Samples (Stratified)[a]	SW Samples (Overturn)[a]	Fish Samples[b]	PW, AV, AI, SD Samples	Sum of Samples (All Media)
Cane Run SW	MHL-1	0	0	0	0	0	1	0	0	6	0	6
Mocks Branch SW	MHL-3	0	0	0	0	0	1	0	0	6	0	6
Target number of samples for this area		0	0	0	0	0	2	0	0	12	0	12
Phase I Dix River - Downstream from Herrington Lake Dam												
Area	Transect ID	SW Transects	SD Locations	PW Locations	AV Locations	AI Locations	Fish Sampling Areas	SW Samples (Stratified)[a]	SW Samples (Overturn)[a]	Fish Samples[b]	PW, AV, AI, SD Samples	Sum of Samples (All Media)
Dix River		1	2	0	1	1	1	1	0	6	4	11
Phase I Program Summary												
Phase I Program Summary		SW Transects	SD Locations	PW Locations	AV Locations	AI Locations	Fish Sampling Areas	SW Samples (Stratified)[a]	SW Samples (Overturn)[a]	Fish Samples[b]	PW, AV, AI, SD Samples	Sum of Samples (All Media)
Total Program Summary		13	29	21	12	12	11	19	12	62	74	167
with Fish Ovary Samples										10		

Table 2-1. Herrington Lake CAP Targeted Field Sampling Plan Summary
Herrington Lake Phase I Technical Memorandum and Phase II Plan
Mercer County, Kentucky

Notes:

a	Water sampling during summer stratification will involve two sample depths if water is stratified, and one sample depth during summer or fall/winter overturn if water is not stratified.
b	Fish sampling will include 3 species, 2 composites /species. HQ Inlet will be bluegill fish only. Dix River downstream from the dam will include three species of fish, including a cold water species, if present. Fish ovary samples will be collected from largemouth bass and from catfish from each of the LHL fish sampling stations. This will amount to 10 ovary samples for two species from 5 fish sampling stations.
c	The Phase I sampling effort may be sufficient for risk management decision-making. As such, the need for the Phase II sampling will be based on the Phase I sampling results.
AI	Aquatic invertebrates
AV	Aquatic vegetation
Fish	Fish study area
NB	North Bank
PW	Pore water
SD	Sediment
SW	Surface water

Table 3-1A: Number of Phase I Fish Samples to Characterize Conditions in Lower and Middle Herrington Lake
Herrington Lake Phase I Field Sampling Technical Memorandum
Mercer County, Kentucky

Fish Sampling Region	Bluegill and Green Sunfish Sample 1 of 2	Bluegill and Green Sunfish Sample 2 of 2	Bass Sample 1 of 2	Bass and Brown Trout Sample 2 of 2	Bass and Trout Ovary	Catfish and Sucker Sample 1 of 2	Catfish and Sucker Sample 2 of 2	Catfish and Sucker Ovary
CI (Curds Inlet)	BG (4)	BG (3)	LMB (2)	LMB (3)	1	CHCF (2)	FHCF (2)	1
HQ1 (HQ Inlet)	BG (3)	BG (4)	NS*	NS*	NS*	NS*	NS*	NS*
LHL1 (Rocky Run)	BG (3)	BG (4)	LMB (2)	LMB (2)	1	CHCF (1)	FHCF (1)	0
LHL2 (Dix Dam)	BG (3)	BG (5)	LMB (3)	KYB (4)	1	CHCF (1)	FHCF (1)	0
LHL3	BG (3)	BG (4)	KYB (3)	KYB (3)	2	CHCF (1)	CHCF (2)	1
LHL4	BG (4)	BG (4)	KYB (2)	LMB (2)	2	CHCF (1)	FHCF (1)	0
LHL5 (Entrance to Mallard Cove / Cane Run)	BG (3)	BG (4)	LMB (3)	LMB (3)	1	CHCF (2)	CHCF (3)	1
LHL6	BG (3)	BG (3)	KYB (3)	LMB (2)	2	CHCF (2)	CHCF (2)	1
MHL1	BG (4)	BG (4)	LMB (2)	KYB (2)	1	FHCF (2)	FHCF (1)	1
MHL3	BG (3)	BG (4)	LMB (2)	LMB (3)	1	CHCF(2)	CHCF (2)	1
DR (Dix River)	BG/GS (3)	GS(4)	LMB (1)	BT (1)	2	SS (2)	HS (1)	1

Notes:

LMB Largemouth Bass
CHCF Channel Catfish
FHCF Flathead Catfish
BG Bluegill
BT Brown Trout
GS Green Sunfish
SS Spotted Sucker
HS Northern Hogsucker

} These four substitute species were collected at Dix River only

(X) Indicates the number of fish that comprise the composite sample
NS* Not Sampled - As per the CAP, HQ Inlet was a sunfish-only sampling region

Table 3-1A Continued: Total Number of Fish and Samples Collected During Phase I Sampling:

Species	Number of Fish Collected	Total Number of Samples
Bluegill	74	21
Green sunfish	7	2
Largemouth bass	30	12
Channel catfish	21	12
Kentucky (Spotted) bass	17	6
Flathead catfish	8	6
Spotted sucker	2	1
Northern hogsucker	2	1
Brown trout	1	1
Total:	162	62
Pan fish:	81	23
Larger fish:	81	39

Table 3-1B: Number of Phase I Samples for Each Media (Excluding Fish) to Characterize Conditions in Lower Herrington Lake

Lower Herrington Lake, Herrington Lake Corrective Action Plan
Mercer County, Kentucky

Regions ↓	Herrington Lake Areas		Stratification					Overturn
	Sampling Location ID	Location Description	Sediment Pore water	Sediment	Aquatic Vegetation	Aquatic Invertebrates	Surface Water[a]	Surface Water[b]
Curds Inlet, Lower Herrington Lake	Curds NB	Upper Curds Inlet	1	grain-size only	—	—	—	—
	Curds 1		1	1	—	—	—	—
	CI-1		1	5[c]	1	1	2[c]	1
	Curds 2	Middle Curds Inlet	3	grain-size only	—	—	—	—
	CI-2		2	4[c]	1	1	2[c]	1
	CI-3		1	3	1	2[c]	2[c]	1
	CI4	Lower / Mouth of Curds Inlet	—	4[c,d]	2[c]	1	2[d]	2[c]
Lower Herrington Lake Outside Curds Inlet	HQ-1	HQ Inlet	3[c]	3	1	1	1	1
	HI-1	Hardin Inlet	4[c,d]	grain-size only	—	—	1	1[d]
	LHL-1	Rocky Run Embayment	—	2	1	2[c]	2	1
	LHL-2	Dix Dam	—	2	1	1	3	1
	LHL-3	Lower Herrington Lake Main Channel	—	2	1	1	3	1
	LHL-4		—	2	1	1[d]	3	1
	LHL-5	Entrance to Mallard Cove / Cane Run	—	2	1	1	3	1
	LHL-6	Lower Herrington Lake Main Channel	—	2	1	1	3	1
Dix River Below Dix Dam	DR-1	Dix River Below Dix Dame	—	1	1	1	1	—
Total for Each Sample Medium =			16[c]	33[c]	13[c]	14[c]	28[c]	13[c]

Notes: Each surface water sample included one field-filtered and one non-filtered set of containers, each constituting a unique sample ID. In total, 94 unique surface water sample IDs were shipped and received by the laboratory.

a Surface water sampling during summer stratification involved one sample for each stratified surface water layer.

b Surface water sampling during overturn involved one sample at 25 ft. BWS (As per the 2017 REH CAP).

c Sample counts include field duplicates but do not include MS/MSD or field equipment blanks. Sediment grain-size only locations are also not included in this count.

d Additional MS/MSD sampled were collected but not incuded in this sample count.

LHL Lower Herrington Lake

— Not Sampled

Table 4-1A: Laboratory Analytical Methods for Fish, Surface Water, Sediment, and Aquatic Invertebrates and Vegetation
Herrington Lake Phase I Field Sampling Technical Memorandum
Mercer County, Kentucky

Test	Methods	Surface Water	Sediment	Pore Water[a]	Aquatic Vegetation	Aquatic Plants	Fish Tissue
Total Metals (selenium, arsenic, cadmium, lead, zinc, iron, boron, and magnesium)	USEPA 200.8 and 6010/6020	✓	✓	--	--	--	--
Dissolved Metals (selenium, arsenic, cadmium, lead, zinc, iron, boron, and magnesium)	USEPA 200.8 and 6010/6021	✓	--	✓	--	--	--
Metals (selenium, arsenic, cadmium, lead, and zinc)	USEPA 6010/6020	--	--	--	✓	✓	✓
Mercury	USEPA 7470 and EPA 7471	✓[1]	✓	✓	✓	✓	✓
Methylmercury	USEPA 1630 and USEPA 1631E	✓	✓	✓	✓	✓	✓
Sulfate	USEPA 300.0	✓	✓	✓	--	--	--
Total Organic Carbon (TOC)	Lloyd Kahn (sediment) SM 5310 (water)	✓	--	--	--	--	--
Dissolved Organic Carbon (DOC)	SW 9060 / SM 5310	✓	--	✓	--	--	--
Hardness	2340C	✓	--	✓	--	--	--
Percent Solids	SM 2540G	--	✓	--	--	--	--
Percent Lipids	Lab SOP	--	✓	--	--	✓	✓
Percent Moisture	Lab SOP	--	✓	--	✓	✓	✓
Speciated selenium	HPLC with ICP-MS	--	--	✓	--	--	--
Speciated arsenic	1632	--	--	✓	--	--	✓
Sediment grain size	Grain size	--	✓	--	--	--	--

Notes:
USEPA United States Environmental Protection Agency
HPLC High Performance Liquid Chromatography
ICP-MS Inductively Coupled Plasma/Mass Spectrometry
SOP Standard Operating Procedure
1 Non-Filtered Only
a See Table 4-1B: Pore Water Laboratory Analytical Methods by Sample Media for detailed Pore Water Methods

Table 4-1B: Pore Water Laboratory Analytical Methods by Sample Media
Herrington Lake Phase I Field Sampling Technical Memorandum
Mercer County, Kentucky

Test	Methods	PW001-CI1C-171103	PW001-CI2A-171104	PW001-CI2C-171103	PW001-CI3C-171103	PW001-CURDS2A-171104	PW001-CURDS2B-171103	PW001-CURDS2C-171103	PW001-CI3C-171103
Speciated Selenium	HPLC with ICP-MS	✓	✓	✓	✓	✓	✓	✓	✓
Speciated Arsenic	USEPA 1632A	✓	✓	✓	✓	✓	✓	✓	✓
Dissolved Metals	USEPA 200.8	✓	✓	✓	✓	✓	✓	✓	✓
Mercury	USEPA 1630	✓	✓	✓	✓	✓	✓	✓	✓
Mercury	USEPA 7470	✓	✓	✓	✓	✓	✓	✓	✓
Methylmercury	USEPA 1631E	✓	✓	✓	✓	✓	✓	✓	✓
Sulfate	USEPA 300.0	✓	✓	✓	✓	✓	✓	✓	✓
Dissolved Organic Carbon (DOC)	SW 9060	✓	NA	✓	✓	✓	✓	✓	✓

Test	Methods	PW001-DUP-171104 (from HQ1C)	PW001-HQ1A-171104	PW001-HQ1B-171104	PW001-HQ1C-171104	PW001-HQ1C-171104 (Field	PW001-HI1A-171102	PW001-HI1B-171103	PW001-HI1C-171101
Speciated Selenium	HPLC with ICP-MS	✓	✓	✓	✓	✓	✓	✓	✓
Speciated Arsenic	USEPA 1632A	✓	✓	✓	✓	✓	✓	✓	✓
Dissolved Metals	USEPA 200.8	✓	✓	✓	✓	✓	✓	✓	✓
Mercury	USEPA 1630	✓	✓	✓	✓	✓	✓	✓	✓
Mercury	USEPA 7470	✓	✓	✓	✓	✓	✓	✓	✓
Methylmercury	USEPA 1631E	✓	✓	✓	✓	✓	✓	✓	NA
Sulfate	USEPA 300.0	✓	✓	✓	✓	✓	NA	✓	NA
Dissolved Organic Carbon (DOC)	SW 9060	✓	✓	✓	✓	NA	NA	✓	NA

Notes:

USEPA United States Environmental Protection Agency
HPLC High Performance Liquid Chromatography
ICP-MS Inductively Coupled Plasma/Mass Spectrometry Standard
SOP Operating Procedure
1 Non-Filtered Only
a See Table 4-1A for detailed Pore Water Laboratory Methods
NA Test not preformed due to insufficient sample volume

Table 4-1C: Parent, Field Duplicate, and MS/MSD Sample Relationships
Herrington Lake Phase I Field Sampling Technical Memorandum
Mercer County, Kentucky

Sample Matrix	Sample Location	Parent Sample	QC / Ovary Sample ID	Type
Fish	CI	FF-001(BG)-CI-171004	FF-001(BG)-CI-171004-FD	Field duplicate
Fish	CI	FWB-001(BG)-CI-171004	FWB-001(BG)-CI-171004-FD	Field duplicate
Fish	CI	FF-002(BG)-CI-171004	FF-002(BG)-CI-171004-FD	Field duplicate
Fish	CI	FWB-002(BG)-CI-171004	FWB-002(BG)-CI-171004-FD	Field duplicate
Fish	CI	FF-002(LMB)-CI-171004	FF-002(LMB)-CI-171004-FD	Field duplicate
Fish	CI	FWB-002(LMB)-CI-171004	FWB-002(LMB)-CI-171004-FD	Field duplicate
Fish	CI	FWB-001(LMB)-CI-171004	FO-001(LMB)-CI-171004	Ovary sample
Fish	CI	FWB-001(FHC)-CI-171013	FO-001(FHC)-CI-171013	Ovary sample
Fish	HQ	FF-002(BG)-HQ-171004	FF-002(BG)-HQ-171004-FD	Field duplicate
Fish	HQ	FWB-002(BG)-HQ-171004	FWB-002(BG)-HQ-171004-FD	Field duplicate
Fish	LHL1	FWB-001(LMB)-LHL1-171005	FO-001(LMB)-LHL1-171005	Ovary sample
Fish	LHL2	FF-001(LMB)-LHL2-171005	FF-001(LMB)-LHL2-171005-FD	Field duplicate
Fish	LHL2	FWB-001(LMB)-LHL2-171005	FWB-001(LMB)-LHL2-171005-FD	Field duplicate
Fish	LHL2	FWB-001(KB)-LHL2-171005	FO-001(KB)-LHL2-171005	Ovary sample
Fish	LHL3	FF-001(CC)-LHL3-171005	FF-001(CC)-LHL3-171005-FD	Field duplicate
Fish	LHL3	FWB-001(CC)-LHL3-171005	FWB-001(CC)-LHL3-171005-FD	Field duplicate
Fish	LHL3	FWB-001(KB)-LHL3-171003	FO-001(KB)-LHL3-171003	Ovary sample
Fish	LHL3	FWB-002(KB)-LHL3-171004	FO-002(KB)-LHL3-171004	Ovary sample
Fish	LHL3	FWB-002(CC)-LHL3-171016	FO-002(CC)-LHL3-171016	Ovary sample
Fish	LHL4	FWB-001(LMB)-LHL4-171003	FO-001(LMB)-LHL4-171003	Ovary sample
Fish	LHL4	FWB-001(KB)-LHL4-171003	FO-001(KB)-LHL4-171003	Ovary sample
Fish	LHL5	FF-002(BG)-LHL5-171011	FF-002(BG)-LHL5-171011-MS FF-002(BG)-LHL5-171011-MSD	MS/MSD
Fish	LHL5	FWB-002(BG)-LHL5-171011	FWB-002(BG)-LHL5-171011-MS FWB-002(BG)-LHL5-171011-MSD	MS/MSD
Fish	LHL5	FWB-001(LMB)-LHL5-171007	FO-001(LMB)-LHL5-171007	Ovary sample
Fish	LHL5	FWB-001(CC)-LHL5-171007	FO-001(CC)-LHL5-171007	Ovary sample
Fish	LHL6	FF-002(CC)-LHL6-171007	FF-002(CC)-LHL6-171007-MS FF-002(CC)-LHL6-171007-MSD	MS/MSD
Fish	LHL6	FWB-002(CC)-LHL6-171007	FWB-002(CC)-LHL6-171007-MS FWB-002(CC)-LHL6-171007-MSD	MS/MSD
Fish	LHL6	FF-002(LMB)-LHL6-171011	FF-002(LMB)-LHL6-171011-MS FF-002(LMB)-LHL6-171011-MSD	MS/MSD
Fish	LHL6	FWB-002(LMB)-LHL6-171011	FWB-002(LMB)-LHL6-171011-MS FWB-002(LMB)-LHL6-171011-MSD	MS/MSD
Fish	LHL6	FWB-001(LMB)-LHL6-171011	FO-001(LMB)-LHL6-171011	Ovary sample
Fish	LHL6	FWB-001(KB)-LHL6-171007	FO-001(KB)-LHL6-171007	Ovary sample
Fish	LHL6	FWB-001(CC)-LHL6-171007	FO-001(CC)-LHL6-171007	Ovary sample
Fish	MHL1	FWB-001(KB)-MHL1-171014	FO-001(KB)-MHL1-171014	Ovary sample
Fish	MHL1	FWB-001(FHC)-MHL1-171014	FO-001(FHC)-MHL1-171014	Ovary sample
Fish	MHL3	FF-002(BG)-MHL3-171014	FF-002(BG)-MHL3-171014-MS FF-002(BG)-MHL3-171014-MSD	MS/MSD
Fish	MHL3	FWB-002(BG)-MHL3-171014	FWB-002(BG)-MHL3-171014-MS FWB-002(BG)-MHL3-171014-MSD	MS/MSD
Fish	MHL3	FWB-001(LMB)-MHL3-171014	FO-001(LMB)-MHL3-171014	Ovary sample
Fish	MHL3	FWB-001(CC)-MHL3-171014	FO-001(CC)-MHL3-171014	Ovary sample
Fish	DR	FWB-001(LMB)-DR-171016	FO-001(LMB)-DR-171016	Ovary sample
Fish	DR	FWB-001(BT)-DR-171016	FO-001(BT)-DR-171016	Ovary sample
Fish	DR	FWB-001(HS)-DR-171016	FO-001(HS)-DR-171016	Ovary sample
Surface water	CI1	SW-001(5)-CI1-171014	DUP-01-171014	Field duplicate
Surface water	CI2	SW-001(10)-CI2-171014	DUP-02-171014	Field duplicate
Surface water	CI3	SW-001(10)-CI3-171014	DUP-03-171014	Field duplicate
Surface water	CI4	SW-001(25)-CI4-171212	DUP-01-171212	Field duplicate
Surface water	CI4	SW-001(70)-CI4-171014	SW-001(70)-CI4-171014-MS SW-001(70)-CI4-171014-MSD	MS/MSD
Surface water	CI4	SW-002(20)-CI4-171014	SW-002(20)-CI4-171014-MS SW-002(20)-CI4-171014-MSD	MS/MSD
Surface water	HI1	SW-001(3)-HI1-171211	SW-001(3)-HI1-171211-MS SW-001(3)-HI1-171211-MSD	MS/MSD
Sediment	CI1B	SD-001(15)-CI1B-171011	DUP-06-171011	Field duplicate
Sediment	CI1C	SD-001(12)-CI1C-171011	DUP-05-171011	Field duplicate
Sediment	CI2C	SD-001(13)-CI2C-171011	DUP-04-171011	Field duplicate
Sediment	CI4A	SD-001(76)-CI4A-171102	SD-DUP-009-171102	Field duplicate

Table 4-1C: Parent, Field Duplicate, and MS/MSD Sample Relationships
Herrington Lake Phase I Field Sampling Technical Memorandum
Mercer County, Kentucky

Sample Matrix	Sample Location	Parent Sample	QC / Ovary Sample ID	Type
Sediment	CI4C	SD-001(19)-CI4C-171012	SD-001(19)-CI4C-171012-MS SD-001(19)-CI4C-171012-MSD	MS/MSD
Sediment pore water	HI1C	PW001-HQ1C-171104	PW001-DUP-171104	Field duplicate
Sediment pore water	HI1A	PW001-HI1A-171102	PW001-HI1A-171102-MS PW001-HI1A-171102-MSD	MS/MSD
Aquatic plants	CI4	AV-001-CI4-171005	AV-001-CI4-171005-FD	Field duplicate
Invertebrates	CI3	AI-001-CI3-171005	AI-001-CI3-171005-FD	Field duplicate
Invertebrates	LHL1	AI-001-LHL1-171012	AI-001-LHL1-171012-FD	Field duplicate
Invertebrates	LHL4	AI-001-LHL4-171012	AI-001-LHL4-171012-MS AI-001-LHL4-171012-MSD	MS/MSD

Notes:

AI Aquatic invertebrate
AV Aquatic vegetation
BG Bluegill
BT Brown trout
CC Channel catfish
CI Curds Inlet
DR Dix River
FD Field duplicate
FF Fish fillet
FHC Flathead catfish
FWB Fish whole body
GS Green sunfish
HQ HQ Inlet
HI Hardins Inlet
HS Hognose sucker
LHL Lower Herrington Lake
LMB Largemouth bass
MHL Middle Herrington Lake
MS/MSD Matrix spike/matrix spike duplicate
PW Pore water
QC Quality Control
SD Sediment
SS Spotted sucker
SW Surface water

Table 4-2: Fish Tissue Weights (Pre- and Post-Lyophilization) and Percent Water Removed Recorded by Quality Bioresources, Inc.
Herrington Lake Phase I Field Sampling Technical Memorandum
Mercer County, Kentucky

	Date	March 2, 2018		March 6, 2018		March 12, 2018	
Sample ID	Tray Number	Tray Tare (g)	Pre-Lyophilization Gross Weight (g)	Post-Lyophilization Gross Weight (g)	Percentage of Water Removed (%)	Post-Lyophilization Gross Weight (g)	Percentage of Water Removed (%)
K1712468-003	1	15.61	334.74	104.53	68.77	104.09	68.90
K1712468-006	2	38.56	1240.27	555.75	55.19	554.29	55.31
	3	38.48	1024.27	448.02	56.26	446.80	56.38
	4	38.58	949.85	418.50	55.94	417.55	56.04
K1712468-009	5	15.68	283.87	76.49	73.05	—	
K1712468-010	6	38.53	1040.05	388.43	62.65	387.33	62.76
	7	28.33	496.12	194.19	60.86	193.94	60.91
K1712468-013	8	38.48	1044.11	419.15	59.86	418.28	59.94
	9	38.47	1106.86	471.65	57.39	470.42	57.50
	10	38.56	1113.50	496.70	55.39	494.86	55.56
K1712468-016	11	38.55	793.84	312.92	60.58	313.05	60.57
K1712469-006	12	15.70	217.40	64.04	70.54	—	
K1712469-007	13	28.27	602.31	245.74	59.20	245.52	59.24
K1712469-009	14	15.68	303.75	79.09	73.96	—	
K1712469-010	15	38.57	856.38	315.81	63.12	315.66	63.14
K1712469-015	16	28.20	438.83	120.26	72.60	—	
K1712469-016	17	38.50	1129.35	372.98	66.97	372.00	67.06
K1712471-002	18	15.69	294.50	83.24	71.74	—	
K1712471-003	19	38.59	803.81	306.23	61.90	305.99	61.93
K1712471-005	20	28.09	391.53	104.69	73.26	—	
K1712471-006	21	38.65	1201.55	391.16	67.45	390.18	67.53
K1712471-009	22	15.71	201.36	59.38	70.51	—	
K1712471-010	23	28.17	502.75	205.38	59.15	204.74	59.28
K1712471-013	24	28.25	463.79	148.09	68.07	148.60	67.96
K1712471-014	25	38.55	1136.74	465.68	59.03	464.51	59.14
K1712471-017	26	15.71	276.91	75.58	72.71	—	
K1712471-018	27	38.48	741.63	297.29	59.91	297.39	59.90
K1712474-002	28	38.49	1022.71	317.74	68.93	318.50	68.86
	29	15.62	307.52	104.15	66.13	104.22	66.11
K1712474-003	30	38.65	1064.36	453.73	57.37	453.16	57.42
	31	38.36	1020.82	438.52	57.04	434.60	57.43
	32	38.58	1010.05	431.15	57.31	430.35	57.39
K1712476-006	33	15.61	174.27	49.54	71.57	—	
K1712476-010	34	15.69	128.16	41.21	67.84	41.19	67.86
K1712476-007	35	28.26	431.28	151.67	64.83	151.79	64.80
K1712476-011	36	28.34	391.71	148.48	62.09	148.60	62.06
K1712476-017	37	28.36	374.77	107.13	71.41	—	
K1712476-018	38	38.68	1005.80	380.48	62.17	380.13	62.21
K1712476-021	39	15.67	168.28	44.01	73.85	—	
K1712476-022	40	28.34	392.77	126.87	67.70	126.68	67.75
K1712476-024	41	28.24	320.81	92.58	71.14	—	
k1712476-025	42	38.40	837.20	304.54	63.62	304.51	63.63
K1712477-002	43	28.30	412.00	110.93	73.08	—	
K1712477-003	44	38.51	818.73	331.49	59.51	331.27	59.54
K1712477-006	45	28.30	292.02	89.74	69.27	89.62	69.31
K1712477-007	46	38.39	848.75	341.97	59.71	341.90	59.72
K1712477-009	47	38.47	759.70	232.96	69.34	233.11	69.32
K1712477-010	48	38.42	1097.55	436.40	60.24	436.01	60.27
	49	38.52	1057.25	421.92	60.09	421.26	60.16
	50	2.68	22.37	10.34	53.78	10.32	53.87
K1712477-012	51	28.21	546.20	139.37	74.48	—	
K1712477-013	52	38.30	866.20	349.74	59.62	349.47	59.65
	53	15.69	309.63	116.72	62.30	116.44	62.39
K1712477-016	54	28.35	430.18	118.73	72.40		
K1712477-017	55	42.04	721.26	279.49	61.25	279.35	61.27
	56	41.75	633.60	250.26	60.50	249.94	60.55
K1712479-012	57	28.32	404.63	133.75	66.95	134.27	66.82
K1712479-013	58	41.96	963.53	382.95	60.26	382.54	60.30
K1712479-015	59	28.25	571.88	147.78	74.16	—	

Table 4-2: Fish Tissue Weights (Pre- and Post-Lyophilization) and
Percent Water Removed Recorded by Quality Bioresources, Inc.
Herrington Lake Phase I Field Sampling Technical Memorandum
Mercer County, Kentucky

K1712479-016	60	41.99	859.45	333.66	61.18	333.23	61.23
	61	28.26	646.97	250.47	61.29	249.50	61.44
K1712479-019	62	42.00	629.00	167.15	73.43	—	
K1712479-020	63	41.90	956.12	387.39	59.48	386.42	59.58
	64	15.70	313.36	127.49	59.32	127.11	59.44
K1712479-022	65	15.68	264.60	70.80	73.24	—	
K1712479-023	66	41.78	823.12	313.24	61.94	312.94	61.98

Notes:

g	grams
Shaded Cells	freeze dry process terminated on March 6, 2018 because drying reached at least 70%
—	No Values see above note

Table 5-1A: Bluegill and Green Sunfish Analytical Results (Fillet/Remains, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	CI		CI		CI		CI		CI		CI		CI	
					Sample Date	10/04/2017		10/04/2017		10/04/2017		10/04/2017		10/04/2017		10/04/2017		10/04/2017	
					Sample Type	N		N		N		N		FD		FD		FD	
					Lab ID	K1712350		K1712350		K1712350		K1712350		K1712350		K1712350		K1712350	
					Sample ID	FF-001(BG)-CI-171004		FF-002(BG)-CI-171004		FWB-001(BG)-CI-171004		FWB-002(BG)-CI-171004		FF-001(BG)-CI-171004-FD		FF-002(BG)-CI-171004-FD		FWB-001(BG)-CI-171004-FD	
Analyte	CAS_RN	Method	BASIS	Unit		Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Lipids	LIPIDS	NOAA LIPID	Wet	%		0.57		0.46		6.7		5.4		0.44		0.37		6.3	
Solids (total)	C-008	ZFZDRY	Wet	%		20.8		21.2		33.1		33.3		21.2		21.2		33.1	
Suspended solids (total)	C-009	ZFZDRY	Wet	%															
Weight, Tissue	WTBIOT	UNKNOWN	Wet	g		75.991		100.546		133.762		176.722							
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g		< 0.04	U	0.018	J	0.274		0.402		0.020	J	< 0.039	U	0.277	
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g		< 0.008	U	0.004	J	0.091		0.134		0.004	J	< 0.008	U	0.092	
Arsenic	7440-38-2	SW6020	Dry	mg/kg		0.39	J	0.50	J	0.71		0.98		0.45	J	0.46	J	0.78	
Arsenic	7440-38-2	SW6020	Wet	mg/kg		0.08	J	0.11	J	0.24		0.33		0.10	J	0.10	J	0.26	
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g		< 0.08	U	< 0.08	U	0.21	J	0.30	J	< 0.08	U	0.04	J	0.24	J
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g		< 0.017	U	< 0.017	U	0.07		0.10		< 0.017	U	0.009	J	0.08	
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g		< 0.08	U	< 0.08	U	0.06	J	0.10		< 0.08	U	< 0.08	U	< 0.08	U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g		< 0.017	U	< 0.017	U	0.021	J	0.034		< 0.017	U	< 0.017	U	< 0.026	U
Boron	7440-42-8	SW6020	Dry	mg/kg		0.66		2.44		2.97		6.33		0.80		2.26		3.17	
Boron	7440-42-8	SW6020	Wet	mg/kg		0.14		0.52		0.98		2.11		0.17		0.48		1.05	
Cadmium	7440-43-9	SW6020	Dry	mg/kg		0.040		0.038		0.316		0.300		0.045		0.036		0.357	
Cadmium	7440-43-9	SW6020	Wet	mg/kg		0.0084		0.0080		0.105		0.100		0.0095		0.0076		0.118	
Iron	7439-89-6	SW6020	Dry	mg/kg		19.1		13.3		130		197		20.2		16.7		153	
Iron	7439-89-6	SW6020	Wet	mg/kg		3.97		2.81		43.0		65.7		4.28		3.53		50.7	
Lead	7439-92-1	SW6020	Dry	mg/kg		< 0.020	U	< 0.020	U	0.127		0.208		< 0.020	U	< 0.020	U	0.159	
Lead	7439-92-1	SW6020	Wet	mg/kg		0.0008	J	< 0.0042	U	0.0419		0.0692		0.0017	J	0.0009	J	0.0527	
Magnesium	7439-95-4	SW6010	Dry	mg/kg		959		1200		1900		2100		1080		1090		1950	
Magnesium	7439-95-4	SW6010	Wet	mg/kg		199		254		629		700		229		231		645	
Mercury	7439-97-6	SW7471B	Dry	mg/kg		0.110		0.091		0.032		0.027		0.105		0.089		0.031	
Mercury	7439-97-6	SW7471B	Wet	mg/kg		0.0229		0.0192		0.0106		0.0091		0.0222		0.0188		0.0101	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g		118		104		27.8		32.2		120		114		26.8	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g		24.6		22.1		9.3		10.8		25.6		24.1		9	
Selenium	7782-49-2	SW6020	Dry	mg/kg		8.91		10.6		5.08		4.99		10.2		9.18		5.78	
Selenium	7782-49-2	SW6020	Wet	mg/kg		1.85		2.24		1.68		1.66		2.15		1.95		1.91	
Zinc	7440-66-6	SW6020	Dry	mg/kg		35.8		35.4		84.4		77.2		42.4		31.7		92.4	
Zinc	7440-66-6	SW6020	Wet	mg/kg		7.45		7.50		27.9		25.7		8.98		6.73		30.6	
Moisture Content	MOISTURE	CALCULATED	Wet	%		79.2		78.8		66.9		66.7		78.8		78.8		66.9	

Table 5-1A: Bluegill and Green Sunfish Analytical Results (Fillet/Remains, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	CI		HQ		HQ		HQ		HQ		HQ		HQ	
					Sample Date	10/04/2017		10/04/2017		10/04/2017		10/04/2017		10/04/2017		10/04/2017		10/04/2017	
					Sample Type	FD		N		N		N		N		FD		FD	
					Lab ID	K1712350		K1712350		K1712350		K1712350		K1712350		K1712350		K1712350	
					Sample ID	FWB-002(BG)-CI-171004-FD		FF-001(BG)-HQ-171004		FF-002(BG)-HQ-171004		FWB-001(BG)-HQ-171004		FWB-002(BG)-HQ-171004		FF-002(BG)-HQ-171004-FD		FWB-002(BG)-HQ-171004-FD	
Analyte	CAS_RN	Method	BASIS	Unit		Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Lipids	LIPIDS	NOAA LIPID	Wet	%		5.9		0.37		0.25		2.4		3.2		0.36		2.7	
Solids (total)	C-008	ZFZDRY	Wet	%		34.2		20.0		20.1		30.3		30.0		20.2		29.5	
Suspended solids (total)	C-009	ZFZDRY	Wet	%															
Weight, Tissue	WTBIOT	UNKNOWN	Wet	g				27.319		30.034		55.009		55.475					
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g		0.402		0.019	J	< 0.039	U	0.182		0.161		< 0.039	U	0.133	
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g		0.137		0.004	J	< 0.008	U	0.055		0.048		< 0.008	U	0.039	
Arsenic	7440-38-2	SW6020	Dry	mg/kg		1.00		0.35	J	0.30	J	0.49	J	0.53		0.33	J	0.53	
Arsenic	7440-38-2	SW6020	Wet	mg/kg		0.34		0.07	J	0.06	J	0.15	J	0.16		0.07	J	0.16	
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g		0.32	J	< 0.08	U	< 0.08	U	0.21	J	0.17	J	< 0.08	U	0.13	J
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g		0.11		< 0.016	U	< 0.016	U	0.06		0.05		< 0.016	U	0.04	
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g		0.08		< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g		0.027		< 0.016	U	< 0.016	U	< 0.024	U	< 0.024	U	< 0.016	U	< 0.023	U
Boron	7440-42-8	SW6020	Dry	mg/kg		6.52		< 0.50	U	< 0.50	U	0.97		1.47		< 0.50	U	1.50	
Boron	7440-42-8	SW6020	Wet	mg/kg		2.23		0.07	J	0.07	J	0.29		0.44		0.07	J	0.44	
Cadmium	7440-43-9	SW6020	Dry	mg/kg		0.317		0.045		0.031		0.126		0.131		0.034		0.114	
Cadmium	7440-43-9	SW6020	Wet	mg/kg		0.108		0.0091		0.0062		0.0382		0.0393		0.0069		0.0337	
Iron	7439-89-6	SW6020	Dry	mg/kg		216		17.0		25.5		106		120		11.4		126	
Iron	7439-89-6	SW6020	Wet	mg/kg		74.0		3.39		5.12		32.1		36.0		2.31		37.1	
Lead	7439-92-1	SW6020	Dry	mg/kg		0.204		< 0.020	U	< 0.020	U	0.103		0.118		< 0.020	U	0.116	
Lead	7439-92-1	SW6020	Wet	mg/kg		0.0697		< 0.0040	U	< 0.0040	U	0.0313		0.0355		< 0.0040	U	0.0343	
Magnesium	7439-95-4	SW6010	Dry	mg/kg		2110		1050		1050		2470		2430		1160		2230	
Magnesium	7439-95-4	SW6010	Wet	mg/kg		721		209		212		747		729		234		658	
Mercury	7439-97-6	SW7471B	Dry	mg/kg		0.028		0.160		0.147		0.045		0.066		0.136		0.053	
Mercury	7439-97-6	SW7471B	Wet	mg/kg		0.0094		0.0319		0.0295		0.0138		0.0199		0.0274		0.0157	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g		25.5		128		126		54.7		42.8		79.5		24.5	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g		8.8		25.5		25.4		16.7		12.9		16.1		7.2	
Selenium	7782-49-2	SW6020	Dry	mg/kg		5.19		6.5		6.99		3.8		3.8		6.27		3.78	
Selenium	7782-49-2	SW6020	Wet	mg/kg		1.77		1.31		1.40		1.14		1.15		1.27		1.11	
Zinc	7440-66-6	SW6020	Dry	mg/kg		76.5		52.0		53.0		109		127		51.6		128	
Zinc	7440-66-6	SW6020	Wet	mg/kg		26.2		10.4		10.7		33.1		38.2		10.4		37.6	
Moisture Content	MOISTURE	CALCULATED	Wet	%		65.8		80.0		79.9		69.7		70.0		79.8		70.5	

Table 5-1A: Bluegill and Green Sunfish Analytical Results (Fillet/Remains, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL1		LHL1		LHL1		LHL1		LHL2		LHL2		LHL2	
					Sample Date	10/04/2017		10/04/2017		10/11/2017		10/11/2017		10/05/2017		10/05/2017		10/05/2017	
					Sample Type	N		N		N		N		N		N		N	
					Lab ID	K1712350		K1712350		K1712347		K1712347		K1712350		K1712350		K1712350	
					Sample ID	FF-002(BG)-LHL1-171004		FWB-002(BG)-LHL1-171004		FF-001(BG)-LHL1-171011		FWB-001(BG)-LHL1-171011		FF-001(BG)-LHL2-171005		FF-002(BG)-LHL2-171005		FWB-001(BG)-LHL2-171005	
Analyte	CAS_RN	Method	BASIS	Unit		Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Lipids	LIPIDS	NOAA LIPID	Wet	%		0.26		1.7		0.35		2.7		0.34		0.22		2.8	
Solids (total)	C-008	ZFZDRY	Wet	%		20.5		31.5		20.5		29.3		20.5		19.7		30.2	
Suspended solids (total)	C-009	ZFZDRY	Wet	%															
Weight, Tissue	WTBIOT	UNKNOWN	Wet	g		54.638		111.849		62.955		140.535		52.709		39.499		94.115	
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g		< 0.039	U	0.035	J	< 0.039	U	0.030	J	< 0.039	UJ	< 0.039	UJ	0.037	J
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g		< 0.008	U	0.011	J	< 0.008	U	0.009	J	< 0.008	U	< 0.008	U	0.011	J
Arsenic	7440-38-2	SW6020	Dry	mg/kg		0.22	J	0.24	J	0.28	J	0.27	J	0.24	J	0.31	J	0.28	J
Arsenic	7440-38-2	SW6020	Wet	mg/kg		0.05	J	0.07	J	0.06	J	0.08	J	0.05	J	0.062	J	0.08	J
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g		< 0.08	U	0.05	J	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g		< 0.016	U	0.015	J	< 0.016	U	< 0.023	U	< 0.016	U	< 0.015	U	< 0.024	U
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g		< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g		< 0.016	U	< 0.025	U	< 0.016	U	< 0.023	U	< 0.016	U	< 0.015	U	< 0.024	U
Boron	7440-42-8	SW6020	Dry	mg/kg		< 0.50	U	1.44		0.38	J	1.97		< 0.50	U	< 0.50	U	0.80	
Boron	7440-42-8	SW6020	Wet	mg/kg		0.05	J	0.45		0.08	J	0.58		< 0.10	U	0.056	J	0.24	
Cadmium	7440-43-9	SW6020	Dry	mg/kg		< 0.020	U	0.091		0.009	J	0.077		< 0.020	U	0.036		0.071	
Cadmium	7440-43-9	SW6020	Wet	mg/kg		0.0038	J	0.0287		0.0019	J	0.0224		0.0035	J	0.0072		0.0215	
Iron	7439-89-6	SW6020	Dry	mg/kg		14.9		108		27.7		72.7		16.7		24.0		58.5	
Iron	7439-89-6	SW6020	Wet	mg/kg		3.06		34.0		5.68		21.3		3.43		4.73		17.7	
Lead	7439-92-1	SW6020	Dry	mg/kg		< 0.020	U	0.114		< 0.020	U	0.074		< 0.020	U	< 0.020	U	0.069	
Lead	7439-92-1	SW6020	Wet	mg/kg		< 0.0041	U	0.0358		0.0015	J	0.0216		0.0010	J	0.0017	J	0.0209	
Magnesium	7439-95-4	SW6010	Dry	mg/kg		1140		2720		1390		2350		1090		1060		2150	
Magnesium	7439-95-4	SW6010	Wet	mg/kg		234		858		285		689		223		210		649	
Mercury	7439-97-6	SW7471B	Dry	mg/kg		0.227		0.078		0.190		0.078		0.142		0.257		0.052	
Mercury	7439-97-6	SW7471B	Wet	mg/kg		0.0464		0.0246		0.0390		0.0228		0.0291		0.0507		0.0158	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g		192		62.1		186		74.9		102		173		48.9	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g		39.4		19.6		38.2		22		21		34.1		14.8	
Selenium	7782-49-2	SW6020	Dry	mg/kg		5.01		2.9		4.9		3.02		4.7		6.29		2.94	
Selenium	7782-49-2	SW6020	Wet	mg/kg		1.03		0.92		1.01		0.88		0.96		1.24		0.89	
Zinc	7440-66-6	SW6020	Dry	mg/kg		52.8		125		61.2		118		47.9		65.1		113	
Zinc	7440-66-6	SW6020	Wet	mg/kg		10.8		39.2		12.6		34.5		9.81		12.8		34.1	
Moisture Content	MOISTURE	CALCULATED	Wet	%		79.5		68.5		79.5		70.7		79.5		80.3		69.8	

Table 5-1A: Bluegill and Green Sunfish Analytical Results (Fillet/Remains, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL2		LHL3		LHL3		LHL3		LHL3		LHL4		LHL4	
					Sample Date	10/05/2017		10/05/2017		10/05/2017		10/05/2017		10/05/2017		10/03/2017		10/03/2017	
					Sample Type	N		N		N		N		N		N		N	
					Lab ID	K1712350		K1712347		K1712347		K1712350		K1712350		K1712350		K1712350	
					Sample ID	FWB-002(BG)-LHL2-171005		FF-002(BG)-LHL3-171005		FWB-002(BG)-LHL3-171005		FF-001(BG)-LHL3-171005		FWB-001(BG)-LHL3-171005		FF-001(BG)-LHL4-171003		FF-002(BG)-LHL4-171003	
Analyte	CAS_RN	Method	BASIS	Unit		Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Lipids	LIPIDS	NOAA LIPID	Wet	%		0.48		2.94		1.9		0.25		2.3		0.22		0.22	
Solids (total)	C-008	ZFZDRY	Wet	%		29.3		20.3		27.7		20.6		31.6		18.1		19.8	
Suspended solids (total)	C-009	ZFZDRY	Wet	%															
Weight, Tissue	WTBIOT	UNKNOWN	Wet	g		82.822		40.79		106.128		57.784		111.453		86.674		73.36	
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g		0.026	J	< 0.039	U	0.049		< 0.039	UJ	0.023	J	< 0.039	U	< 0.039	U
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g		0.008	J	< 0.008	U	0.014		< 0.008	U	0.007	J	< 0.007	U	< 0.008	U
Arsenic	7440-38-2	SW6020	Dry	mg/kg		0.29	J	0.28	J	0.39	J	0.27	J	0.24	J	0.20	J	0.18	J
Arsenic	7440-38-2	SW6020	Wet	mg/kg		0.08	J	0.06	J	0.11	J	0.06	J	0.08	J	0.037	J	0.035	J
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g		0.05	J	< 0.08	U	0.04	J	< 0.08	U	< 0.08	U	< 0.02	U	< 0.08	U
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g		0.013	J	< 0.016	U	0.012	J	< 0.016	U	< 0.025	U	< 0.014	U	< 0.016	U
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g		< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g		< 0.023	U	< 0.016	U	< 0.021	U	< 0.016	U	< 0.025	U	< 0.014	U	< 0.016	U
Boron	7440-42-8	SW6020	Dry	mg/kg		0.97		0.52		2.47		< 0.50	U	1.24		< 0.50	U	< 0.50	U
Boron	7440-42-8	SW6020	Wet	mg/kg		0.29		0.11		0.68		0.06	J	0.39		0.059	J	0.047	J
Cadmium	7440-43-9	SW6020	Dry	mg/kg		0.121		0.015	J	0.103		< 0.020	U	0.096		0.028		0.020	
Cadmium	7440-43-9	SW6020	Wet	mg/kg		0.0355		0.0030	J	0.0284		0.0033	J	0.0303		0.0051		0.0040	
Iron	7439-89-6	SW6020	Dry	mg/kg		68.6		14.8		106		19.7		57.3		16.9		21.6	
Iron	7439-89-6	SW6020	Wet	mg/kg		20.1		3.01		29.5		4.06		18.1		3.06		4.28	
Lead	7439-92-1	SW6020	Dry	mg/kg		0.101		0.031		0.124		< 0.020	U	0.083		< 0.020	U	< 0.020	U
Lead	7439-92-1	SW6020	Wet	mg/kg		0.0297		0.0063		0.0342		0.0039	J	0.0263		0.0012	J	0.0011	J
Magnesium	7439-95-4	SW6010	Dry	mg/kg		2730		1390		2040		1050		2400		1190		1160	
Magnesium	7439-95-4	SW6010	Wet	mg/kg		799		281		565		217		758		216		229	
Mercury	7439-97-6	SW7471B	Dry	mg/kg		0.086		0.128		0.060		0.144		0.043		0.257		0.252	
Mercury	7439-97-6	SW7471B	Wet	mg/kg		0.0252		0.0260		0.0166		0.0296		0.0135		0.0465		0.0499	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g		74		125		57.9		110		38.6		131		236	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g		21.7		25.3		16.1		22.7		12.2		23.7		46.7	
Selenium	7782-49-2	SW6020	Dry	mg/kg		3.61		5.82		3.86		4.9		3.5		6.2		5.75	
Selenium	7782-49-2	SW6020	Wet	mg/kg		1.06		1.18		1.07		1.02		1.11		1.13		1.14	
Zinc	7440-66-6	SW6020	Dry	mg/kg		143		54.3		117		44.9		102		55.7		56.2	
Zinc	7440-66-6	SW6020	Wet	mg/kg		42.0		11.0		32.5		9.25		32.1		10.1		11.1	
Moisture Content	MOISTURE	CALCULATED	Wet	%		70.7		79.7		72.3		79.4		68.4		81.9		80.2	

Table 5-1A: Bluegill and Green Sunfish Analytical Results (Fillet/Remains, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL4		LHL4		LHL5		LHL5		LHL5		LHL5		LHL6	
					Sample Date	10/03/2017		10/03/2017		10/11/2017		10/11/2017		10/11/2017		10/11/2017		10/11/2017	
					Sample Type	N		N		N		N		N		N		N	
					Lab ID	K1712350		K1712350		K1712347		K1712347		K1712347		K1712347		K1712347	
					Sample ID	FWB-001(BG)-LHL4-171003		FWB-002(BG)-LHL4-171003		FF-001(BG)-LHL5-171011		FF-002(BG)-LHL5-171011		FWB-001(BG)-LHL5-171011		FWB-002(BG)-LHL5-171011		FF-001(BG)-LHL6-171011	
Analyte	CAS_RN	Method	BASIS	Unit		Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Lipids	LIPIDS	NOAA LIPID	Wet	%		1.1		2.1		0.27		0.25		1.2		1.2		0.24	
Solids (total)	C-008	ZFZDRY	Wet	%		31.1		31.8		20.5		20.1		27.8		27.9		19.6	
Suspended solids (total)	C-009	ZFZDRY	Wet	%															
Weight, Tissue	WTBIOT	UNKNOWN	Wet	g		198.26		142.351		82.303		66.205		179.861		138.936		74.48	
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g		0.019	J	0.028	J	< 0.04	U	< 0.039	UJ	0.021	J	0.019	J	< 0.04	U
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g		0.006	J	0.009	J	< 0.008	U	< 0.008	U	0.006	J	0.005	J	< 0.008	U
Arsenic	7440-38-2	SW6020	Dry	mg/kg		0.13	J	0.16	J	0.25	J	0.29	J	0.21	J	0.21	J	0.25	J
Arsenic	7440-38-2	SW6020	Wet	mg/kg		0.04	J	0.05	J	0.05	J	0.06	J	0.06	J	0.06	J	0.049	J
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g		< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g		< 0.025	U	< 0.025	U	< 0.016	U	< 0.016	U	< 0.022	U	< 0.022	U	< 0.015	U
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g		< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g		< 0.025	U	< 0.025	U	< 0.016	U	< 0.016	U	< 0.022	U	< 0.022	U	< 0.015	U
Boron	7440-42-8	SW6020	Dry	mg/kg		1.62		0.96		0.21	J	0.28	J	0.95		1.12		0.35	J
Boron	7440-42-8	SW6020	Wet	mg/kg		0.50		0.30		0.04	J	0.06	J	0.26		0.31		0.068	J
Cadmium	7440-43-9	SW6020	Dry	mg/kg		0.094		0.103		0.008	J	0.010	J	0.079		0.066		0.007	J
Cadmium	7440-43-9	SW6020	Wet	mg/kg		0.0292		0.0327		0.0016	J	0.0019	J	0.0220		0.0185		0.0013	J
Iron	7439-89-6	SW6020	Dry	mg/kg		56.8		61.8		15.7		18.7		77.0		65.5		18.2	
Iron	7439-89-6	SW6020	Wet	mg/kg		17.7		19.7		3.22		3.76		21.4		18.3		3.58	
Lead	7439-92-1	SW6020	Dry	mg/kg		0.074		0.062		< 0.020	U	< 0.020	U	0.096		0.069		< 0.020	U
Lead	7439-92-1	SW6020	Wet	mg/kg		0.0230		0.0198		0.0018	J	0.0020	J	0.0267		0.0193		0.0024	J
Magnesium	7439-95-4	SW6010	Dry	mg/kg		2770		2580		1300		1360		2310		2450		1320	
Magnesium	7439-95-4	SW6010	Wet	mg/kg		860		822		267		273		643		683		258	
Mercury	7439-97-6	SW7471B	Dry	mg/kg		0.073		0.068		0.130		0.182		0.044		0.076		0.199	
Mercury	7439-97-6	SW7471B	Wet	mg/kg		0.0228		0.0218		0.0267		0.0366		0.0121		0.0212		0.0390	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g		91		66.2		150		187		54.8		69.2		213	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g		28.4		21.2		30.7		37.5		15.3		19.3		41.8	
Selenium	7782-49-2	SW6020	Dry	mg/kg		3.6		3.27		4.7		4.36		2.97		2.8		4.9	
Selenium	7782-49-2	SW6020	Wet	mg/kg		1.11		1.04		0.95		0.88		0.83		0.79		0.96	
Zinc	7440-66-6	SW6020	Dry	mg/kg		112		127		67.5		63.0		117		129		57.7	
Zinc	7440-66-6	SW6020	Wet	mg/kg		35.0		40.2		13.8		12.7		32.6		35.9		11.3	
Moisture Content	MOISTURE	CALCULATED	Wet	%		68.9		68.2		79.5		79.9		72.2		72.1		80.4	

Table 5-1A: Bluegill and Green Sunfish Analytical Results (Fillet/Remains, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL6		LHL6		LHL6		MHL1		MHL1		MHL1		MHL1	
					Sample Date	10/11/2017		10/11/2017		10/11/2017		10/15/2017		10/15/2017		10/15/2017		10/15/2017	
					Sample Type	N		N		N		N		N		N		N	
					Lab ID	K1712347		K1712347		K1712347		K1712347		K1712347		K1712347		K1712347	
					Sample ID	FF-002(BG)-LHL6-171011		FWB-001(BG)-LHL6-171011		FWB-002(BG)-LHL6-171011		FF-001(BG)-MHL1-171015		FF-002(BG)-MHL1-171015		FWB-001(BG)-MHL1-171015		FWB-002(BG)-MHL1-171015	
Analyte	CAS_RN	Method	BASIS	Unit		Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Lipids	LIPIDS	NOAA LIPID	Wet	%		0.26		1.4		1.1		0.39		0.52		1.9		2.3	
Solids (total)	C-008	ZFZDRY	Wet	%		19.2		29.4		28.0		19.4		30.0		29.3		19.9	
Suspended solids (total)	C-009	ZFZDRY	Wet	%															
Weight, Tissue	WTBIOT	UNKNOWN	Wet	g		56.032		172.005		114.202		90.76		72.553		159.868		116.935	
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g		< 0.039	U	< 0.04	U	0.016	J	< 0.039	U	< 0.04	U	< 0.04	U	0.020	J
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g		< 0.008	U	< 0.012	U	0.005	J	< 0.008	U	< 0.012	U	< 0.012	U	0.004	J
Arsenic	7440-38-2	SW6020	Dry	mg/kg		0.26	J	0.21	J	0.22	J	0.20	J	0.22	J	0.18	J	0.25	J
Arsenic	7440-38-2	SW6020	Wet	mg/kg		0.050	J	0.06	J	0.06	J	0.038	J	0.06	J	0.05	J	0.05	J
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g		< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g		< 0.015	U	< 0.023	U	< 0.022	U	< 0.015	U	< 0.024	U	< 0.023	U	< 0.016	U
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g		< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g		< 0.015	U	< 0.023	U	< 0.022	U	< 0.015	U	< 0.024	U	< 0.023	U	< 0.016	U
Boron	7440-42-8	SW6020	Dry	mg/kg		< 0.50	U	0.80		0.81		0.31	J	0.28	J	0.40	J	1.40	
Boron	7440-42-8	SW6020	Wet	mg/kg		< 0.096	U	0.24		0.23		0.061	J	0.08	J	0.12	J	0.28	
Cadmium	7440-43-9	SW6020	Dry	mg/kg		0.008	J	0.049		0.052		0.005	J	0.009	J	0.020	J	0.019	J
Cadmium	7440-43-9	SW6020	Wet	mg/kg		0.0015	J	0.0145		0.0146		0.0009	J	0.0026	J	0.0057	J	0.0039	J
Iron	7439-89-6	SW6020	Dry	mg/kg		18.9		61.4		61.2		18.2		24.6		60.4		86.9	
Iron	7439-89-6	SW6020	Wet	mg/kg		3.63		18.1		17.1		3.53		7.38		17.7		17.3	
Lead	7439-92-1	SW6020	Dry	mg/kg		< 0.020	U	0.060		0.069		< 0.020	U	< 0.020	U	0.084		0.122	
Lead	7439-92-1	SW6020	Wet	mg/kg		0.0019	J	0.0177		0.0192		0.0019	J	0.0032	J	0.0245		0.0243	
Magnesium	7439-95-4	SW6010	Dry	mg/kg		1380		2520		2600		1230		1170		2510		2330	
Magnesium	7439-95-4	SW6010	Wet	mg/kg		264		742		729		238		350		734		463	
Mercury	7439-97-6	SW7471B	Dry	mg/kg		0.194		0.065		0.067		0.246		0.161		0.076		0.051	
Mercury	7439-97-6	SW7471B	Wet	mg/kg		0.0372		0.0191		0.0187		0.0477		0.0484		0.0223		0.0102	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g		183		66.9		69.1		192		169		87.1		65.8	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g		35.1		19.7		19.4		37.2		50.9		25.6		13.1	
Selenium	7782-49-2	SW6020	Dry	mg/kg		4.20		3.08		2.46		2.0		1.7		1.31		1.31	
Selenium	7782-49-2	SW6020	Wet	mg/kg		0.81		0.91		0.69		0.38		0.50		0.38		0.26	
Zinc	7440-66-6	SW6020	Dry	mg/kg		63.2		109		134		50.6		48.5		120		125	
Zinc	7440-66-6	SW6020	Wet	mg/kg		12.1		32.0		37.4		9.82		14.5		35.1		24.9	
Moisture Content	MOISTURE	CALCULATED	Wet	%		80.8		70.6		72.0		80.6		70.0		70.7		80.1	

Table 5-1A: Bluegill and Green Sunfish Analytical Results (Fillet/Remains, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	MHL3		MHL3		MHL3		MHL3		DR		DR		DR	
					Sample Date	10/14/2017		10/14/2017		10/14/2017		10/14/2017		10/14/2017		10/14/2017		10/16/2017	
					Sample Type	N		N		N		N		N		N		N	
					Lab ID	K1712347		K1712347		K1712347		K1712347		K1712347		K1712347		K1712347	
					Sample ID	FF-001(BG)-MHL3-171014		FF-002(BG)-MHL3-171014		FWB-001(BG)-MHL3-171014		FWB-002(BG)-MHL3-171014		FF-001(GS)-DR-171014		FWB-001(GS)-DR-171014		FF-001(BG)-DR-171016	
Analyte	CAS_RN	Method	BASIS	Unit		Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Lipids	LIPIDS	NOAA LIPID	Wet	%		0.37		0.36		2.5		3.1		0.27		1.5		1.1	
Solids (total)	C-008	ZFZDRY	Wet	%		20.6		19.9		30.5		30.4		20.4		27.4		19.8	
Suspended solids (total)	C-009	ZFZDRY	Wet	%															
Weight, Tissue	WTBIOT	UNKNOWN	Wet	g		57.978		67.606		102.558		103.568		42.336		90.47		18.333	
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g		< 0.039	U	< 0.039	UJ	0.019	J	0.046		< 0.04	U	< 0.039	U	< 0.04	U
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g		< 0.008	U	< 0.008	U	0.006	J	0.014		< 0.008	U	< 0.011	U	< 0.008	U
Arsenic	7440-38-2	SW6020	Dry	mg/kg		0.19	J	0.22	J	0.18	J	0.27	J	0.16	J	0.18	J	0.09	J
Arsenic	7440-38-2	SW6020	Wet	mg/kg		0.04	J	0.04	J	0.05	J	0.08	J	0.03	J	0.05	J	0.018	J
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g		< 0.08	U	< 0.08	U	< 0.08	U	0.04	J	< 0.08	U	< 0.08	U	< 0.08	U
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g		< 0.016	U	< 0.015	U	< 0.024	U	0.013	J	< 0.016	U	< 0.022	U	< 0.016	U
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g		< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U	< 0.08	U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g		< 0.016	U	< 0.015	U	< 0.024	U	< 0.024	U	< 0.016	U	< 0.022	U	< 0.016	U
Boron	7440-42-8	SW6020	Dry	mg/kg		< 0.50	U	< 0.50	U	0.39	J	1.22		< 0.50	U	0.29	J	< 0.50	U
Boron	7440-42-8	SW6020	Wet	mg/kg		< 0.10	U	< 0.100	U	0.12	J	0.37		< 0.10	U	0.08	J	< 0.099	U
Cadmium	7440-43-9	SW6020	Dry	mg/kg		< 0.020	U	< 0.020	U	0.028		0.022		0.007	J	0.042		0.007	J
Cadmium	7440-43-9	SW6020	Wet	mg/kg		< 0.0041	U	< 0.0040	U	0.0085		0.0067		0.0014	J	0.0115		0.0014	J
Iron	7439-89-6	SW6020	Dry	mg/kg		13.9		13.5		56.6	J	125		21.6		82.2		19.4	
Iron	7439-89-6	SW6020	Wet	mg/kg		2.87		2.70		17.3		37.9		4.40		22.5		3.83	
Lead	7439-92-1	SW6020	Dry	mg/kg		< 0.020	U	< 0.020	U	0.277		0.160		< 0.020	U	0.072		0.008	J
Lead	7439-92-1	SW6020	Wet	mg/kg		0.0014	J	0.0008	J	0.0845		0.0487		0.0014	J	0.0196		0.0016	J
Magnesium	7439-95-4	SW6010	Dry	mg/kg		1310		1250		2240		2240		1160		2020		1100	
Magnesium	7439-95-4	SW6010	Wet	mg/kg		270		250		683		681		236		553		217	
Mercury	7439-97-6	SW7471B	Dry	mg/kg		0.130		0.163		0.056		0.056		0.437		0.176		0.182	
Mercury	7439-97-6	SW7471B	Wet	mg/kg		0.0267		0.0324		0.0171		0.0170		0.0891		0.0482		0.0359	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g		150		156		57.3		62.4		375		187		253	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g		31		31		17.5		19.1		76.5		51.2		50.1	
Selenium	7782-49-2	SW6020	Dry	mg/kg		1.01		1.09		0.70	J	0.9	J	3.32		2.4		2.4	
Selenium	7782-49-2	SW6020	Wet	mg/kg		0.21		0.22		0.21	J	0.26	J	0.68		0.66		0.48	
Zinc	7440-66-6	SW6020	Dry	mg/kg		42.9		50.0		100		122		45.1		99.7		48.3	
Zinc	7440-66-6	SW6020	Wet	mg/kg		8.84		9.96		30.6		37.1		9.21		27.3		9.57	
Moisture Content	MOISTURE	CALCULATED	Wet	%		79.4		80.1		69.5		69.6		79.6		72.6		80.2	

Table 5-1A: Bluegill and Green Sunfish Analytical Results (Fillet/Remains, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	DR		DR		DR	
				Sample Date	10/16/2017		10/16/2017		10/16/2017	
				Sample Type	N		N		N	
				Lab ID	K1712347		K1712347		K1712347	
				Sample ID	FF-002(GS)-DR-171016		FWB-001(BG)-DR-171016		FWB-002(GS)-DR-171016	
Analyte	CAS_RN	Method	BASIS	Unit	Result	IQ	Result	IQ	Result	IQ
Lipids	LIPIDS	NOAA LIPID	Wet	%	0.55		2.9		3.0	
Solids (total)	C-008	ZFZDRY	Wet	%	20.3		28.4		27.4	
Suspended solids (total)	C-009	ZFZDRY	Wet	%						
Weight, Tissue	WTBIOT	UNKNOWN	Wet	g	15.858		33.035		36.917	
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	< 0.039	U	0.040		0.035	J
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	< 0.008	U	0.012		0.010	J
Arsenic	7440-38-2	SW6020	Dry	mg/kg	0.37	J	0.13	J	0.39	J
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.07	J	0.04	J	0.11	J
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.08	U	< 0.08	U	< 0.08	U
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.016	U	< 0.022	U	< 0.022	U
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.08	U	0.04	J	< 0.08	U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.016	U	0.012	J	< 0.022	U
Boron	7440-42-8	SW6020	Dry	mg/kg	< 0.50	U	< 0.50	U	< 0.50	U
Boron	7440-42-8	SW6020	Wet	mg/kg	< 0.10	U	< 0.14	U	< 0.14	U
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.020	J	0.023		0.051	
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.0040	J	0.0066		0.0139	
Iron	7439-89-6	SW6020	Dry	mg/kg	21.6		76.4		138	
Iron	7439-89-6	SW6020	Wet	mg/kg	4.38		21.7		37.9	
Lead	7439-92-1	SW6020	Dry	mg/kg	0.011	J	0.072		0.104	
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0022	J	0.0203		0.0285	
Magnesium	7439-95-4	SW6010	Dry	mg/kg	1020		1980		1870	
Magnesium	7439-95-4	SW6010	Wet	mg/kg	208		561		513	
Mercury	7439-97-6	SW7471B	Dry	mg/kg	0.394		0.090		0.162	
Mercury	7439-97-6	SW7471B	Wet	mg/kg	0.0800		0.0255		0.0443	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	334		93.8		162	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	67.9		26.7		44.5	
Selenium	7782-49-2	SW6020	Dry	mg/kg	3.87		1.8		3.00	
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.79		0.52		0.82	
Zinc	7440-66-6	SW6020	Dry	mg/kg	55.2		104		127	
Zinc	7440-66-6	SW6020	Wet	mg/kg	11.2		29.5		34.9	
Moisture Content	MOISTURE	CALCULATED	Wet	%	79.7		71.6		72.6	

Table 5-1A: Bluegill and Green Sunfish Analytical Results (Fillet/Remains, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:	%	Percent
	CI	Curd's Inlet
	DR	Dix River
	FD	Field Duplicate Sample
	g	grams
	HQ	HQ Inlet
	IQ	Interpreted qualifier, data flags from third party validation
	J	Concentration is greater than method detection limit but less than laboratory reporting limit
	LHL	Lower Herrington Lake
	mg/kg	milligrams per kilogram
	MHL	Middle Herrington Lake
	N	Normal Sample
	ng/g	nanograms per gram
	U	Constituent was analyzed for, but not detected
	ug/g	micrograms per gram

Table 5-1B: Bluegill and Green Sunfish Calculated Whole-body Results (Dry Weight Selenium)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Selenium	
Location	Fish ID	Portion	Weight of Portion	Total Weight of Fish (Fillet + Carcass)	Portion mg/kg dw	Calculated whole fish mg/kg dw
CI	BG-1	1-Fillet	76.0	209.8	8.91	6.5
		3-Carcass	133.8		5.08	
	BG-1 Dup	1-Fillet	76.0	209.8	10.2	7.4
		3-Carcass	133.8		5.78	
	BG-2	1-Fillet	100.5	277.3	10.6	7.0
		3-Carcass	176.7		4.99	
	BG-2 Dup	1-Fillet	100.5	277.3	9.18	6.6
		3-Carcass	176.7		5.19	
HQ	BG-1	1-Fillet	27.3	82.3	6.5	4.7
		3-Carcass	55.0		3.8	
	BG-2	1-Fillet	30.0	85.5	6.99	4.9
		3-Carcass	55.5		3.8	
	BG-2 Dup	1-Fillet	30.0	85.5	6.27	4.7
		3-Carcass	55.5		3.78	
LHL1	BG-1	1-Fillet	63.0	203.5	4.9	3.6
		3-Carcass	140.5		3.02	
	BG-2	1-Fillet	54.6	166.5	5.01	3.6
		3-Carcass	111.8		2.9	
LHL2	BG-1	1-Fillet	52.7	146.8	4.7	3.6
		3-Carcass	94.1		2.94	
	BG-2	1-Fillet	39.5	122.3	6.29	4.5
		3-Carcass	82.8		3.61	
LHL3	BG-1	1-Fillet	57.8	169.2	4.9	4.0
		3-Carcass	111.5		3.5	
	BG-2	1-Fillet	40.8	146.9	5.82	4.4
		3-Carcass	106.1		3.86	
LHL4	BG-1	1-Fillet	86.7	284.9	6.2	4.4
		3-Carcass	198.3		3.6	
	BG-2	1-Fillet	73.4	215.7	5.75	4.1
		3-Carcass	142.4		3.27	
LHL5	BG-1	1-Fillet	82.3	262.2	4.7	3.5
		3-Carcass	179.9		2.97	
	BG-2	1-Fillet	66.2	205.1	4.36	3.3
		3-Carcass	138.9		2.8	
LHL6	BG-1	1-Fillet	74.5	246.5	4.9	3.6
		3-Carcass	172.0		3.08	
	BG-2	1-Fillet	56.0	170.2	4.2	3.0
		3-Carcass	114.2		2.46	
MHL1	BG-1	1-Fillet	90.8	250.6	2	1.6
		3-Carcass	159.9		1.31	
	BG-2	1-Fillet	72.6	189.5	1.7	1.5
		3-Carcass	116.9		1.31	
MHL3	BG-1	1-Fillet	58.0	160.5	1.01	0.8
		3-Carcass	102.6		0.7	
	BG-2	1-Fillet	67.6	171.2	1.09	1.0
		3-Carcass	103.6		0.9	
DR	BG-1	1-Fillet	18.3	51.4	2.4	2.0
		3-Carcass	33.0		1.8	
	GS-1	1-Fillet	42.3	132.8	3.32	2.7
		3-Carcass	90.5		2.4	
	GS-2	1-Fillet	15.9	52.8	3.87	3.3
		3-Carcass	36.9		3	

Table 5-1B: Bluegill and Green Sunfish Calculated Whole-body Results (Dry Weight Selenium)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

BG	Bluegill
CI	Curd's Inlet
DR	Dix River
dw	Dry Weight
GS	Green Sunfish
HQ	HQ Inlet
LHL	Lower Herrington Lake
mg/kg	millligrams per kilogram
MHL	Middle Herrington Lake

Table 5-1C: Bluegill and Green Sunfish Calculated Whole-body Results (Wet Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Arsenic EPA 1632A		Arsenic III		Arsenic SW6020	
Location	Fish ID	Portion	Weight of Portion	Total Weight of Fish (Fillet + Carcass)	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww
CI	BG-1	1-Fillet	76.0	209.8	0	0.058	0	0.045	0.08	0.18
		3-Carcass	133.8		0.091		0.07		0.24	
	BG-1 Dup	1-Fillet	76.0	209.8	0.004	0.06	0	0.051	0.1	0.2
		3-Carcass	133.8		0.092		0.08		0.26	
	BG-2	1-Fillet	100.5	277.3	0.004	0.087	0	0.064	0.11	0.25
		3-Carcass	176.7		0.134		0.1		0.33	
	BG-2 Dup	1-Fillet	100.5	277.3	0	0.087	0.009	0.073	0.1	0.25
		3-Carcass	176.7		0.137		0.11		0.34	
HQ	BG-1	1-Fillet	27.3	82.3	0.004	0.038	0	0.04	0.07	0.12
		3-Carcass	55.0		0.055		0.06		0.15	
	BG-2	1-Fillet	30.0	85.5	0	0.031	0	0.032	0.06	0.12
		3-Carcass	55.5		0.048		0.05		0.16	
	BG-2 Dup	1-Fillet	30.0	85.5	0	0.025	0	0.026	0.07	0.13
		3-Carcass	55.5		0.039		0.04		0.16	
LHL1	BG-1	1-Fillet	63.0	203.5	0	0.0062	0	0	0.06	0.074
		3-Carcass	140.5		0.009		0		0.08	
	BG-2	1-Fillet	54.6	166.5	0	0.0074	0	0.01	0.05	0.063
		3-Carcass	111.8		0.011		0.015		0.07	
LHL2	BG-1	1-Fillet	52.7	146.8	0	0.0071	0	0	0.05	0.069
		3-Carcass	94.1		0.011		0		0.08	
	BG-2	1-Fillet	39.5	122.3	0	0.0054	0	0.0088	0.062	0.074
		3-Carcass	82.8		0.008		0.013		0.08	
LHL3	BG-1	1-Fillet	57.8	169.2	0	0.0046	0	0	0.06	0.073
		3-Carcass	111.5		0.007		0		0.08	
	BG-2	1-Fillet	40.8	146.9	0	0.01	0	0.0087	0.06	0.096
		3-Carcass	106.1		0.014		0.012		0.11	
LHL4	BG-1	1-Fillet	86.7	284.9	0	0.0042	0	0	0.037	0.039
		3-Carcass	198.3		0.006		0		0.04	
	BG-2	1-Fillet	73.4	215.7	0	0.0059	0	0	0.035	0.045
		3-Carcass	142.4		0.009		0		0.05	
LHL5	BG-1	1-Fillet	82.3	262.2	0	0.0041	0	0	0.05	0.057
		3-Carcass	179.9		0.006		0		0.06	
	BG-2	1-Fillet	66.2	205.1	0	0.0034	0	0	0.06	0.06
		3-Carcass	138.9		0.005		0		0.06	
LHL6	BG-1	1-Fillet	74.5	246.5	0	0	0	0	0.049	0.057
		3-Carcass	172.0		0		0		0.06	
	BG-2	1-Fillet	56.0	170.2	0	0.0034	0	0	0.05	0.057
		3-Carcass	114.2		0.005		0		0.06	
MHL1	BG-1	1-Fillet	90.8	250.6	0	0	0	0	0.038	0.046
		3-Carcass	159.9		0		0		0.05	
	BG-2	1-Fillet	72.6	189.5	0	0.0025	0	0	0.06	0.054
		3-Carcass	116.9		0.004		0		0.05	
MHL3	BG-1	1-Fillet	58.0	160.5	0	0.0038	0	0	0.04	0.046
		3-Carcass	102.6		0.006		0		0.05	
	BG-2	1-Fillet	67.6	171.2	0	0.0085	0	0.0079	0.04	0.064
		3-Carcass	103.6		0.014		0.013		0.08	
DR	BG-1	1-Fillet	18.3	51.4	0	0.0077	0	0	0.018	0.032
		3-Carcass	33.0		0.012		0		0.04	
	GS-1	1-Fillet	42.3	132.8	0	0	0	0	0.03	0.044
		3-Carcass	90.5		0		0		0.05	
	GS-2	1-Fillet	15.9	52.8	0	0.007	0	0	0.07	0.098
		3-Carcass	36.9		0.01		0		0.11	

Table 5-1C: Bluegill and Green Sunfish Calculated Whole-body Results (Wet Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Arsenic V		Boron		Cadmium	
Location	Fish ID	Portion	Weight of Portion	Total Weight of Fish (Fillet + Carcass)	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww
CI	BG-1	1-Fillet	76.0	209.8	0	0.013	0.14	0.68	0.008	0.07
		3-Carcass	133.8		0.021		0.98		0.105	
	BG-1 Dup	1-Fillet	76.0	209.8	0	0	0.17	0.73	0.01	0.079
		3-Carcass	133.8		0		1.05		0.118	
	BG-2	1-Fillet	100.5	277.3	0	0.022	0.52	1.5	0.008	0.067
		3-Carcass	176.7		0.034		2.11		0.1	
	BG-2 Dup	1-Fillet	100.5	277.3	0	0.017	0.48	1.6	0.008	0.072
		3-Carcass	176.7		0.027		2.23		0.108	
HQ	BG-1	1-Fillet	27.3	82.3	0	0	0.07	0.22	0.009	0.029
		3-Carcass	55.0		0		0.29		0.038	
	BG-2	1-Fillet	30.0	85.5	0	0	0.07	0.31	0.006	0.028
		3-Carcass	55.5		0		0.44		0.039	
	BG-2 Dup	1-Fillet	30.0	85.5	0	0	0.07	0.31	0.007	0.024
		3-Carcass	55.5		0		0.44		0.034	
LHL1	BG-1	1-Fillet	63.0	203.5	0	0	0.08	0.43	0.002	0.016
		3-Carcass	140.5		0		0.58		0.022	
	BG-2	1-Fillet	54.6	166.5	0	0	0.05	0.32	0.004	0.021
		3-Carcass	111.8		0		0.45		0.029	
LHL2	BG-1	1-Fillet	52.7	146.8	0	0	0	0.15	0.004	0.015
		3-Carcass	94.1		0		0.24		0.022	
	BG-2	1-Fillet	39.5	122.3	0	0	0.056	0.21	0.007	0.026
		3-Carcass	82.8		0		0.29		0.036	
LHL3	BG-1	1-Fillet	57.8	169.2	0	0	0.06	0.28	0.003	0.021
		3-Carcass	111.5		0		0.39		0.03	
	BG-2	1-Fillet	40.8	146.9	0	0	0.11	0.52	0.003	0.021
		3-Carcass	106.1		0		0.68		0.028	
LHL4	BG-1	1-Fillet	86.7	284.9	0	0	0.059	0.37	0.005	0.022
		3-Carcass	198.3		0		0.5		0.029	
	BG-2	1-Fillet	73.4	215.7	0	0	0.047	0.21	0.004	0.023
		3-Carcass	142.4		0		0.3		0.033	
LHL5	BG-1	1-Fillet	82.3	262.2	0	0	0.04	0.19	0.002	0.016
		3-Carcass	179.9		0		0.26		0.022	
	BG-2	1-Fillet	66.2	205.1	0	0	0.06	0.23	0.002	0.013
		3-Carcass	138.9		0		0.31		0.019	
LHL6	BG-1	1-Fillet	74.5	246.5	0	0	0.068	0.19	0.001	0.011
		3-Carcass	172.0		0		0.24		0.015	
	BG-2	1-Fillet	56.0	170.2	0	0	0	0.15	0.002	0.01
		3-Carcass	114.2		0		0.23		0.015	
MHL1	BG-1	1-Fillet	90.8	250.6	0	0	0.061	0.099	9E-04	0.004
		3-Carcass	159.9		0		0.12		0.006	
	BG-2	1-Fillet	72.6	189.5	0	0	0.08	0.2	0.003	0.0034
		3-Carcass	116.9		0		0.28		0.004	
MHL3	BG-1	1-Fillet	58.0	160.5	0	0	0	0.077	0	0.0054
		3-Carcass	102.6		0		0.12		0.009	
	BG-2	1-Fillet	67.6	171.2	0	0	0	0.22	0	0.0041
		3-Carcass	103.6		0		0.37		0.007	
DR	BG-1	1-Fillet	18.3	51.4	0	0.0077	0	0	0.001	0.0047
		3-Carcass	33.0		0.012		0		0.007	
	GS-1	1-Fillet	42.3	132.8	0	0	0	0.054	0.001	0.0083
		3-Carcass	90.5		0		0.08		0.012	
	GS-2	1-Fillet	15.9	52.8	0	0	0	0	0.004	0.011
		3-Carcass	36.9		0		0		0.014	

Table 5-1C: Bluegill and Green Sunfish Calculated Whole-body Results (Wet Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Iron		Lead		Magnesium	
Location	Fish ID	Portion	Weight of Portion	Total Weight of Fish (Fillet + Carcass)	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww
CI	BG-1	1-Fillet	76.0	209.8	3.97	29	8E-04	0.027	199	470
		3-Carcass	133.8		43		0.042		629	
	BG-1 Dup	1-Fillet	76.0	209.8	4.28	34	0.002	0.034	229	490
		3-Carcass	133.8		50.7		0.053		645	
	BG-2	1-Fillet	100.5	277.3	2.81	43	0	0.044	254	540
		3-Carcass	176.7		65.7		0.069		700	
	BG-2 Dup	1-Fillet	100.5	277.3	3.53	48	9E-04	0.045	231	540
		3-Carcass	176.7		74		0.07		721	
HQ	BG-1	1-Fillet	27.3	82.3	3.39	23	0	0.021	209	570
		3-Carcass	55.0		32.1		0.031		747	
	BG-2	1-Fillet	30.0	85.5	5.12	25	0	0.023	212	550
		3-Carcass	55.5		36		0.036		729	
	BG-2 Dup	1-Fillet	30.0	85.5	2.31	25	0	0.022	234	510
		3-Carcass	55.5		37.1		0.034		658	
LHL1	BG-1	1-Fillet	63.0	203.5	5.68	16	0.002	0.015	285	560
		3-Carcass	140.5		21.3		0.022		689	
	BG-2	1-Fillet	54.6	166.5	3.06	24	0	0.024	234	650
		3-Carcass	111.8		34		0.036		858	
LHL2	BG-1	1-Fillet	52.7	146.8	3.43	13	0.001	0.014	223	500
		3-Carcass	94.1		17.7		0.021		649	
	BG-2	1-Fillet	39.5	122.3	4.73	15	0.002	0.021	210	610
		3-Carcass	82.8		20.1		0.03		799	
LHL3	BG-1	1-Fillet	57.8	169.2	4.06	13	0.004	0.019	217	570
		3-Carcass	111.5		18.1		0.026		758	
	BG-2	1-Fillet	40.8	146.9	3.01	22	0.006	0.026	281	490
		3-Carcass	106.1		29.5		0.034		565	
LHL4	BG-1	1-Fillet	86.7	284.9	3.06	13	0.001	0.016	216	660
		3-Carcass	198.3		17.7		0.023		860	
	BG-2	1-Fillet	73.4	215.7	4.28	14	0.001	0.013	229	620
		3-Carcass	142.4		19.7		0.02		822	
LHL5	BG-1	1-Fillet	82.3	262.2	3.22	16	0.002	0.019	267	520
		3-Carcass	179.9		21.4		0.027		643	
	BG-2	1-Fillet	66.2	205.1	3.76	14	0.002	0.014	273	550
		3-Carcass	138.9		18.3		0.019		683	
LHL6	BG-1	1-Fillet	74.5	246.5	3.58	14	0.002	0.013	258	600
		3-Carcass	172.0		18.1		0.018		742	
	BG-2	1-Fillet	56.0	170.2	3.63	13	0.002	0.014	264	580
		3-Carcass	114.2		17.1		0.019		729	
MHL1	BG-1	1-Fillet	90.8	250.6	3.53	13	0.002	0.016	238	550
		3-Carcass	159.9		17.7		0.025		734	
	BG-2	1-Fillet	72.6	189.5	7.38	14	0.003	0.016	350	420
		3-Carcass	116.9		17.3		0.024		463	
MHL3	BG-1	1-Fillet	58.0	160.5	2.87	12	0.001	0.054	270	530
		3-Carcass	102.6		17.3		0.085		683	
	BG-2	1-Fillet	67.6	171.2	2.7	24	8E-04	0.03	250	510
		3-Carcass	103.6		37.9		0.049		681	
DR	BG-1	1-Fillet	18.3	51.4	3.83	15	0.002	0.014	217	440
		3-Carcass	33.0		21.7		0.02		561	
	GS-1	1-Fillet	42.3	132.8	4.4	17	0.001	0.014	236	450
		3-Carcass	90.5		22.5		0.02		553	
	GS-2	1-Fillet	15.9	52.8	4.38	28	0.002	0.021	208	420
		3-Carcass	36.9		37.9		0.029		513	

Table 5-1C: Bluegill and Green Sunfish Calculated Whole-body Results (Wet Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Mercury		Methyl mercury		Selenium	
Location	Fish ID	Portion	Weight of Portion	Total Weight of Fish (Fillet + Carcass)	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion ug/kg	Calculated whole fish ug/kg	Portion mg/kg ww	Calculated whole fish mg/kg ww
CI	BG-1	1-Fillet	76.0	209.8	0.023	0.015	0.025	0.015	1.85	1.7
		3-Carcass	133.8		0.011		0.009		1.68	
	BG-1 Dup	1-Fillet	76.0	209.8	0.022	0.014	0.026	0.015	2.15	2
		3-Carcass	133.8		0.01		0.009		1.91	
	BG-2	1-Fillet	100.5	277.3	0.019	0.013	0.022	0.015	2.24	1.9
		3-Carcass	176.7		0.009		0.011		1.66	
	BG-2 Dup	1-Fillet	100.5	277.3	0.019	0.013	0.024	0.014	1.95	1.8
		3-Carcass	176.7		0.009		0.009		1.77	
HQ	BG-1	1-Fillet	27.3	82.3	0.032	0.02	0.026	0.02	1.31	1.2
		3-Carcass	55.0		0.014		0.017		1.14	
	BG-2	1-Fillet	30.0	85.5	0.03	0.023	0.025	0.017	1.4	1.2
		3-Carcass	55.5		0.02		0.013		1.15	
	BG-2 Dup	1-Fillet	30.0	85.5	0.027	0.02	0.016	0.01	1.27	1.2
		3-Carcass	55.5		0.016		0.007		1.11	
LHL1	BG-1	1-Fillet	63.0	203.5	0.039	0.028	0.038	0.027	1.01	0.92
		3-Carcass	140.5		0.023		0.022		0.88	
	BG-2	1-Fillet	54.6	166.5	0.046	0.032	0.039	0.026	1.03	0.96
		3-Carcass	111.8		0.025		0.02		0.92	
LHL2	BG-1	1-Fillet	52.7	146.8	0.029	0.021	0.021	0.017	0.96	0.92
		3-Carcass	94.1		0.016		0.015		0.89	
	BG-2	1-Fillet	39.5	122.3	0.051	0.033	0.034	0.026	1.24	1.1
		3-Carcass	82.8		0.025		0.022		1.06	
LHL3	BG-1	1-Fillet	57.8	169.2	0.03	0.019	0.023	0.016	1.02	1.1
		3-Carcass	111.5		0.014		0.012		1.11	
	BG-2	1-Fillet	40.8	146.9	0.026	0.019	0.025	0.019	1.18	1.1
		3-Carcass	106.1		0.017		0.016		1.07	
LHL4	BG-1	1-Fillet	86.7	284.9	0.047	0.03	0.024	0.027	1.13	1.1
		3-Carcass	198.3		0.023		0.028		1.11	
	BG-2	1-Fillet	73.4	215.7	0.05	0.031	0.047	0.03	1.14	1.1
		3-Carcass	142.4		0.022		0.021		1.04	
LHL5	BG-1	1-Fillet	82.3	262.2	0.027	0.017	0.031	0.02	0.95	0.87
		3-Carcass	179.9		0.012		0.015		0.83	
	BG-2	1-Fillet	66.2	205.1	0.037	0.026	0.038	0.025	0.88	0.82
		3-Carcass	138.9		0.021		0.019		0.79	
LHL6	BG-1	1-Fillet	74.5	246.5	0.039	0.025	0.042	0.026	0.96	0.93
		3-Carcass	172.0		0.019		0.02		0.91	
	BG-2	1-Fillet	56.0	170.2	0.037	0.025	0.035	0.025	0.81	0.73
		3-Carcass	114.2		0.019		0.019		0.69	
MHL1	BG-1	1-Fillet	90.8	250.6	0.048	0.031	0.037	0.03	0.38	0.38
		3-Carcass	159.9		0.022		0.026		0.38	
	BG-2	1-Fillet	72.6	189.5	0.048	0.025	0.051	0.028	0.5	0.35
		3-Carcass	116.9		0.01		0.013		0.26	
MHL3	BG-1	1-Fillet	58.0	160.5	0.027	0.021	0.031	0.022	0.21	0.21
		3-Carcass	102.6		0.017		0.018		0.21	
	BG-2	1-Fillet	67.6	171.2	0.032	0.023	0.031	0.024	0.22	0.24
		3-Carcass	103.6		0.017		0.019		0.26	
DR	BG-1	1-Fillet	18.3	51.4	0.036	0.029	0.05	0.035	0.48	0.51
		3-Carcass	33.0		0.026		0.027		0.52	
	GS-1	1-Fillet	42.3	132.8	0.089	0.061	0.077	0.059	0.68	0.67
		3-Carcass	90.5		0.048		0.051		0.66	
	GS-2	1-Fillet	15.9	52.8	0.08	0.055	0.068	0.052	0.79	0.81
		3-Carcass	36.9		0.044		0.045		0.82	

Table 5-1C: Bluegill and Green Sunfish Calculated Whole-body Results (Wet Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Zinc	
Location	Fish ID	Portion	Weight of Portion	Total Weight of Fish (Fillet + Carcass)	Portion mg/kg ww	Calculated whole fish mg/kg ww
CI	BG-1	1-Fillet	76.0	209.8	7.45	20
		3-Carcass	133.8		27.9	
	BG-1 Dup	1-Fillet	76.0	209.8	8.98	23
		3-Carcass	133.8		30.6	
	BG-2	1-Fillet	100.5	277.3	7.5	19
		3-Carcass	176.7		25.7	
	BG-2 Dup	1-Fillet	100.5	277.3	6.73	19
		3-Carcass	176.7		26.2	
HQ	BG-1	1-Fillet	27.3	82.3	10.4	26
		3-Carcass	55.0		33.1	
	BG-2	1-Fillet	30.0	85.5	10.7	29
		3-Carcass	55.5		38.2	
	BG-2 Dup	1-Fillet	30.0	85.5	10.4	28
		3-Carcass	55.5		37.6	
LHL1	BG-1	1-Fillet	63.0	203.5	12.6	28
		3-Carcass	140.5		34.5	
	BG-2	1-Fillet	54.6	166.5	10.8	30
		3-Carcass	111.8		39.2	
LHL2	BG-1	1-Fillet	52.7	146.8	9.81	25
		3-Carcass	94.1		34.1	
	BG-2	1-Fillet	39.5	122.3	12.8	33
		3-Carcass	82.8		42	
LHL3	BG-1	1-Fillet	57.8	169.2	9.25	24
		3-Carcass	111.5		32.1	
	BG-2	1-Fillet	40.8	146.9	11	27
		3-Carcass	106.1		32.5	
LHL4	BG-1	1-Fillet	86.7	284.9	10.1	27
		3-Carcass	198.3		35	
	BG-2	1-Fillet	73.4	215.7	11.1	30
		3-Carcass	142.4		40.2	
LHL5	BG-1	1-Fillet	82.3	262.2	13.8	27
		3-Carcass	179.9		32.6	
	BG-2	1-Fillet	66.2	205.1	12.7	28
		3-Carcass	138.9		35.9	
LHL6	BG-1	1-Fillet	74.5	246.5	11.3	26
		3-Carcass	172.0		32	
	BG-2	1-Fillet	56.0	170.2	12.1	29
		3-Carcass	114.2		37.4	
MHL1	BG-1	1-Fillet	90.8	250.6	9.82	26
		3-Carcass	159.9		35.1	
	BG-2	1-Fillet	72.6	189.5	14.5	21
		3-Carcass	116.9		24.9	
MHL3	BG-1	1-Fillet	58.0	160.5	8.84	23
		3-Carcass	102.6		30.6	
	BG-2	1-Fillet	67.6	171.2	9.96	26
		3-Carcass	103.6		37.1	
DR	BG-1	1-Fillet	18.3	51.4	9.57	22
		3-Carcass	33.0		29.5	
	GS-1	1-Fillet	42.3	132.8	9.21	22
		3-Carcass	90.5		27.3	
	GS-2	1-Fillet	15.9	52.8	11.2	28
		3-Carcass	36.9		34.9	

Table 5-1C: Bluegill and Green Sunfish Calculated Whole-body Results (Wet Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

BG	Bluegill
CI	Curd's Inlet
DR	Dix River
Dup	Duplicate Sample
EPA	Environmental Protection Agency
GS	Green Sunfish
HQ	HQ Inlet
LHL	Lower Herrington Lake
mg/kg	milligrams per kilogram
MHL	Middle Herrington Lake
ug/kg	micrograms per kilogram
ww	Wet Weight

Table 5-1D: Bass, Catfish, Trout, and Sucker Analytical Results and Calculated Whole-body Results (Dry Weight Selenium)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Location	Fish ID	Portion	Weight of Portion	Total Weight of Fish (2xFillet + Ovary if present + Carcass)	Selenium Concentration in Portion mg/kg dw	Selenium Concentration in Calculated whole fish mg/kg dw
CI	CC-1	FF	588	2449	2.6	2.31
		FWB	1273		2.04	
	FHC-1	FF	783	3317	6	4.6
		FO	14		14.5	
		FWB	1737		3.25	
	LMB-1	FF	328	1534	7.08	5.5
		FO	7		8.93	
		FWB	871		4.29	
	LMB-2	FF	193	964	5.98	4.07
		FWB	578		2.79	
	LMB-2 FD	FF	193	389	5.33	5.3
		FWB	4		2.52	
LHL1	CC-1	FF	310	1470	1.8	1.62
		FWB	850		1.49	
	FHC-1	FF	162	729	4.33	3.27
		FWB	404		2.41	
	LMB-1	FF	399	1658	4.19	3.32
		FO	4		4.8	
		FWB	856		2.5	
	LMB-2	FF	290	1467	4.2	3.25
		FWB	887		2.63	
LHL2	CC-1	FF	211	1065	2.41	1.99
		FWB	643		1.71	
	FHC-1	FF	113	580	7.34	5.13
		FWB	354		3.72	
	KB-1	FF	391	1839	5.3	3.75
		FO	4		6.89	
		FWB	1053		2.58	
	LMB-1	FF	302	1487	4.31	3.12
		FWB	882		2.3	
	LMB-1 FD	FF	302	608	4.3	4.29
		FWB	4		2.61	
LHL3	CC-1	FF	330	1633	2.7	2.62
		FWB	973		2.57	
	CC-1 FD	FF	330	1633	2.6	2.43
		FWB	973		2.32	
	KB-1	FF	275	1372	5.5	4.1
		FO	3		6.08	
		FWB	818		3.15	
	CC-2	FF	1260	5316	1.3	1.6
		FO	130		6.59	
		FWB	2666		1.65	
	KB-2	FF	314	1881	4.67	3.62
		FO	4		5.4	
		FWB	1250		3.08	

Table 5-1D: Bass, Catfish, Trout, and Sucker Analytical Results and Calculated Whole-body Results (Dry Weight Selenium)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Location	Fish ID	Portion	Weight of Portion	Total Weight of Fish (2xFillet + Ovary if present + Carcass)	Selenium Concentration in Portion mg/kg dw	Selenium Concentration in Calculated whole fish mg/kg dw
LHL4	CC-1	FF	463	2109	2.69	2.33
		FWB	1183		2.04	
	FHC-1	FF	628	2828	4.77	3.35
		FWB	1572		2.21	
	KB-1	FF	137	668	5.44	4.13
		FO	3		6.4	
		FWB	392		3.19	
	LMB-1	FF	168	770	4.97	4.04
		FO	2		6.3	
		FWB	433		3.31	
LHL5	CC-1	FF	1587	6846	1.5	1.35
		FO	76		6.6	
		FWB	3596		1.1	
	LMB-1	FF	573	2685	4.47	3.29
		FO	6		4.2	
		FWB	1533		2.4	
	CC-2	FF	774	3839	1.69	1.4
		FWB	2291		1.2	
	LMB-2	FF	617	2522	3.7	2.81
		FWB	1288		1.95	
LHL6	CC-1	FF	1465	6120	1.5	1.39
		FO	10		5.78	
		FWB	3180		1.28	
	KB-1	FF	269	1425	3.97	3.01
		FO	5		6.7	
		FWB	882		2.4	
	LMB-1	FF	314	1492	5.66	4.32
		FO	8		7.56	
		FWB	857		3.3	
	CC-2	FF	403	1811	1.1	1.21
		FWB	1005		1.3	
MHL1	FHC-1	FF	460	2176	1.97	1.56
		FO	10		10.9	
		FWB	1246		1.19	
	KB-1	FF	205	934	1.6	1.38
		FO	3		3.3	
		FWB	520		1.2	
	LMB-1	FF	273	1312	1.81	1.52
		FWB	766		1.31	
	FHC-2	FF	1111	6104	1.9	1.2
		FWB	3882		0.8	

Table 5-1D: Bass, Catfish, Trout, and Sucker Analytical Results and Calculated Whole-body Results (Dry Weight Selenium)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Location	Fish ID	Portion	Weight of Portion	Total Weight of Fish (2xFillet + Ovary if present + Carcass)	Selenium Concentration in Portion mg/kg dw	Selenium Concentration in Calculated whole fish mg/kg dw
MHL3	CC-1	FF	537	2306	0.7	0.738
		FO	22		5.11	
		FWB	1211		0.69	
	LMB-1	FF	543	2433	1.53	1.33
		FO	12		3.95	
		FWB	1335		1.14	
	CC-2	FF	339	2051	0.95	0.95
		FWB	1373		0.95	
	LMB-2	FF	416	2146	1.36	1.15
		FWB	1314		1.01	
DR	BT-1	FF	53	236	2.1	2.89
		FO	34		6.95	
		FWB	96		2.3	
	HS-1	FF	74	413	5.1	4.06
		FO	10		5.86	
		FWB	256		3.4	
	LMB-1	FF	109	484	4.28	3.58
		FO	7		6.37	
		FWB	259		2.91	
	SS-1	FF	50	224	6.29	5.3
		FWB	124		4.5	

Notes:

BT	Brown Trout
CC	Channel Catfish
CI	Curd's Inlet
DR	Dix River
dw	Dry Weight
FHC	Flathead Catfish
HS	Northern Hogsucker
KB	Kentucky Bass
LHL	Lower Herrington Lake
LMB	Largemouth Bass
mg/kg	milligrams per kilogram
SS	Spotted Sucker

Table 5-1E: Bass, Catfish, Trout, and Sucker Analytical Results and Calculated Whole-body Results (Wet-weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Portion	Calculated	Portion	Calculated	Portion	Calculated	Portion	Calculated
					Arsenic 1632A		Arsenic III		Arsenic SW6020		Arsenic V	
Location	Fish ID	Portion	Portion Weight	Whole body Weight (2x fillet + remains)	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww
CI	CC-1	FF	588	2449	0	0.0052	0	0	0.04	0.0712	0	0
		FWB	1273		0.01		0		0.1		0	
	FHC-1	FF	783	3303	0	0.00631	0	0	0.05	0.0763	0	0
		FWB	1737		0.012		0		0.1		0	
	LMB-1	FF	328	1527	0	0.00285	0	0	0.25	0.307	0	0
		FWB	871		0.005		0		0.35		0	
	LMB-2	FF	192.89	963.94	0	0.0042	0	0	0.18	0.222	0	0
		FWB	578.16		0.007		0		0.25		0	
	LMB-2 FD	FF	192.89	389.358	0	0.0000827	0	0	0.17	0.17	0	0
		FWB	3.578		0.009		0		0.22		0	
LHL1	CC-1	FF	310.22	1470.31	0	0	0	0	0.01	0.01	0	0
		FWB	849.87		0		0		0.01		0	
	FHC-1	FF	162.29	728.67	0	0	0	0	0.009	0.0151	0	0
		FWB	404.09		0		0		0.02		0	
	LMB-1	FF	399	1654	0	0	0	0	0.31	0.476	0	0
		FWB	856		0		0		0.63		0	
	LMB-2	FF	290	1467	0	0	0	0	0.35	0.525	0	0
		FWB	887		0		0		0.64		0	
LHL2	CC-1	FF	211	1065	0	0.00664	0	0	0.02	0.0623	0	0
		FWB	643		0.011		0		0.09		0	
	FHC-1	FF	113	580	0	0	0	0	0.015	0.0242	0	0
		FWB	354		0		0		0.03		0	
	KB-1	FF	391.35	1835.42	0	0.00344	0	0	0.32	0.372	0	0
		FWB	1052.72		0.006		0		0.41		0	
	LMB-1	FF	302.41	1486.89	0	0	0	0	0.31	0.399	0	0
		FWB	882.07		0		0		0.46		0	
	LMB-1 FD	FF	302.41	608.398	0	0	0	0	0.33	0.331	0	0
		FWB	3.578		0		0		0.52		0	
LHL3	CC-1	FF	330	1633	0	0.00417	0	0	0.02	0.0319	0	0
		FWB	973		0.007		0		0.04		0	
	CC-1 FD	FF	330	1633	0	0.00417	0	0	0.02	0.026	0	0
		FWB	973		0.007		0		0.03		0	
	KB-1	FF	275.46	1368.79	0	0	0	0	0.36	0.491	0	0
		FWB	817.87		0		0		0.58		0	
	CC-2	FF	1260	5186	0	0	0	0	0.04	0.0451	0	0
		FWB	2666		0		0		0.05		0	
	KB-2	FF	313.96	1877.92	0	0	0	0	0.38	0.506	0	0
		FWB	1250		0		0		0.57		0	
LHL4	CC-1	FF	463	2109	0	0	0	0	0.01	0.0156	0	0
		FWB	1183		0		0		0.02		0	
	FHC-1	FF	628	2828	0	0	0	0	0.03	0.0467	0	0
		FWB	1572		0		0		0.06		0	
	KB-1	FF	136.72	665.03	0	0	0	0	0.27	0.341	0	0
		FWB	391.59		0		0		0.39		0	
	LMB-1	FF	167.69	768.47	0	0	0	0	0.16	0.228	0	0
		FWB	433.09		0		0		0.28		0	
LHL5	CC-1	FF	1587	6770	0	0	0	0	0.04	0.04	0	0
		FWB	3596		0		0		0.04		0	
	LMB-1	FF	573	2679	0	0	0	0	0.34	0.443	0	0
		FWB	1533		0		0		0.52		0	
	CC-2	FF	774	3839	0	0.00418	0	0	0.03	0.0419	0	0
		FWB	2291		0.007		0		0.05		0	
	LMB-2	FF	617	2522	0	0	0	0	0.34	0.468	0	0
		FWB	1288		0		0		0.59		0	

Table 5-1E: Bass, Catfish, Trout, and Sucker Analytical Results and Calculated Whole-body Results (Wet-weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Arsenic 1632A		Arsenic III		Arsenic SW6020		Arsenic V	
Location	Fish ID	Portion	Portion Weight	Whole body Weight (2x fillet + remains)	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww
LHL6	CC-1	FF	1465	6110	0	0	0	0	0.03	0.0456	0	0
		FWB	3180		0		0		0.06		0	
	KB-1	FF	269	1420	0	0	0	0	0.26	0.372	0	0
		FWB	882		0		0		0.44		0	
	LMB-1	FF	314.1	1484.87	0	0	0	0	0.18	0.243	0	0
		FWB	856.67		0		0		0.29		0	
	CC-2	FF	403	1811	0	0.00555	0	0	0.07	0.0866	0	0
		FWB	1005		0.01		0		0.1		0	
MHL1	FHC-1	FF	460.07	2166.59	0	0.00288	0	0	0.02	0.043	0	0
		FWB	1246.45		0.005		0		0.06		0	
	KB-1	FF	205.4	930.58	0	0	0	0	0.35	0.473	0	0
		FWB	519.78		0		0		0.57		0	
	LMB-1	FF	272.62	1311.66	0	0	0	0	0.26	0.406	0	0
		FWB	766.42		0		0		0.51		0	
	FHC-2	FF	1111	6104	0	0	0	0	0.02	0.0391	0	0
		FWB	3882		0		0		0.05		0	
MHL3	CC-1	FF	536.69	2284.02	0	0	0	0	0.05	0.0712	0	0
		FWB	1210.64		0		0		0.09		0	
	LMB-1	FF	543	2421	0	0	0	0	0.29	0.455	0	0
		FWB	1335		0		0		0.59		0	
	CC-2	FF	339	2051	0	0.00402	0	0	0.04	0.0601	0	0
		FWB	1373		0.006		0		0.07		0	
	LMB-2	FF	416	2146	0	0	0	0	0.29	0.406	0	0
		FWB	1314		0		0		0.48		0	
DR	BT-1	FF	52.66	201.48	0	0.00143	0	0	0.23	0.216	0	0
		FWB	96.16		0.003		0		0.2		0	
	HS-1	FF	73.5	403.17	0	0.00318	0	0	0.05	0.0436	0	0
		FWB	256.17		0.005		0		0.04		0	
	LMB-1	FF	109.25	477.05	0	0.00434	0	0	0.07	0.0754	0	0
		FWB	258.55		0.008		0		0.08		0	
	SS-1	FF	50.24	224.32	0	0.00442	0	0	0.02	0.031	0	0
		FWB	123.84		0.008		0		0.04		0	

Notes:

BT	Brown Tout	DR	Dix River
CC	Channel Catfish	FF	Fillet
CI	Curd's Inlet	FHC	Flathead Catfish

Table 5-1E: Bass, Catfish, Trout, and Sucker Analytical Results and Calculated Whole-body Results (Wet-weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Portion	Calculated	Portion	Calculated	Portion	Calculated	Portion	Calculated	Portion	Calculated
					Boron		Cadmium		Iron		Lead		Magnesium	
Location	Fish ID	Portion	Portion Weight	Whole body Weight (2x fillet + remains)	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww
CI	CC-1	FF	588	2449	0.07	0.418	0.0023	0.0143	3.85	19.1	0.0027	0.0179	178	324
		FWB	1273		0.74		0.0253		33.1		0.032		458	
	FHC-1	FF	783	3303	0.24	0.619	0.0107	0.0397	3.55	15.4	0.0017	0.00827	224	333
		FWB	1737		0.96		0.0659		26		0.0142		432	
	LMB-1	FF	328	1527	0	0	0.0007	0.006	1.36	7.54	0.0009	0.00609	274	458
		FWB	871		0		0.01		12.2		0.01		596	
	LMB-2	FF	192.89	963.94	0	0.084	0.0029	0.0611	1.64	57.2	0.001	0.0125	270	489
		FWB	578.16		0.14		0.1		94.3		0.0201		635	
	LMB-2 FD	FF	192.89	389.358	0	0.00138	0.0031	0.00374	1.54	2.09	0.0017	0.00184	236	239
		FWB	3.578		0.15		0.0732		61.7		0.0164		573	
LHL1	CC-1	FF	310.22	1470.31	0.05	0.166	0.002	0.00703	5.94	17.7	0.0034	0.017	191	374
		FWB	849.87		0.25		0.0107		26.3		0.027		508	
	FHC-1	FF	162.29	728.67	0.079	0.263	0.0013	0.00718	2.94	12.1	0	0.00865	188	303
		FWB	404.09		0.41		0.0119		19.5		0.0156		395	
	LMB-1	FF	399	1654	0	0	0.0016	0.00843	1.61	10.1	0.0012	0.00901	268	435
		FWB	856		0		0.0148		18.1		0.0163		591	
	LMB-2	FF	290	1467	0	0	0	0.00707	2.54	11.2	0	0.00405	292	395
		FWB	887		0		0.0117		16.8		0.0067		463	
LHL2	CC-1	FF	211	1065	0	0.254	0.0011	0.00708	4.32	34.3	0.002	0.0219	191	352
		FWB	643		0.42		0.011		53.9		0.0349		457	
	FHC-1	FF	113	580	0.126	0.409	0.0023	0.00877	4.11	14.1	0.003	0.0135	227	416
		FWB	354		0.59		0.0129		20.5		0.0202		537	
	KB-1	FF	391.35	1835.42	0	0	0.001	0.00576	2.45	9.82	0.0009	0.00555	241	335
		FWB	1052.72		0		0.0093		15.3		0.009		405	
	LMB-1	FF	302.41	1486.89	0	0	0.0016	0.00848	2.16	9.18	0.0009	0.00541	227	495
		FWB	882.07		0		0.0132		14		0.0085		678	
	LMB-1 FD	FF	302.41	608.398	0	0	0.001	0.00107	2.23	2.3	0.001	0.00103	237	238
		FWB	3.578		0		0.0136		14.6		0.0069		481	
LHL3	CC-1	FF	330	1633	0	0.119	0.0007	0.0158	5.77	93.5	0.0035	0.0208	189	352
		FWB	973		0.2		0.0261		153		0.0325		462	
	CC-1 FD	FF	330	1633	0	0.101	0.0008	0.00652	5.02	53.1	0.0027	0.00991	197	239
		FWB	973		0.17		0.0104		85.7		0.0148		268	
	KB-1	FF	275.46	1368.79	0	0	0	0.004	2.67	9.74	0.0016	0.00877	246	454
		FWB	817.87		0		0.0067		14.5		0.0136		594	
	CC-2	FF	1260	5186	0.08	0.157	0.0018	0.018	3.61	19.4	0.0013	0.0352	176	246
		FWB	2666		0.23		0.0333		34.4		0.0672		313	
	KB-2	FF	313.96	1877.92	0	0	0	0.00752	3.25	9.21	0.0013	0.00536	248	437
		FWB	1250		0		0.0113		12.2		0.0074		532	
LHL4	CC-1	FF	463	2109	0	0.0954	0.0032	0.0137	4.82	17.7	0.0011	0.0104	180	342
		FWB	1183		0.17		0.0219		27.7		0.0177		469	
	FHC-1	FF	628	2828	0.13	0.363	0.0014	0.0147	5.33	13	0.002	0.0134	210	383
		FWB	1572		0.55		0.0254		19.2		0.0225		522	
	KB-1	FF	136.72	665.03	0	0	0.0043	0.0123	2.03	10.7	0.0075	0.0163	241	411
		FWB	391.59		0		0.0179		16.7		0.0225		529	
	LMB-1	FF	167.69	768.47	0	0	0.0022	0.00744	1.75	7.3	0.002	0.00572	250	385
		FWB	433.09		0		0.0115		11.6		0.0086		490	
LHL5	CC-1	FF	1587	6770	0	0.0797	0.0011	0.00524	3.34	7.36	0.0024	0.00846	211	471
		FWB	3596		0.15		0.0089		10.9		0.0138		701	
	LMB-1	FF	573	2679	0.07	0.11	0.0009	0.00594	2.36	8.16	0.0017	0.00656	253	429
		FWB	1533		0.14		0.0097		12.5		0.0102		560	
	CC-2	FF	774	3839	0.06	0.257	0	0.00436	3.12	13.9	0.0013	0.014	246	458
		FWB	2291		0.39		0.0073		21.2		0.0225		601	
	LMB-2	FF	617	2522	0	0	0	0.0048	2.35	7.69	0.001	0.00953	273	412
		FWB	1288		0		0.0094		12.8		0.0177		546	

Table 5-1E: Bass, Catfish, Trout, and Sucker Analytical Results and Calculated Whole-body Results (Wet-weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Boron		Cadmium		Iron		Lead		Magnesium	
Location	Fish ID	Portion	Portion Weight	Whole body Weight (2x fillet + remains)	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww
LHL6	CC-1	FF	1465	6110	0	0	0	0.00697	3.73	10.9	0.0011	0.0276	231	288
		FWB	3180		0		0.0134		17.6		0.052		341	
	KB-1	FF	269	1420	0	0	0	0.00447	2.04	10.2	0.0008	0.00471	270	502
		FWB	882		0		0.0072		15.1		0.0071		643	
	LMB-1	FF	314.1	1484.87	0	0	0.0008	0.00507	1.78	7.79	0.001	0.00752	228	421
		FWB	856.67		0		0.0082		12.2		0.0123		563	
	CC-2	FF	403	1811	0	0.0666	0	0.00677	5.14	13.6	0.0016	0.0215	218	314
		FWB	1005		0.12		0.0122		20.3		0.0374		391	
MHL1	FHC-1	FF	460.07	2166.59	0.05	0.102	0.0025	0.00728	3.54	10.2	0.0016	0.0105	205	351
		FWB	1246.45		0.14		0.0108		15.1		0.0171		458	
	KB-1	FF	205.4	930.58	0	0	0	0.0014	2.9	9.6	0.003	0.00646	207	371
		FWB	519.78		0		0.0025		14.9		0.0092		501	
	LMB-1	FF	272.62	1311.66	0	0	0	0.0038	1.97	11.2	0.0008	0.00425	219	350
		FWB	766.42		0		0.0065		17.7		0.0067		443	
	FHC-2	FF	1111	6104	0	0.0509	0	0.00757	2.17	8.49	0.001	0.0168	181	473
		FWB	3882		0.08		0.0119		12.1		0.0259		640	
MHL3	CC-1	FF	536.69	2284.02	0	0	0	0.00323	3.84	15.2	0.0018	0.0116	202	263
		FWB	1210.64		0		0.0061		25.2		0.0202		318	
	LMB-1	FF	543	2421	0	0	0	0.00447	1.69	13.4	0.0007	0.0127	281	425
		FWB	1335		0		0.0081		22.9		0.0225		543	
	CC-2	FF	339	2051	0	0.0602	0	0.00462	3.86	33.7	0.0013	0.0352	202	395
		FWB	1373		0.09		0.0069		48.5		0.0519		490	
	LMB-2	FF	416	2146	0	0	0	0.00202	2.47	9.65	0	0.00484	303	482
		FWB	1314		0		0.0033		14.2		0.0079		596	
DR	BT-1	FF	52.66	201.48	0	0	0.0026	0.00274	5.47	10.7	0.0016	0.0132	206	278
		FWB	96.16		0		0.0029		16.4		0.026		357	
	HS-1	FF	73.5	403.17	0.11	0.205	0.0026	0.0117	4.67	8.37	0.0016	0.00586	281	444
		FWB	256.17		0.26		0.0169		10.5		0.0083		538	
	LMB-1	FF	109.25	477.05	0	0	0.0022	0.00767	3.49	12.4	0.0009	0.00545	262	450
		FWB	258.55		0		0.0123		20		0.0093		608	
	SS-1	FF	50.24	224.32	0.13	0.262	0.0032	0.00469	3.92	17.5	0.0022	0.0167	253	431
		FWB	123.84		0.37		0.0059		28.5		0.0285		575	

Notes:

FWB	Remains	LHL	Lower Herrington Lake
HS	Northern Hogsucker	LMB	Largemouth Bass
KB	Kentucky Bass	mg/kg	milligrams per kilogram

Table 5-1E: Bass, Catfish, Trout, and Sucker Analytical Results and Calculated Whole-body Results (Wet-weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Portion	Calculated	Portion	Calculated	Portion	Calculated	Portion	Calculated
					Mercury		Methyl mercury		Selenium		Zinc	
Location	Fish ID	Portion	Portion Weight	Whole body Weight (2x fillet + remains)	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww
CI	CC-1	FF	588	2449	0.0394	0.0347	43.2	36.6	0.62	0.703	7.62	16.3
		FWB	1273		0.0303		30.5		0.78		24.4	
	FHC-1	FF	783	3303	0.153	0.107	142	104	1.53	1.41	5.17	17.5
		FWB	1737		0.0662		69.6		1.29		28.6	
	LMB-1	FF	328	1527	0.0922	0.0684	86.2	65.1	1.56	1.48	7.67	14.4
		FWB	871		0.0504		49.2		1.41		19.5	
	LMB-2	FF	192.89	963.94	0.0863	0.061	108	74.4	1.22	0.956	10.3	18
		FWB	578.16		0.0442		51.9		0.78		23.1	
	LMB-2 FD	FF	192.89	389.358	0.0867	0.0863	116	115	1.09	1.09	10.3	10.4
		FWB	3.578		0.0385		39.6		0.7		21	
LHL1	CC-1	FF	310.22	1470.31	0.0364	0.0289	50.5	35.3	0.44	0.486	11.9	21.3
		FWB	849.87		0.0234		24.2		0.52		28.2	
	FHC-1	FF	162.29	728.67	0.0948	0.0682	108	71.7	0.81	0.721	4.42	15.5
		FWB	404.09		0.0468		42.6		0.65		24.4	
	LMB-1	FF	399	1654	0.0967	0.0698	106	75.3	0.9	0.921	7.06	14.3
		FWB	856		0.0448		46.6		0.94		21.1	
	LMB-2	FF	290	1467	0.101	0.0731	115	81.7	0.99	0.99	7.21	14
		FWB	887		0.0549		60		0.99		18.4	
LHL2	CC-1	FF	211	1065	0.0392	0.026	56.4	38.9	0.58	0.622	8.14	16.9
		FWB	643		0.0174		27.4		0.65		22.6	
	FHC-1	FF	113	580	0.176	0.121	198	143	1.39	1.17	5.4	21.4
		FWB	354		0.0851		108		1.03		31.6	
	KB-1	FF	391.35	1835.42	0.0827	0.0608	98.3	69.1	1.2	1.03	8.45	16.5
		FWB	1052.72		0.0445		47.4		0.91		22.5	
	LMB-1	FF	302.41	1486.89	0.0823	0.0533	97.9	68.5	0.95	0.849	6.78	13
		FWB	882.07		0.0334		48.3		0.78		17.2	
	LMB-1 FD	FF	302.41	608.398	0.0704	0.0702	93.9	93.6	0.95	0.95	6.89	6.95
		FWB	3.578		0.0374		42.3		0.88		17.4	
LHL3	CC-1	FF	330	1633	0.0417	0.0397	45	26.1	0.55	0.681	8.59	18
		FWB	973		0.0383		13.2		0.77		24.4	
	CC-1 FD	FF	330	1633	0.0437	0.0274	57.4	34	0.53	0.5	8.08	13.3
		FWB	973		0.0164		18.1		0.48		16.8	
	KB-1	FF	275.46	1368.79	0.0928	0.0835	122	99.2	1.31	1.26	9.74	21.4
		FWB	817.87		0.0772		83.8		1.23		29.2	
	CC-2	FF	1260	5186	0.095	0.0795	94.5	68.6	0.43	0.612	7.35	16.6
		FWB	2666		0.0649		44.1		0.7		25.3	
	KB-2	FF	313.96	1877.92	0.0872	0.0757	118	86.4	1.15	1.15	9.03	18.9
		FWB	1250		0.0699		70.6		1.15		23.9	
LHL4	CC-1	FF	463	2109	0.162	0.106	207	119	0.6	0.611	8.05	18.1
		FWB	1183		0.0625		51		0.62		25.9	
	FHC-1	FF	628	2828	0.221	0.165	379	246	1	0.872	6.4	19.4
		FWB	1572		0.12		139		0.77		29.8	
	KB-1	FF	136.72	665.03	0.142	0.0948	166	101	1.23	1.12	8.96	20.3
		FWB	391.59		0.0619		56.3		1.05		28.3	
	LMB-1	FF	167.69	768.47	0.0536	0.0387	64.6	40	1.06	1.04	8.28	14.6
		FWB	433.09		0.0272		20.9		1.02		19.5	
LHL5	CC-1	FF	1587	6770	0.119	0.0959	169	119	0.46	0.479	8.61	20.2
		FWB	3596		0.0756		74.2		0.46		30.4	
	LMB-1	FF	573	2679	0.053	0.0432	96.2	67.5	0.98	0.912	7.46	13.5
		FWB	1533		0.0359		46.1		0.86		18.1	
	CC-2	FF	774	3839	0.0508	0.0339	43.7	34.6	0.46	0.448	8.83	17.3
		FWB	2291		0.0225		28.4		0.44		23.1	
	LMB-2	FF	617	2522	0.061	0.0459	105	236	0.78	0.754	6.56	12.5
		FWB	1288		0.0315		361		0.73		18.1	

Table 5-1E: Bass, Catfish, Trout, and Sucker Analytical Results and Calculated Whole-body Results (Wet-weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Mercury		Methyl mercury		Selenium		Zinc	
Location	Fish ID	Portion	Portion Weight	Whole body Weight (2x fillet + remains)	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww	Portion mg/kg ww	Calculated whole fish mg/kg ww
LHL6	CC-1	FF	1465	6110	0.146	0.106	207	139	0.44	0.484	7.42	13.2
		FWB	3180		0.0691		76		0.52		18.6	
	KB-1	FF	269	1420	0.135	0.0869	171	107	0.88	0.851	6.93	18.3
		FWB	882		0.0576		68.5		0.83		25.2	
	LMB-1	FF	314.1	1484.87	0.155	0.112	167	126	1.25	1.18	6.49	12.6
		FWB	856.67		0.0808		96		1.12		17.1	
	CC-2	FF	403	1811	0.0467	0.0333	58.5	40.2	0.32	0.414	7.69	15.1
		FWB	1005		0.0226		25.5		0.49		21.1	
MHL1	FHC-1	FF	460.07	2166.59	0.2	0.149	269	175	0.42	0.392	4.99	16.6
		FWB	1246.45		0.112		106		0.36		25.2	
	KB-1	FF	205.4	930.58	0.0714	0.0605	102	78.5	0.37	0.411	6.67	15.7
		FWB	519.78		0.0518		59.9		0.44		22.8	
	LMB-1	FF	272.62	1311.66	0.103	0.0776	141	100	0.41	0.451	7.11	13.8
		FWB	766.42		0.0596		71.5		0.48		18.5	
	FHC-2	FF	1111	6104	0.329	0.266	427	278	0.4	0.349	5.94	25.2
		FWB	3882		0.23		192		0.32		36.3	
MHL3	CC-1	FF	536.69	2284.02	0.15	0.113	190	131	0.2	0.251	7.85	14.4
		FWB	1210.64		0.0809		78.2		0.27		20.2	
	LMB-1	FF	543	2421	0.182	0.124	165	118	0.33	0.37	7.33	13.7
		FWB	1335		0.0775		79		0.4		18.9	
	CC-2	FF	339	2051	0.049	0.0355	76.7	48	0.24	0.307	7.05	18.5
		FWB	1373		0.0289		33.9		0.34		24.2	
	LMB-2	FF	416	2146	0.0769	0.0546	84	61.2	0.31	0.334	7.8	13.8
		FWB	1314		0.0405		46.7		0.35		17.6	
DR	BT-1	FF	52.66	201.48	0.0174	0.0148	22.5	22.6	0.43	0.842	14.2	29.9
		FWB	96.16		0.012		22.7		0.58		47	
	HS-1	FF	73.5	403.17	0.0269	0.0198	27.3	29	1.06	1.05	9.63	17.2
		FWB	256.17		0.0158		30		1.03		21.5	
	LMB-1	FF	109.25	477.05	0.152	0.114	186	145	0.93	0.941	9.2	14.8
		FWB	258.55		0.0819		111		0.94		19.6	
	SS-1	FF	50.24	224.32	0.0316	0.0255	38.6	34.6	1.27	1.23	7.91	17.2
		FWB	123.84		0.0205		31.3		1.19		24.7	

Notes:
SS Spotted Sucker
ww Wet Weight

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	CI	CI	CI	CI	CI
				Sample ID	FF-001(CC)-CI-171013	FF-001(FHC)-CI-171013	FF-001(LMB)-CI-171004	FF-002(LMB)-CI-171004	FF-002(LMB)-CI-171004-FD
				Lab Sample ID	K1712469-022	K1712469-018	K1712479-002	K1712476-014	K1712476-032
				Area of Concern					
				Lake Status					
				Sample Date	10/13/2017	10/13/2017	10/04/2017	10/04/2017	10/04/2017
				Sample Type	N	N	N	N	FD
Analyte	CASRN	Method	Basis	Unit					
Moisture Content	MOISTURE	CALCULATED	Wet	%	76.5	74.4	78.0	79.6	79.6
Lipids	LIPIDS	NOAA LIPID	Wet	%			4.6	1.6	2.2
Solids (total)	C-008	ZFZDRY	Wet	%	23.5	25.6	22.0	20.4	20.4
Suspended solids (total)	C-009	ZFZDRY	Wet	%					
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	< 0.04 U	< 0.039 U	< 0.039	< 0.039	< 0.04
Arsenic	7440-38-2	SW6020	Dry	mg/kg	0.17 J	0.18 J	1.13	0.89	0.82
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.08 U	< 0.078 U	< 0.078	< 0.079	< 0.079
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.08 U	< 0.078 U	< 0.078	< 0.079	< 0.079
Boron	7440-42-8	SW6020	Dry	mg/kg	0.31 J	0.95	< 0.50	< 0.50	< 0.50
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.010 J	0.042	0.003	0.014	0.015
Iron	7439-89-6	SW6020	Dry	mg/kg	16.4	13.9	6.18	8.05	7.56
Lead	7439-92-1	SW6020	Dry	mg/kg	0.012 J	0.007 J	0.004	0.005	0.008
Magnesium	7439-95-4	SW6010	Dry	mg/kg	759	876	1250	1320	1160
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.168	0.596	0.419	0.423	0.425
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	184	554	392	527	568
Selenium	7782-49-2	SW6020	Dry	mg/kg	2.6	6.0	7.08	5.98	5.33
Zinc	7440-66-6	SW6020	Dry	mg/kg	32.4	20.2	34.9	50.6	50.4
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	< 0.009 U	< 0.01 U	< 0.009	< 0.008	< 0.008
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.04 J	0.05 J	0.25	0.18	0.17
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.019 U	< 0.02 U	< 0.017	< 0.016	< 0.016
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.019 U	< 0.02 U	< 0.017	< 0.016	< 0.016
Boron	7440-42-8	SW6020	Wet	mg/kg	0.07 J	0.24	< 0.11	< 0.10	< 0.10
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.0023 J	0.0107	0.0007	0.0029	0.0031
Iron	7439-89-6	SW6020	Wet	mg/kg	3.85	3.55	1.36	1.64	1.54
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0027 J	0.0017 J	0.0009	0.0010	0.0017
Magnesium	7439-95-4	SW6010	Wet	mg/kg	178	224	274	270	236
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.0394	0.153	0.0922	0.0863	0.0867
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	43.2	142	86.2	108	116
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.62	1.53	1.56	1.22	1.09
Zinc	7440-66-6	SW6020	Wet	mg/kg	7.62	5.17	7.67	10.3	10.3

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	CI	CI	CI	CI	CI
					Sample ID	FO-001(FHC)-CI-171013	FO-001(LMB)-CI-171004	FWB-001(CC)-CI-171013	FWB-001(FHC)-CI-171013	FWB-001(LMB)-CI-171004
					Lab Sample ID	K1712469-020	K1712479-004	K1712469-023	K1712469-019	K1712479-003
					Area of Concern					
					Lake Status					
					Sample Date	10/13/2017	10/04/2017	10/13/2017	10/13/2017	10/04/2017
					Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit						
Moisture Content	MOISTURE	CALCULATED	Wet	%	83.3	82.0	61.7	60.2	67.1
Lipids	LIPIDS	NOAA LIPID	Wet	%	1.5				22
Solids (total)	C-008	ZFZDRY	Wet	%	16.7	18.0	38.3	39.8	32.9
Suspended solids (total)	C-009	ZFZDRY	Wet	%	16.7	18.0			
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g			0.027 J	0.030 J	0.016
Arsenic	7440-38-2	SW6020	Dry	mg/kg			0.25 J	0.26 J	1.07
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g			< 0.078 U	< 0.079 U	< 0.078
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g			< 0.078 U	< 0.079 U	< 0.078
Boron	7440-42-8	SW6020	Dry	mg/kg			1.92	2.41	< 0.50
Cadmium	7440-43-9	SW6020	Dry	mg/kg			0.066	0.166	0.031
Iron	7439-89-6	SW6020	Dry	mg/kg			86.5	65.4	36.9
Lead	7439-92-1	SW6020	Dry	mg/kg			0.084	0.036	0.031
Magnesium	7439-95-4	SW6010	Dry	mg/kg			1200 J	1090 J	1810
Mercury	7439-97-6	SW7471	Dry	mg/kg			0.079	0.166	0.153
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g			79.4	175	149
Selenium	7782-49-2	SW6020	Dry	mg/kg	14.5	8.93	2.04 J	3.25 J	4.29
Zinc	7440-66-6	SW6020	Dry	mg/kg			63.6 J	71.9 J	59.3
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g			0.010 J	0.012 J	0.005
Arsenic	7440-38-2	SW6020	Wet	mg/kg			0.10 J	0.10 J	0.35
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g			< 0.03 U	< 0.031 U	< 0.026
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g			< 0.03 U	< 0.031 U	< 0.026
Boron	7440-42-8	SW6020	Wet	mg/kg			0.74	0.96	< 0.16
Cadmium	7440-43-9	SW6020	Wet	mg/kg			0.0253	0.0659	0.0100
Iron	7439-89-6	SW6020	Wet	mg/kg			33.1	26.0	12.2
Lead	7439-92-1	SW6020	Wet	mg/kg			0.0320	0.0142	0.0100
Magnesium	7439-95-4	SW6010	Wet	mg/kg			458	432	596
Mercury	7439-97-6	SW7471	Wet	mg/kg			0.0303	0.0662	0.0504
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g			30.5	69.6	49.2
Selenium	7782-49-2	SW6020	Wet	mg/kg	2.42	1.61	0.78	1.29	1.41
Zinc	7440-66-6	SW6020	Wet	mg/kg			24.4	28.6	19.5

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	CI	CI	LHL1	LHL1	LHL1
				Sample ID	FWB-002(LMB)-CI-171004	FWB-002(LMB)-CI-171004-FD	FF-001(CC)-LHL1-171005	FF-001(FHC)-LHL1-171011	FF-001(LMB)-LHL1-171005
				Lab Sample ID	K1712476-015	K1712476-033	K1712471-002	K1712476-021	K1712477-002
				Area of Concern					
				Lake Status					
				Sample Date	10/04/2017	10/04/2017	10/05/2017	10/11/2017	10/05/2017
				Sample Type	N	FD	N	N	N
Analyte	CASRN	Method	Basis	Unit					
Moisture Content	MOISTURE	CALCULATED	Wet	%	72.1	72.1	75.8	81.4	78.5
Lipids	LIPIDS	NOAA LIPID	Wet	%	10.6	9.2	16	1.3	9.4
Solids (total)	C-008	ZFZDRY	Wet	%	27.9	27.9	24.2	18.6	21.5
Suspended solids (total)	C-009	ZFZDRY	Wet	%					
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	0.025	< 0.04 U	< 0.039	< 0.04	< 0.04
Arsenic	7440-38-2	SW6020	Dry	mg/kg	0.91	0.78	0.04	0.05	1.43
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.078	< 0.08	< 0.079	< 0.08	< 0.08
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.078	< 0.08	< 0.079	< 0.08	< 0.08
Boron	7440-42-8	SW6020	Dry	mg/kg	0.50	0.53	0.20	0.42	< 0.50
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.360	0.262	0.008	0.007	0.008
Iron	7439-89-6	SW6020	Dry	mg/kg	338	221	24.6	15.8	7.50
Lead	7439-92-1	SW6020	Dry	mg/kg	0.072	0.059	0.014	< 0.020	0.006
Magnesium	7439-95-4	SW6010	Dry	mg/kg	2280	2060	790	1010	1250
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.158	0.138	0.150 J	0.510	0.450
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	186	142	209	578	493
Selenium	7782-49-2	SW6020	Dry	mg/kg	2.79	2.52	1.8	4.33	4.19
Zinc	7440-66-6	SW6020	Dry	mg/kg	82.8	75.3	49.0	23.8	32.8
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	0.007	0.009	< 0.01	< 0.007	< 0.009
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.25	0.22	0.010	0.009	0.31
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.022	< 0.022	< 0.019	< 0.015	< 0.017
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.022	< 0.022	< 0.019	< 0.015	< 0.017
Boron	7440-42-8	SW6020	Wet	mg/kg	0.14	0.15	0.05	0.079	< 0.11
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.100	0.0732	0.0020	0.0013	0.0016
Iron	7439-89-6	SW6020	Wet	mg/kg	94.3	61.7	5.94	2.94	1.61
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0201	0.0164	0.0034	< 0.0037	0.0012
Magnesium	7439-95-4	SW6010	Wet	mg/kg	635	573	191	188	268
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.0442	0.0385	0.0364	0.0948	0.0967
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	51.9	39.6	50.5	108	106
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.78	0.70	0.44	0.81	0.90
Zinc	7440-66-6	SW6020	Wet	mg/kg	23.1	21.0	11.9	4.42	7.06

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL1	LHL1	LHL1	LHL1	LHL1
					Sample ID	FF-002(LMB)-LHL1-171005	FO-001(LMB)-LHL1-171005	FWB-001(CC)-LHL1-171005	FWB-001(FHC)-LHL1-171011	FWB-001(LMB)-LHL1-171005
					Lab Sample ID	K1712477-006	K1712477-004	K1712471-003	K1712476-022	K1712477-003
					Area of Concern					
					Lake Status					
					Sample Date	10/05/2017	10/05/2017	10/05/2017	10/11/2017	10/05/2017
					Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit						
Moisture Content	MOISTURE	CALCULATED	Wet	%	76.8	77.3	65.1	73.0	62.5
Lipids	LIPIDS	NOAA LIPID	Wet	%	8.5		25	7.6	36
Solids (total)	C-008	ZFZDRY	Wet	%	23.2	22.7	34.9	27.0	37.5
Suspended solids (total)	C-009	ZFZDRY	Wet	%		22.7			
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	< 0.04		< 0.039	< 0.04	< 0.039
Arsenic	7440-38-2	SW6020	Dry	mg/kg	1.50		0.04	0.09	1.68
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.079		< 0.079	< 0.08	< 0.078
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.079		< 0.079	< 0.08	< 0.078
Boron	7440-42-8	SW6020	Dry	mg/kg	< 0.50		0.72	1.51	< 0.50
Cadmium	7440-43-9	SW6020	Dry	mg/kg	< 0.020		0.031	0.044	0.040
Iron	7439-89-6	SW6020	Dry	mg/kg	10.9		75.3	72.2	48.3
Lead	7439-92-1	SW6020	Dry	mg/kg	< 0.020		0.077	0.058	0.043
Magnesium	7439-95-4	SW6010	Dry	mg/kg	1260		1460	1460	1580
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.435		0.067 J	0.173	0.120
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	494		69.1	158	124
Selenium	7782-49-2	SW6020	Dry	mg/kg	4.2	4.8	1.49	2.41	2.50
Zinc	7440-66-6	SW6020	Dry	mg/kg	31.1		80.7	90.5	56.2
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	< 0.009		< 0.014	< 0.011	< 0.015
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.35		0.01	0.02	0.63
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.018		< 0.028	< 0.022	< 0.029
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.018		< 0.028	< 0.022	< 0.029
Boron	7440-42-8	SW6020	Wet	mg/kg	< 0.12		0.25	0.41	< 0.19
Cadmium	7440-43-9	SW6020	Wet	mg/kg	< 0.0046		0.0107	0.0119	0.0148
Iron	7439-89-6	SW6020	Wet	mg/kg	2.54		26.3	19.5	18.1
Lead	7439-92-1	SW6020	Wet	mg/kg	< 0.0046		0.0270	0.0156	0.0163
Magnesium	7439-95-4	SW6010	Wet	mg/kg	292		508	395	591
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.101		0.0234	0.0468	0.0448
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	115		24.2	42.6	46.6
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.99	1.08	0.52	0.65	0.94
Zinc	7440-66-6	SW6020	Wet	mg/kg	7.21		28.2	24.4	21.1

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	LHL1	LHL2	LHL2	LHL2	LHL2
				Sample ID	FWB-002(LMB)-LHL1-171005	FF-001(CC)-LHL2-171005	FF-001(FHC)-LHL2-171005	FF-001(KB)-LHL2-171005	FF-001(LMB)-LHL2-171005
				Lab Sample ID	K1712477-007	K1712469-006	K1712468-002	K1712476-017	K1712469-009
				Area of Concern					
				Lake Status					
				Sample Date	10/05/2017	10/05/2017	10/05/2017	10/05/2017	10/05/2017
				Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit					
Moisture Content	MOISTURE	CALCULATED	Wet	%	62.5	76.0	81.1	77.3	78.0
Lipids	LIPIDS	NOAA LIPID	Wet	%	33			7.7	
Solids (total)	C-008	ZFZDRY	Wet	%	37.5	24.0	18.9	22.7	22.0
Suspended solids (total)	C-009	ZFZDRY	Wet	%					
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	< 0.04	< 0.04 U	< 0.039 UJ	< 0.04	< 0.04 U
Arsenic	7440-38-2	SW6020	Dry	mg/kg	1.72	0.10 J	0.08 J	1.43	1.41
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.08	< 0.079 U	< 0.079 U	< 0.08	< 0.079 U
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.08	< 0.079 U	< 0.079 U	< 0.08	< 0.079 U
Boron	7440-42-8	SW6020	Dry	mg/kg	< 0.50	< 0.50 U	0.67	< 0.50	< 0.50 U
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.031	0.004 J	0.012 J	0.004	0.007 J
Iron	7439-89-6	SW6020	Dry	mg/kg	44.8	18.0	21.7	10.8	9.80
Lead	7439-92-1	SW6020	Dry	mg/kg	0.018	0.008 J	0.016 J	0.004	0.004 J
Magnesium	7439-95-4	SW6010	Dry	mg/kg	1230	794	1200	1060	1030
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.146	0.163	0.929 J	0.364	0.374
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	160	235	1050	433	445
Selenium	7782-49-2	SW6020	Dry	mg/kg	2.63	2.41	7.34	5.3	4.31
Zinc	7440-66-6	SW6020	Dry	mg/kg	49.1	33.9	28.6	37.2	30.8
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	< 0.015	< 0.01 U	< 0.007 U	< 0.009	< 0.009 U
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.64	0.02 J	0.015 J	0.32	0.31
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.03	< 0.019 U	< 0.015 U	< 0.018	< 0.017 U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.03	< 0.019 U	< 0.015 U	< 0.018	< 0.017 U
Boron	7440-42-8	SW6020	Wet	mg/kg	< 0.19	< 0.12 U	0.126	< 0.11	< 0.11 U
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.0117	0.0011 J	0.0023 J	0.0010	0.0016 J
Iron	7439-89-6	SW6020	Wet	mg/kg	16.8	4.32	4.11	2.45	2.16
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0067	0.0020 J	0.0030 J	0.0009	0.0009 J
Magnesium	7439-95-4	SW6010	Wet	mg/kg	463	191	227	241	227
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.0549	0.0392	0.176	0.0827	0.0823
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	60	56.4	198	98.3	97.9
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.99	0.58	1.39	1.20	0.95
Zinc	7440-66-6	SW6020	Wet	mg/kg	18.4	8.14	5.40	8.45	6.78

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL2	LHL2	LHL2	LHL2	LHL2
					Sample ID	FF-001(LMB)-LHL2-171005-FD	FO-001(KB)-LHL2-171005	FWB-001(CC)-LHL2-171005	FWB-001(FHC)-LHL2-171005	FWB-001(KB)-LHL2-171005
					Lab Sample ID	K1712469-012	K1712476-019	K1712469-007	K1712468-003	K1712476-018
					Area of Concern					
					Lake Status					
					Sample Date	10/05/2017	10/05/2017	10/05/2017	10/05/2017	10/05/2017
					Sample Type	FD	N	N	N	N
Analyte	CASRN	Method	Basis	Unit						
Moisture Content	MOISTURE	CALCULATED	Wet	%	78.0	77.3	62.2		64.7
Lipids	LIPIDS	NOAA LIPID	Wet	%					32.9
Solids (total)	C-008	ZFZDRY	Wet	%	22.0	22.7	37.8		35.3
Suspended solids (total)	C-009	ZFZDRY	Wet	%		22.7			
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	< 0.04 U		0.028 J	< 0.039 U	< 0.04 U
Arsenic	7440-38-2	SW6020	Dry	mg/kg	1.48		0.24 J	0.12 J	1.17
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.079 U		< 0.078 U	< 0.078 U	< 0.08
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.079 U		< 0.078 U	< 0.078 U	< 0.08
Boron	7440-42-8	SW6020	Dry	mg/kg	< 0.50 U		1.11	2.12	< 0.50
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.005 J		0.029	0.047	0.026
Iron	7439-89-6	SW6020	Dry	mg/kg	10.1		143	74.0	43.4
Lead	7439-92-1	SW6020	Dry	mg/kg	0.004 J		0.092	0.073	0.026
Magnesium	7439-95-4	SW6010	Dry	mg/kg	1080		1210	1940	1150
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.320		0.046	0.307 J	0.126
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	427		72.4	389	134
Selenium	7782-49-2	SW6020	Dry	mg/kg	4.3	6.89	1.71	3.72	2.58
Zinc	7440-66-6	SW6020	Dry	mg/kg	31.3		59.8	114	63.8
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	< 0.009 U		0.011 J	< 0.011 U	0.006
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.33		0.09 J	0.03 J	0.41
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.017 U		< 0.029 U	< 0.022 U	< 0.028
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.017 U		< 0.029 U	< 0.022 U	< 0.028
Boron	7440-42-8	SW6020	Wet	mg/kg	< 0.11 U		0.42	0.59	< 0.18
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.0010 J		0.0110	0.0129	0.0093
Iron	7439-89-6	SW6020	Wet	mg/kg	2.23		53.9	20.5	15.3
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0010 J		0.0349	0.0202	0.0090
Magnesium	7439-95-4	SW6010	Wet	mg/kg	237		457	537	405
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.0704		0.0174	0.0851	0.0445
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	93.9		27.4	108	47.4
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.95	1.56	0.65	1.03	0.91
Zinc	7440-66-6	SW6020	Wet	mg/kg	6.89		22.6	31.6	22.5

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL2	LHL2	LHL3	LHL3	LHL3
					Sample ID	FWB-001(LMB)-LHL2-171005	FWB-001(LMB)-LHL2-171005-FD	FF-001(CC)-LHL3-171005	FF-001(CC)-LHL3-171005-FD	FF-001(KB)-LHL3-171003
					Lab Sample ID	K1712469-010	K1712469-013	K1712479-006	K1712479-009	K1712476-002
					Area of Concern					
					Lake Status					
					Sample Date	10/05/2017	10/05/2017	10/05/2017	10/05/2017	10/03/2017
					Sample Type	N	N	N	FD	N
Analyte	CASRN	Method	Basis	Unit						
Moisture Content	MOISTURE	CALCULATED	Wet	%	66.1	66.1	79.5	79.5	76.4
Lipids	LIPIDS	NOAA LIPID	Wet	%			20	19	8.9
Solids (total)	C-008	ZFZDRY	Wet	%	33.9	33.9	20.5	20.5	23.6
Suspended solids (total)	C-009	ZFZDRY	Wet	%					
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	< 0.039 U	< 0.039 U	< 0.4	< 0.04	< 0.039
Arsenic	7440-38-2	SW6020	Dry	mg/kg	1.37	1.52	0.11	0.11	1.53
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.077 U	< 0.078 U	< 0.08	< 0.08	< 0.078
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.077 U	< 0.078 U	< 0.08	< 0.08	< 0.078
Boron	7440-42-8	SW6020	Dry	mg/kg	< 0.50 U	< 0.50 U	< 0.50	< 0.50	< 0.50
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.039	0.040	0.004	0.004	< 0.020
Iron	7439-89-6	SW6020	Dry	mg/kg	41.2	43.0	28.2	24.5	11.3
Lead	7439-92-1	SW6020	Dry	mg/kg	0.025	0.021	0.017	0.013 J	0.007
Magnesium	7439-95-4	SW6010	Dry	mg/kg	2000	1420	922	962	1040
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.099	0.110	0.203	0.213	0.393
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	142	125	220	280	515
Selenium	7782-49-2	SW6020	Dry	mg/kg	2.30	2.61	2.70	2.6	5.5
Zinc	7440-66-6	SW6020	Dry	mg/kg	50.8	51.2	41.9	39.4	41.3
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	< 0.013 U	< 0.013 U	< 0.008	< 0.008	< 0.009
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.46	0.52	0.02	0.02	0.36
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.026 U	< 0.026 U	< 0.016	< 0.016	< 0.019
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.026 U	< 0.026 U	< 0.016	< 0.016	< 0.019
Boron	7440-42-8	SW6020	Wet	mg/kg	< 0.17 U	< 0.17 U	< 0.10	< 0.10	< 0.12
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.0132	0.0136	0.0007	0.0008	< 0.0047
Iron	7439-89-6	SW6020	Wet	mg/kg	14.0	14.6	5.77	5.02	2.67
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0085	0.0069	0.0035	0.0027	0.0016
Magnesium	7439-95-4	SW6010	Wet	mg/kg	678	481	189	197	246
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.0334	0.0374	0.0417	0.0437	0.0928
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	48.3	42.3	45	57.4	122
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.78	0.88	0.55	0.53	1.31
Zinc	7440-66-6	SW6020	Wet	mg/kg	17.2	17.4	8.59	8.08	9.74

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL3	LHL3	LHL3	LHL3	LHL3
					Sample ID	FF-002(CC)-LHL3-171016	FF-002(KB)-LHL3-171004	FO-001(KB)-LHL3-171003	FO-002(CC)-LHL3-171016	FO-002(KB)-LHL3-171004
					Lab Sample ID	K1712474-006	K1712469-002	K1712476-004	K1712474-008	K1712469-004
					Area of Concern					
					Lake Status					
					Sample Date	10/16/2017	10/04/2017	10/03/2017	10/16/2017	10/04/2017
					Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit						
Moisture Content	MOISTURE	CALCULATED	Wet	%	67.0	75.4	78.6	64.8	77.1
Lipids	LIPIDS	NOAA LIPID	Wet	%	52			7.8	
Solids (total)	C-008	ZFZDRY	Wet	%	33.0	24.6	21.4	35.2	22.9
Suspended solids (total)	C-009	ZFZDRY	Wet	%			21.4	35.2	22.9
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	< 0.04	< 0.04 U			
Arsenic	7440-38-2	SW6020	Dry	mg/kg	0.11	1.53			
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.079	< 0.079 U			
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.079	< 0.079 U			
Boron	7440-42-8	SW6020	Dry	mg/kg	< 0.50 U	< 0.50 U			
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.005	< 0.020 U			
Iron	7439-89-6	SW6020	Dry	mg/kg	10.9	13.2			
Lead	7439-92-1	SW6020	Dry	mg/kg	0.004	0.005 J			
Magnesium	7439-95-4	SW6010	Dry	mg/kg	533 J	1010			
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.288	0.354			
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	286	481			
Selenium	7782-49-2	SW6020	Dry	mg/kg	1.3 J	4.67	6.08	6.59	5.4
Zinc	7440-66-6	SW6020	Dry	mg/kg	22.3	36.7			
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	< 0.013	< 0.01 U			
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.04	0.38			
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.026	< 0.019 U			
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.04	< 0.019 U			
Boron	7440-42-8	SW6020	Wet	mg/kg	0.08	< 0.12 U			
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.0018	< 0.0049 U			
Iron	7439-89-6	SW6020	Wet	mg/kg	3.61	3.25			
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0013	0.0013 J			
Magnesium	7439-95-4	SW6010	Wet	mg/kg	176	248			
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.0950	0.0872			
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	94.5	118			
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.43	1.15	1.30	2.32	1.23
Zinc	7440-66-6	SW6020	Wet	mg/kg	7.35	9.03			

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL3	LHL3	LHL3	LHL3	LHL3
					Sample ID	FWB-001(CC)-LHL3-171005	FWB-001(CC)-LHL3-171005-FD	FWB-001(KB)-LHL3-171003	FWB-002(CC)-LHL3-171016	FWB-002(KB)-LHL3-171004
					Lab Sample ID	K1712479-007	K1712479-010	K1712476-003	K1712474-007	K1712469-003
					Area of Concern					
					Lake Status					
					Sample Date	10/05/2017	10/05/2017	10/03/2017	10/16/2017	10/04/2017
					Sample Type	N	FD	N	N	N
Analyte	CASRN	Method	Basis	Unit						
Moisture Content	MOISTURE	CALCULATED	Wet	%	70.1	70.1	60.8	57.8	62.6
Lipids	LIPIDS	NOAA LIPID	Wet	%	23	19	27.0	42	
Solids (total)	C-008	ZFZDRY	Wet	%	29.9	20.9	39.2	42.2	37.4
Suspended solids (total)	C-009	ZFZDRY	Wet	%					
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	0.022	< 0.04 U	< 0.039	< 0.04	< 0.04 U
Arsenic	7440-38-2	SW6020	Dry	mg/kg	0.14	0.14	1.48	0.11	1.51
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.078	< 0.079	< 0.078	< 0.079	< 0.079 U
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.078	< 0.079	< 0.078	< 0.079	< 0.079 U
Boron	7440-42-8	SW6020	Dry	mg/kg	0.68	0.81	< 0.50	0.55	< 0.50 U
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.087	0.050	0.017	0.079	0.030
Iron	7439-89-6	SW6020	Dry	mg/kg	511	410	36.9	81.6	32.5
Lead	7439-92-1	SW6020	Dry	mg/kg	0.109	0.071 J	0.035	0.159	0.020 J
Magnesium	7439-95-4	SW6010	Dry	mg/kg	1540	1280	1510	741	1420
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.128	0.078	0.197	0.154	0.187
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	44	86.5	214	104 J	188
Selenium	7782-49-2	SW6020	Dry	mg/kg	2.57	2.32	3.15	1.65	3.08
Zinc	7440-66-6	SW6020	Dry	mg/kg	81.7	80.5	74.5	59.9 J	64.0
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	0.007	0.007	< 0.015	< 0.017	< 0.015 U
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.04	0.03	0.58	0.05	0.57
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.023	< 0.024	< 0.03	< 0.034	< 0.03 U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.023	< 0.024	< 0.03	< 0.04	< 0.03 U
Boron	7440-42-8	SW6020	Wet	mg/kg	0.20	0.17	< 0.20	0.23	< 0.19 U
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.0261	0.0104	0.0067	0.0333	0.0113
Iron	7439-89-6	SW6020	Wet	mg/kg	153	85.7	14.5	34.4	12.2
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0325	0.0148	0.0136	0.0672	0.0074 J
Magnesium	7439-95-4	SW6010	Wet	mg/kg	462	268	594	313	532
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.0383	0.0164	0.0772	0.0649	0.0699
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	13.2	18.1	83.8	44.1	70.6
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.77	0.48	1.23	0.70	1.15
Zinc	7440-66-6	SW6020	Wet	mg/kg	24.4	16.8	29.2	25.3	23.9

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	LHL4	LHL4	LHL4	LHL4	LHL4
				Sample ID	FF-001(CC)-LHL4-171012	FF-001(FHC)-LHL4-171012	FF-001(KB)-LHL4-171003	FF-001(LMB)-LHL4-171003	FO-001(KB)-LHL4-171003
				Lab Sample ID	K1712469-015	K1712468-009	K1712476-010	K1712476-006	K1712476-012
				Area of Concern					
				Lake Status					
				Sample Date	10/12/2017	10/12/2017	10/03/2017	10/03/2017	10/03/2017
				Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit					
Moisture Content	MOISTURE	CALCULATED	Wet	%	77.6	79.0	77.3	78.6	79.9
Lipids	LIPIDS	NOAA LIPID	Wet	%			4.3	2.9	
Solids (total)	C-008	ZFZDRY	Wet	%	22.4	21.0	22.7	21.4	20.1
Suspended solids (total)	C-009	ZFZDRY	Wet	%					20.1
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	< 0.04 U	< 0.039 U	< 0.04	< 0.04	
Arsenic	7440-38-2	SW6020	Dry	mg/kg	0.07 J	0.17 J	1.21	0.74	
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.079 U	< 0.078 U	< 0.079	< 0.079	
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.079 U	< 0.078 U	< 0.079	< 0.079	
Boron	7440-42-8	SW6020	Dry	mg/kg	< 0.50 U	0.63	< 0.50	< 0.50	
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.014 J	0.007 J	0.019	0.011	
Iron	7439-89-6	SW6020	Dry	mg/kg	21.5	25.4	8.93	8.17	
Lead	7439-92-1	SW6020	Dry	mg/kg	0.005 J	0.010 J	0.033	0.010	
Magnesium	7439-95-4	SW6010	Dry	mg/kg	804	999	1060	1170	
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.723	1.05 J	0.625	0.250	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	925	1670	731	302	
Selenium	7782-49-2	SW6020	Dry	mg/kg	2.69	4.77	5.44	4.97	6.4
Zinc	7440-66-6	SW6020	Dry	mg/kg	35.9	30.5	39.5	38.7	
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	< 0.009 U	< 0.009 U	< 0.009	< 0.009	
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.01 J	0.03 J	0.27	0.16	
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.018 U	< 0.018 U	< 0.018	< 0.017	
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.018 U	< 0.018 U	< 0.018	< 0.017	
Boron	7440-42-8	SW6020	Wet	mg/kg	< 0.11 U	0.13	< 0.11	< 0.11	
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.0032 J	0.0014 J	0.0043	0.0022	
Iron	7439-89-6	SW6020	Wet	mg/kg	4.82	5.33	2.03	1.75	
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0011 J	0.0020 J	0.0075	0.0020	
Magnesium	7439-95-4	SW6010	Wet	mg/kg	180	210	241	250	
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.162	0.221	0.142	0.0536	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	207	379	166	64.6	
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.60	1.00	1.23	1.06	1.28
Zinc	7440-66-6	SW6020	Wet	mg/kg	8.05	6.40	8.96	8.28	

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	LHL4	LHL4	LHL4	LHL4	LHL4
				Sample ID	FO-001(LMB)-LHL4-171003	FWB-001(CC)-LHL4-171012	FWB-001(FHC)-LHL4-171012	FWB-001(KB)-LHL4-171003	FWB-001(LMB)-LHL4-171003
				Lab Sample ID	K1712476-008	K1712469-016	K1712468-010	K1712476-011	K1712476-007
				Area of Concern					
				Lake Status					
				Sample Date	10/03/2017	10/12/2017	10/12/2017	10/03/2017	10/03/2017
				Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit					
Moisture Content	MOISTURE	CALCULATED	Wet	%	81.6	69.4		66.9	69.3
Lipids	LIPIDS	NOAA LIPID	Wet	%				23.4	17.2
Solids (total)	C-008	ZFZDRY	Wet	%	18.4	30.6		33.1	30.7
Suspended solids (total)	C-009	ZFZDRY	Wet	%	18.4				
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g		< 0.039 U	< 0.039 U	< 0.04	< 0.04
Arsenic	7440-38-2	SW6020	Dry	mg/kg		0.07 J	0.18 J	1.17	0.92
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g		< 0.078 U	< 0.079 U	< 0.08	< 0.079
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g		< 0.078 U	< 0.079 U	< 0.08	< 0.079
Boron	7440-42-8	SW6020	Dry	mg/kg		0.56	1.56	< 0.50	< 0.50
Cadmium	7440-43-9	SW6020	Dry	mg/kg		0.072	0.073	0.054	0.038
Iron	7439-89-6	SW6020	Dry	mg/kg		90.4	54.8	50.4	37.6
Lead	7439-92-1	SW6020	Dry	mg/kg		0.058	0.064	0.068	0.028
Magnesium	7439-95-4	SW6010	Dry	mg/kg		1530	1490	1600	1600
Mercury	7439-97-6	SW7471	Dry	mg/kg		0.204	0.344 J	0.187	0.089
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g		167	398	170	67.8
Selenium	7782-49-2	SW6020	Dry	mg/kg	6.3	2.04	2.21	3.19	3.31
Zinc	7440-66-6	SW6020	Dry	mg/kg		84.5	85.0	85.4	63.6
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g		< 0.012 U	< 0.014 U	< 0.013	< 0.012
Arsenic	7440-38-2	SW6020	Wet	mg/kg		0.02 J	0.06 J	0.39	0.28
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g		< 0.024 U	< 0.028 U	< 0.026	< 0.024
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g		< 0.024 U	< 0.028 U	< 0.026	< 0.024
Boron	7440-42-8	SW6020	Wet	mg/kg		0.17	0.55	< 0.17	< 0.15
Cadmium	7440-43-9	SW6020	Wet	mg/kg		0.0219	0.0254	0.0179	0.0115
Iron	7439-89-6	SW6020	Wet	mg/kg		27.7	19.2	16.7	11.6
Lead	7439-92-1	SW6020	Wet	mg/kg		0.0177	0.0225	0.0225	0.0086
Magnesium	7439-95-4	SW6010	Wet	mg/kg		469	522	529	490
Mercury	7439-97-6	SW7471	Wet	mg/kg		0.0625	0.120	0.0619	0.0272
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g		51	139	56.3	20.9
Selenium	7782-49-2	SW6020	Wet	mg/kg	1.16	0.62	0.77	1.05	1.02
Zinc	7440-66-6	SW6020	Wet	mg/kg		25.9	29.8	28.3	19.5

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL5	LHL5	LHL5	LHL5	LHL5
					Sample ID	FF-001(CC)-LHL5-171007	FF-001(LMB)-LHL5-171007	FF-002(CC)-LHL5-171007	FF-002(LMB)-LHL5-171007	FO-001(CC)-LHL5-171007
					Lab Sample ID	K1712468-005	K1712479-015	K1712477-009	K1712479-019	K1712468-007
					Area of Concern					
					Lake Status					
					Sample Date	10/07/2017	10/07/2017	10/07/2017	10/07/2017	10/07/2017
					Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit						
Moisture Content	MOISTURE	CALCULATED	Wet	%	69.3	78.0	73.0	78.7	66.6
Lipids	LIPIDS	NOAA LIPID	Wet	%		11	32	8.9	6.6
Solids (total)	C-008	ZFZDRY	Wet	%	30.7	22.0	27.0	21.3	33.4
Suspended solids (total)	C-009	ZFZDRY	Wet	%					33.4
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	< 0.039 U	< 0.04	< 0.04	< 0.04	
Arsenic	7440-38-2	SW6020	Dry	mg/kg	0.14 J	1.57	0.11	1.58	
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.079 U	< 0.079	< 0.079	< 0.08	
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.079 U	< 0.079	< 0.079	< 0.08	
Boron	7440-42-8	SW6020	Dry	mg/kg	< 0.50 U	0.34	0.23	< 0.50	
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.004 J	0.004	< 0.020	< 0.020	
Iron	7439-89-6	SW6020	Dry	mg/kg	10.9	10.7	11.5	11.1	
Lead	7439-92-1	SW6020	Dry	mg/kg	0.008 J	0.008 J	0.005	0.005 J	
Magnesium	7439-95-4	SW6010	Dry	mg/kg	688	1150	909	1280	
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.388 J	0.241	0.188	0.286	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	552	437	162	495	
Selenium	7782-49-2	SW6020	Dry	mg/kg	1.50	4.47	1.69	3.7	6.6
Zinc	7440-66-6	SW6020	Dry	mg/kg	28.1	33.9	32.7	30.8	
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	< 0.012 U	< 0.009	< 0.011	< 0.009	
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.04 J	0.34	0.03	0.34	
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.024 U	< 0.017	< 0.021	< 0.017	
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.024 U	< 0.017	< 0.021	< 0.017	
Boron	7440-42-8	SW6020	Wet	mg/kg	< 0.15 U	0.07	0.06	< 0.11	
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.0011 J	0.0009	< 0.0054	< 0.0043	
Iron	7439-89-6	SW6020	Wet	mg/kg	3.34	2.36	3.12	2.35	
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0024 J	0.0017	0.0013	0.0010	
Magnesium	7439-95-4	SW6010	Wet	mg/kg	211	253	246	273	
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.119	0.0530	0.0508	0.0610	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	169	96.2	43.7	105	
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.46	0.98	0.46	0.78	2.20
Zinc	7440-66-6	SW6020	Wet	mg/kg	8.61	7.46	8.83	6.56	

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	LHL5	LHL5	LHL5	LHL5	LHL5
				Sample ID	FO-001(LMB)-LHL5-171007	FWB-001(CC)-LHL5-171007	FWB-001(LMB)-LHL5-171007	FWB-002(CC)-LHL5-171007	FWB-002(LMB)-LHL5-171007
				Lab Sample ID	K1712479-017	K1712468-006	K1712479-016	K1712477-010	K1712479-020
				Area of Concern					
				Lake Status					
				Sample Date	10/07/2017	10/07/2017	10/07/2017	10/07/2017	10/07/2017
				Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit					
Moisture Content	MOISTURE	CALCULATED	Wet	%	72.7		64.3	62.4	62.4
Lipids	LIPIDS	NOAA LIPID	Wet	%			32	38	34
Solids (total)	C-008	ZFZDRY	Wet	%	27.3		35.7	37.6	37.6
Suspended solids (total)	C-009	ZFZDRY	Wet	%	27.3				
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g		< 0.039 U	< 0.04	< 0.039 U	< 0.04
Arsenic	7440-38-2	SW6020	Dry	mg/kg		0.09 J	1.45	0.12	1.58
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g		< 0.078 U	< 0.08	< 0.079	< 0.08
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g		< 0.078 U	< 0.08	< 0.079	< 0.08
Boron	7440-42-8	SW6020	Dry	mg/kg		0.35 J	0.38	1.03	< 0.50
Cadmium	7440-43-9	SW6020	Dry	mg/kg		0.021	0.027	0.020	0.025
Iron	7439-89-6	SW6020	Dry	mg/kg		26.0	35.1	56.3	34.0
Lead	7439-92-1	SW6020	Dry	mg/kg		0.033	0.029 J	0.060	0.047 J
Magnesium	7439-95-4	SW6010	Dry	mg/kg		1670	1570	1600	1450
Mercury	7439-97-6	SW7471	Dry	mg/kg		0.180 J	0.101	0.060	0.084
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g		177	129	75.6	95.4
Selenium	7782-49-2	SW6020	Dry	mg/kg	4.2	1.1	2.4	1.2	1.95
Zinc	7440-66-6	SW6020	Dry	mg/kg		72.3	50.8	61.6	48.2
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g		< 0.016 U	< 0.014	0.007	< 0.015
Arsenic	7440-38-2	SW6020	Wet	mg/kg		0.04 J	0.52	0.05	0.59
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g		< 0.033 U	< 0.028	< 0.03	< 0.03
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g		< 0.033 U	< 0.028	< 0.03	< 0.03
Boron	7440-42-8	SW6020	Wet	mg/kg		0.15 J	0.14	0.39	< 0.19
Cadmium	7440-43-9	SW6020	Wet	mg/kg		0.0089	0.0097	0.0073	0.0094
Iron	7439-89-6	SW6020	Wet	mg/kg		10.9	12.5	21.2	12.8
Lead	7439-92-1	SW6020	Wet	mg/kg		0.0138	0.0102	0.0225	0.0177
Magnesium	7439-95-4	SW6010	Wet	mg/kg		701	560	601	546
Mercury	7439-97-6	SW7471	Wet	mg/kg		0.0756	0.0359	0.0225	0.0315
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g		74.2	46.1	28.4	361
Selenium	7782-49-2	SW6020	Wet	mg/kg	1.16	0.46	0.86	0.44	0.73
Zinc	7440-66-6	SW6020	Wet	mg/kg		30.4	18.1	23.1	18.1

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	LHL6	LHL6	LHL6	LHL6	LHL6
				Sample ID	FF-001(CC)-LHL6-171007	FF-001(KB)-LHL6-171007	FF-001(LMB)-LHL6-171011	FF-002(CC)-LHL6-171007	FO-001(CC)-LHL6-171007
				Lab Sample ID	K1712474-002	K1712479-022	K1712476-024	K1712479-012	K1712474-004
				Area of Concern					
				Lake Status					
				Sample Date	10/07/2017	10/07/2017	10/11/2017	10/07/2017	10/07/2017
				Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit					
Moisture Content	MOISTURE	CALCULATED	Wet	%	71.1	77.9	78.0	71.8	61.9
Lipids	LIPIDS	NOAA LIPID	Wet	%	36	6.0	5.8	37	9.0
Solids (total)	C-008	ZFZDRY	Wet	%	28.9	22.1	22.0	28.2	38.1
Suspended solids (total)	C-009	ZFZDRY	Wet	%					38.1
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	< 0.04	< 0.04	< 0.04 UJ	< 0.04 UJ	
Arsenic	7440-38-2	SW6020	Dry	mg/kg	0.11	1.18	0.81	0.23	
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.08	< 0.08	< 0.079	< 0.08	
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.08	< 0.08	< 0.079	< 0.08	
Boron	7440-42-8	SW6020	Dry	mg/kg	< 0.50	< 0.50	< 0.50	< 0.50	
Cadmium	7440-43-9	SW6020	Dry	mg/kg	< 0.020	< 0.020	0.004	< 0.020	
Iron	7439-89-6	SW6020	Dry	mg/kg	12.9	9.25	8.08	18.2	
Lead	7439-92-1	SW6020	Dry	mg/kg	0.004	0.004 J	0.005	0.006 J	
Magnesium	7439-95-4	SW6010	Dry	mg/kg	799	1220	1040	772	
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.505	0.611	0.706 J	0.166	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	717	771	758	207	
Selenium	7782-49-2	SW6020	Dry	mg/kg	1.5	3.97	5.66	1.1	5.78
Zinc	7440-66-6	SW6020	Dry	mg/kg	25.7	31.4	29.5	27.3	
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	< 0.012	< 0.009	< 0.009	< 0.011	
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.03	0.26	0.18	0.07	
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.023	< 0.018	< 0.017	< 0.023	
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.023	< 0.018	< 0.017	< 0.023	
Boron	7440-42-8	SW6020	Wet	mg/kg	< 0.14	< 0.11	< 0.11	< 0.14	
Cadmium	7440-43-9	SW6020	Wet	mg/kg	< 0.0058	< 0.0044	0.0008	< 0.0056	
Iron	7439-89-6	SW6020	Wet	mg/kg	3.73	2.04	1.78	5.14	
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0011	0.0008	0.0010	0.0016	
Magnesium	7439-95-4	SW6010	Wet	mg/kg	231	270	228	218	
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.146	0.135	0.155	0.0467	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	207	171	167	58.5	
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.44	0.88	1.25	0.32	2.20
Zinc	7440-66-6	SW6020	Wet	mg/kg	7.42	6.93	6.49	7.69	

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	LHL6	LHL6	LHL6	LHL6	LHL6
				Sample ID	FO-001(KB)-LHL6-171007	FO-001(LMB)-LHL6-171011	FWB-001(CC)-LHL6-171007	FWB-001(KB)-LHL6-171007	FWB-001(LMB)-LHL6-171011
				Lab Sample ID	K1712479-024	K1712476-026	K1712474-003	K1712479-023	K1712476-025
				Area of Concern					
				Lake Status					
				Sample Date	10/07/2017	10/11/2017	10/07/2017	10/07/2017	10/11/2017
				Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit					
Moisture Content	MOISTURE	CALCULATED	Wet	%	79.2	80.7	59.6	65.3	66.7
Lipids	LIPIDS	NOAA LIPID	Wet	%			40	29	21.6
Solids (total)	C-008	ZFZDRY	Wet	%	20.8	19.3	40.4	34.7	33.3
Suspended solids (total)	C-009	ZFZDRY	Wet	%	20.8	19.3			
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g			< 0.04	< 0.04	< 0.04
Arsenic	7440-38-2	SW6020	Dry	mg/kg			0.14	1.26	0.87
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g			< 0.08	< 0.079	< 0.08
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g			< 0.08	< 0.079	< 0.08
Boron	7440-42-8	SW6020	Dry	mg/kg			< 0.50	< 0.50	< 0.50
Cadmium	7440-43-9	SW6020	Dry	mg/kg			0.033	0.021	0.025
Iron	7439-89-6	SW6020	Dry	mg/kg			43.5	43.4	36.5
Lead	7439-92-1	SW6020	Dry	mg/kg			0.129	0.020 J	0.037
Magnesium	7439-95-4	SW6010	Dry	mg/kg			844	1850	1690
Mercury	7439-97-6	SW7471	Dry	mg/kg			0.171	0.166	0.243
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g			188	197	288
Selenium	7782-49-2	SW6020	Dry	mg/kg	6.7	7.56	1.28	2.40	3.3
Zinc	7440-66-6	SW6020	Dry	mg/kg			46.1	72.5	51.3
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g			< 0.016	< 0.014	< 0.013
Arsenic	7440-38-2	SW6020	Wet	mg/kg			0.06	0.44	0.29
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g			< 0.032	< 0.028	< 0.027
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g			< 0.032	< 0.028	< 0.027
Boron	7440-42-8	SW6020	Wet	mg/kg			< 0.20	< 0.17	< 0.17
Cadmium	7440-43-9	SW6020	Wet	mg/kg			0.0134	0.0072	0.0082
Iron	7439-89-6	SW6020	Wet	mg/kg			17.6	15.1	12.2
Lead	7439-92-1	SW6020	Wet	mg/kg			0.0520	0.0071	0.0123
Magnesium	7439-95-4	SW6010	Wet	mg/kg			341	643	563
Mercury	7439-97-6	SW7471	Wet	mg/kg			0.0691	0.0576	0.0808
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g			76	68.5	96
Selenium	7782-49-2	SW6020	Wet	mg/kg	1.38	1.46	0.52	0.83	1.12
Zinc	7440-66-6	SW6020	Wet	mg/kg			18.6	25.2	17.1

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL6	MHL1	MHL1	MHL1	MHL1
					Sample ID	FWB-002(CC)-LHL6-171007	FF-001(FHC)-MHL1-171014	FF-001(KB)-MHL1-171014	FF-001(LMB)-MHL1-171015	FF-002(FHC)-MHL1-171014
					Lab Sample ID	K1712479-013	K1712471-005	K1712471-009	K1712471-017	K1712468-012
					Area of Concern					
					Lake Status					
					Sample Date	10/07/2017	10/14/2017	10/14/2017	10/15/2017	10/14/2017
					Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit						
Moisture Content	MOISTURE	CALCULATED	Wet	%	63.0	78.9	76.5	77.1	78.4
Lipids	LIPIDS	NOAA LIPID	Wet	%	38	5.5	11	7.5	
Solids (total)	C-008	ZFZDRY	Wet	%	37.0	21.1	23.5	22.9	21.6
Suspended solids (total)	C-009	ZFZDRY	Wet	%					
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	0.026	< 0.039	< 0.039	< 0.039	< 0.04 U
Arsenic	7440-38-2	SW6020	Dry	mg/kg	0.26	0.08	1.50	1.15	0.11 J
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.08	< 0.079	< 0.078	< 0.079	< 0.079 U
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.08	< 0.079	< 0.078	< 0.079	< 0.079 U
Boron	7440-42-8	SW6020	Dry	mg/kg	0.32	0.24	< 0.50	< 0.50	< 0.50 U
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.033	0.012	< 0.020	< 0.020	< 0.020 U
Iron	7439-89-6	SW6020	Dry	mg/kg	54.8	16.8	12.3	8.60	10.1
Lead	7439-92-1	SW6020	Dry	mg/kg	0.101 J	0.008	0.013	0.004	0.005 J
Magnesium	7439-95-4	SW6010	Dry	mg/kg	1060	973	882	957	836
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.061	0.947 J	0.304 J	0.448 J	1.52 J
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	68.8	1280	433	614	1980
Selenium	7782-49-2	SW6020	Dry	mg/kg	1.3	1.97	1.60	1.81	1.9
Zinc	7440-66-6	SW6020	Dry	mg/kg	56.9	23.6	28.4	31.0	27.5
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	0.010	< 0.008	< 0.009	< 0.009	< 0.009 U
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.10	0.02	0.35	0.26	0.02 J
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.03	< 0.017	< 0.018	< 0.018	< 0.017 U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.03	< 0.017	< 0.018	< 0.018	< 0.017 U
Boron	7440-42-8	SW6020	Wet	mg/kg	0.12	0.05	< 0.12	< 0.11	< 0.11 U
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.0122	0.0025	< 0.0047	< 0.0046	< 0.0043 U
Iron	7439-89-6	SW6020	Wet	mg/kg	20.3	3.54	2.90	1.97	2.17
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0374	0.0016	0.0030	0.0008	0.0010 J
Magnesium	7439-95-4	SW6010	Wet	mg/kg	391	205	207	219	181
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.0226	0.200	0.0714	0.103	0.329
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	25.5	269	102	141	427
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.49	0.42	0.37	0.41	0.40
Zinc	7440-66-6	SW6020	Wet	mg/kg	21.1	4.99	6.67	7.11	5.94

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	MHL1	MHL1	MHL1	MHL1	MHL1
					Sample ID	FO-001(FHC)-MHL1-171014	FO-001(KB)-MHL1-171014	FWB-001(FHC)-MHL1-171014	FWB-001(KB)-MHL1-171014	FWB-001(LMB)-MHL1-171015
					Lab Sample ID	K1712471-007	K1712471-011	K1712471-006	K1712471-010	K1712471-018
					Area of Concern					
					Lake Status					
					Sample Date	10/14/2017	10/14/2017	10/14/2017	10/14/2017	10/15/2017
					Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit						
Moisture Content	MOISTURE	CALCULATED	Wet	%	83.2	74.6	69.8	62.8	63.2
Lipids	LIPIDS	NOAA LIPID	Wet	%	1.7		21	26	29
Solids (total)	C-008	ZFZDRY	Wet	%	16.8	25.4	30.2	37.2	36.8
Suspended solids (total)	C-009	ZFZDRY	Wet	%	16.8	25.4			
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g			< 0.04 U	< 0.039	< 0.04 UJ
Arsenic	7440-38-2	SW6020	Dry	mg/kg			0.18	1.52	1.39
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g			< 0.08	< 0.079	< 0.079
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g			< 0.08	< 0.079	< 0.079
Boron	7440-42-8	SW6020	Dry	mg/kg			0.46	< 0.50	< 0.50
Cadmium	7440-43-9	SW6020	Dry	mg/kg			0.036	0.007	0.018
Iron	7439-89-6	SW6020	Dry	mg/kg			49.9	40.1	48.1
Lead	7439-92-1	SW6020	Dry	mg/kg			0.057	0.025	0.018
Magnesium	7439-95-4	SW6010	Dry	mg/kg			1520	1350	1200
Mercury	7439-97-6	SW7471	Dry	mg/kg			0.369 J	0.139 J	0.162 J
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g			350	161	194
Selenium	7782-49-2	SW6020	Dry	mg/kg	10.9	3.3	1.19	1.2	1.31
Zinc	7440-66-6	SW6020	Dry	mg/kg			83.4	61.4	50.3
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g			0.005	< 0.015	< 0.015
Arsenic	7440-38-2	SW6020	Wet	mg/kg			0.06	0.57	0.51
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g			< 0.024	< 0.029	< 0.029
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g			< 0.024	< 0.029	< 0.029
Boron	7440-42-8	SW6020	Wet	mg/kg			0.14	< 0.19	< 0.18
Cadmium	7440-43-9	SW6020	Wet	mg/kg			0.0108	0.0025	0.0065
Iron	7439-89-6	SW6020	Wet	mg/kg			15.1	14.9	17.7
Lead	7439-92-1	SW6020	Wet	mg/kg			0.0171	0.0092	0.0067
Magnesium	7439-95-4	SW6010	Wet	mg/kg			458	501	443
Mercury	7439-97-6	SW7471	Wet	mg/kg			0.112	0.0518	0.0596
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g			106	59.9	71.5
Selenium	7782-49-2	SW6020	Wet	mg/kg	1.83	0.83	0.36	0.44	0.48
Zinc	7440-66-6	SW6020	Wet	mg/kg			25.2	22.8	18.5

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	MHL1	MHL3	MHL3	MHL3	MHL3
					Sample ID	FWB-002(FHC)-MHL1-171014	FF-001(CC)-MHL3-171014	FF-001(LMB)-MHL3-171014	FF-002(CC)-MHL3-171014	FF-002(LMB)-MHL3-171014
					Lab Sample ID	K1712468-013	K1712471-013	K1712477-012	K1712468-015	K1712477-016
					Area of Concern					
					Lake Status					
					Sample Date	10/14/2017	10/14/2017	10/14/2017	10/14/2017	10/14/2017
					Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit						
Moisture Content	MOISTURE	CALCULATED	Wet	%		72.4	78.5	74.4	77.5	
Lipids	LIPIDS	NOAA LIPID	Wet	%		25	8.1		8.3	
Solids (total)	C-008	ZFZDRY	Wet	%		27.6	21.5	25.6	22.5	
Suspended solids (total)	C-009	ZFZDRY	Wet	%						
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	< 0.039 U	< 0.039	< 0.04	< 0.039	< 0.04	
Arsenic	7440-38-2	SW6020	Dry	mg/kg	0.13 J	0.17	1.36	0.16 J	1.28	
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.077 U	< 0.078	< 0.08	< 0.078 U	< 0.08	
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.077 U	< 0.078	< 0.08	< 0.078 U	< 0.08	
Boron	7440-42-8	SW6020	Dry	mg/kg	0.20 J	< 0.50	< 0.50	< 0.50 U	< 0.50	
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.030	< 0.020	< 0.020	< 0.020 U	< 0.020	
Iron	7439-89-6	SW6020	Dry	mg/kg	30.0	13.9	7.85	15.1	11.0	
Lead	7439-92-1	SW6020	Dry	mg/kg	0.064	0.006	0.003	0.005 J	< 0.020	
Magnesium	7439-95-4	SW6010	Dry	mg/kg	1590	732	1310	791	1350	
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.570 J	0.542 J	0.847	0.191 J	0.342	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	477	689	766	300	373	
Selenium	7782-49-2	SW6020	Dry	mg/kg	0.80 J	0.7	1.53	0.95 J	1.36	
Zinc	7440-66-6	SW6020	Dry	mg/kg	90.0	28.4	34.1	27.6	34.7	
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	< 0.016 U	< 0.011	< 0.009	< 0.01 U	< 0.009	
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.05 J	0.05	0.29	0.04 J	0.29	
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.031 U	< 0.022	< 0.017	< 0.02 U	< 0.018	
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.031 U	< 0.022	< 0.017	< 0.02 U	< 0.018	
Boron	7440-42-8	SW6020	Wet	mg/kg	0.08 J	< 0.14	< 0.11	< 0.13 U	< 0.11	
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.0119	< 0.0055	< 0.0043	< 0.0051 U	< 0.0045	
Iron	7439-89-6	SW6020	Wet	mg/kg	12.1	3.84	1.69	3.86	2.47	
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0259	0.0018	0.0007	0.0013 J	< 0.0045	
Magnesium	7439-95-4	SW6010	Wet	mg/kg	640	202	281	202	303	
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.230	0.150	0.182	0.0490	0.0769	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	192	190	165	76.7	84	
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.32 J	0.20	0.33	0.24 J	0.31	
Zinc	7440-66-6	SW6020	Wet	mg/kg	36.3	7.85	7.33	7.05	7.80	

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	MHL3	MHL3	MHL3	MHL3	MHL3
					Sample ID	FO-001(CC)-MHL3-171014	FO-001(LMB)-MHL3-171014	FWB-001(CC)-MHL3-171014	FWB-001(LMB)-MHL3-171014	FWB-002(CC)-MHL3-171014
					Lab Sample ID	K1712471-015	K1712477-014	K1712471-014	K1712477-013	K1712468-016
					Area of Concern					
					Lake Status					
					Sample Date	10/14/2017	10/14/2017	10/14/2017	10/14/2017	10/14/2017
					Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit						
Moisture Content	MOISTURE	CALCULATED	Wet	%	67.5	81.3	61.2	64.9	
Lipids	LIPIDS	NOAA LIPID	Wet	%	6.7	1.6	34	29	
Solids (total)	C-008	ZFZDRY	Wet	%	32.5	18.7	38.8	35.1	
Suspended solids (total)	C-009	ZFZDRY	Wet	%	32.5	18.7			
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g			< 0.039	< 0.039	0.016 J
Arsenic	7440-38-2	SW6020	Dry	mg/kg			0.22	1.69	0.20 J
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g			< 0.079	< 0.078	< 0.078 U
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g			< 0.079	< 0.078	< 0.078 U
Boron	7440-42-8	SW6020	Dry	mg/kg			< 0.50	< 0.50	0.25 J
Cadmium	7440-43-9	SW6020	Dry	mg/kg			0.016	0.023	0.019 J
Iron	7439-89-6	SW6020	Dry	mg/kg			64.9	65.4	134
Lead	7439-92-1	SW6020	Dry	mg/kg			0.052	0.064	0.143
Magnesium	7439-95-4	SW6010	Dry	mg/kg			820	1550	1350
Mercury	7439-97-6	SW7471	Dry	mg/kg			0.208 J	0.221	0.080 J
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g			201	225	93.4
Selenium	7782-49-2	SW6020	Dry	mg/kg	5.11	3.95	0.69	1.14	0.95 J
Zinc	7440-66-6	SW6020	Dry	mg/kg			52.2	53.9	66.6
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g			< 0.015	< 0.014	0.006 J
Arsenic	7440-38-2	SW6020	Wet	mg/kg			0.09	0.59	0.07 J
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g			< 0.031	< 0.027	< 0.028 U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g			< 0.031	< 0.027	< 0.028 U
Boron	7440-42-8	SW6020	Wet	mg/kg			< 0.19	< 0.18	0.09 J
Cadmium	7440-43-9	SW6020	Wet	mg/kg			0.0061	0.0081	0.0069 J
Iron	7439-89-6	SW6020	Wet	mg/kg			25.2	22.9	48.5
Lead	7439-92-1	SW6020	Wet	mg/kg			0.0202	0.0225	0.0519
Magnesium	7439-95-4	SW6010	Wet	mg/kg			318	543	490
Mercury	7439-97-6	SW7471	Wet	mg/kg			0.0809	0.0775	0.0289
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g			78.2	79	33.9
Selenium	7782-49-2	SW6020	Wet	mg/kg	1.66	0.74	0.27	0.40	0.34 J
Zinc	7440-66-6	SW6020	Wet	mg/kg			20.2	18.9	24.2

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	MHL3	DR	DR	DR	DR
				Sample ID	FWB-002(LMB)-MHL3-171014	FF-001(BT)-DR-171016	FF-001(HS)-DR-171016	FF-001(LMB)-DR-171016	FF-001(SS)-DR-171016
				Lab Sample ID	K1712477-017	K1712476-028	K1712468-021	K1712471-020	K1712468-018
				Area of Concern					
				Lake Status					
				Sample Date	10/14/2017	10/16/2017	10/16/2017	10/16/2017	10/16/2017
				Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit					
Moisture Content	MOISTURE	CALCULATED	Wet	%	65.0	79.1	79.3	78.2	79.8
Lipids	LIPIDS	NOAA LIPID	Wet	%	32	3.1		2.3	
Solids (total)	C-008	ZFZDRY	Wet	%	35.0	20.9	20.7	21.8	20.2
Suspended solids (total)	C-009	ZFZDRY	Wet	%					
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	< 0.04	< 0.04	< 0.039 U	< 0.04	< 0.039 UJ
Arsenic	7440-38-2	SW6020	Dry	mg/kg	1.38	1.11	0.23 J	0.32	0.12 J
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.08	< 0.08	< 0.078 U	< 0.079	< 0.079 U
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.08	< 0.08	< 0.078 U	< 0.079	< 0.079 U
Boron	7440-42-8	SW6020	Dry	mg/kg	< 0.50	< 0.50	0.51	< 0.50	0.65
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.010	0.013	0.013 J	0.010	0.016 J
Iron	7439-89-6	SW6020	Dry	mg/kg	40.4	26.2	22.6	16.0	19.4
Lead	7439-92-1	SW6020	Dry	mg/kg	0.023	0.008	0.008 J	0.004	0.011 J
Magnesium	7439-95-4	SW6010	Dry	mg/kg	1700	985	1360	1200	1250
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.116	0.083	0.130	0.697	0.157
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	133	108	132	851	191
Selenium	7782-49-2	SW6020	Dry	mg/kg	1.01	2.1	5.10	4.28	6.29
Zinc	7440-66-6	SW6020	Dry	mg/kg	50.4	68.1	46.5	42.2	39.2
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	< 0.014	< 0.08	< 0.008 U	< 0.009	< 0.008 U
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.48	0.23	0.05 J	0.07	0.02 J
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.028	< 0.017	< 0.016 U	< 0.017	< 0.016 U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.028	< 0.017	< 0.016 U	< 0.017	< 0.016 U
Boron	7440-42-8	SW6020	Wet	mg/kg	< 0.18	< 0.10	0.11	< 0.11	0.13
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.0033	0.0026	0.0026 J	0.0022	0.0032 J
Iron	7439-89-6	SW6020	Wet	mg/kg	14.2	5.47	4.67	3.49	3.92
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0079	0.0016	0.0016 J	0.0009	0.0022 J
Magnesium	7439-95-4	SW6010	Wet	mg/kg	596	206	281	262	253
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.0405	0.0174	0.0269	0.152	0.0316
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	46.7	22.5	27.3	186	38.6
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.35	0.43	1.06	0.93	1.27
Zinc	7440-66-6	SW6020	Wet	mg/kg	17.6	14.2	9.63	9.20	7.91

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	DR	DR	DR	DR	DR
				Sample ID	FO-001(BT)-DR-171016	FO-001(HS)-DR-171016	FO-001(LMB)-DR-171016	FWB-001(BT)-DR-171016	FWB-001(HS)-DR-171016
				Lab Sample ID	K1712476-030	K1712468-023	K1712471-022	K1712476-029	K1712468-022
				Area of Concern					
				Lake Status					
				Sample Date	10/16/2017	10/16/2017	10/16/2017	10/16/2017	10/16/2017
				Sample Type	N	N	N	N	N
Analyte	CASRN	Method	Basis	Unit					
Moisture Content	MOISTURE	CALCULATED	Wet	%	59.2	78.8	79.4	74.9	69.9
Lipids	LIPIDS	NOAA LIPID	Wet	%	8.4	1.2		9.4	
Solids (total)	C-008	ZFZDRY	Wet	%	40.8	21.2	20.6	25.1	30.1
Suspended solids (total)	C-009	ZFZDRY	Wet	%	40.8	21.2	20.6		
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g				0.014	0.018 J
Arsenic	7440-38-2	SW6020	Dry	mg/kg				0.80	0.13 J
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g				< 0.078	< 0.079 U
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g				< 0.078	< 0.079 U
Boron	7440-42-8	SW6020	Dry	mg/kg				< 0.50	0.88
Cadmium	7440-43-9	SW6020	Dry	mg/kg				0.012	0.056
Iron	7439-89-6	SW6020	Dry	mg/kg				65.5	34.9
Lead	7439-92-1	SW6020	Dry	mg/kg				0.104	0.028
Magnesium	7439-95-4	SW6010	Dry	mg/kg				1420	1790
Mercury	7439-97-6	SW7471	Dry	mg/kg				0.048	0.053
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g				89.8	98.6
Selenium	7782-49-2	SW6020	Dry	mg/kg	6.95	5.86	6.37	2.30	3.4
Zinc	7440-66-6	SW6020	Dry	mg/kg				187	71.4
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g				0.003	0.005 J
Arsenic	7440-38-2	SW6020	Wet	mg/kg				0.20	0.04 J
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g				< 0.02	< 0.024 U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g				< 0.02	< 0.024 U
Boron	7440-42-8	SW6020	Wet	mg/kg				< 0.13	0.26
Cadmium	7440-43-9	SW6020	Wet	mg/kg				0.0029	0.0169
Iron	7439-89-6	SW6020	Wet	mg/kg				16.4	10.5
Lead	7439-92-1	SW6020	Wet	mg/kg				0.0260	0.0083
Magnesium	7439-95-4	SW6010	Wet	mg/kg				357	538
Mercury	7439-97-6	SW7471	Wet	mg/kg				0.0120	0.0158
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g				22.7	30
Selenium	7782-49-2	SW6020	Wet	mg/kg	2.84	1.24	1.31	0.58	1.03
Zinc	7440-66-6	SW6020	Wet	mg/kg				47.0	21.5

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	DR	DR
				Sample ID	FWB-001(LMB)-DR-171016	FWB-001(SS)-DR-171016
				Lab Sample ID	K1712471-021	K1712468-019
				Area of Concern		
				Lake Status		
				Sample Date	10/16/2017	10/16/2017
				Sample Type	N	N
Analyte	CASRN	Method	Basis	Unit		
Moisture Content	MOISTURE	CALCULATED	Wet	%	67.6	73.6
Lipids	LIPIDS	NOAA LIPID	Wet	%	17	
Solids (total)	C-008	ZFZDRY	Wet	%	32.4	26.4
Suspended solids (total)	C-009	ZFZDRY	Wet	%		
Arsenic	7440-38-2	EPA 1632A	Dry	ug/g	0.025	0.032 J
Arsenic	7440-38-2	SW6020	Dry	mg/kg	0.24	0.14 J
Arsenic III	22541-54-4	EPA 1632A	Dry	ug/g	< 0.08	< 0.078 U
Arsenic V	17428-41-0	EPA 1632A	Dry	ug/g	< 0.08	< 0.078 U
Boron	7440-42-8	SW6020	Dry	mg/kg	< 0.50	1.40
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.038	0.022
Iron	7439-89-6	SW6020	Dry	mg/kg	61.9	108
Lead	7439-92-1	SW6020	Dry	mg/kg	0.029	0.108
Magnesium	7439-95-4	SW6010	Dry	mg/kg	1880	2180
Mercury	7439-97-6	SW7471	Dry	mg/kg	0.253	0.078
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	341	118
Selenium	7782-49-2	SW6020	Dry	mg/kg	2.91	4.5
Zinc	7440-66-6	SW6020	Dry	mg/kg	60.4	93.6
Arsenic	7440-38-2	EPA 1632A	Wet	ug/g	0.008	0.008 J
Arsenic	7440-38-2	SW6020	Wet	mg/kg	0.08	0.04 J
Arsenic III	22541-54-4	EPA 1632A	Wet	ug/g	< 0.026	< 0.021 U
Arsenic V	17428-41-0	EPA 1632A	Wet	ug/g	< 0.026	< 0.021 U
Boron	7440-42-8	SW6020	Wet	mg/kg	< 0.16	0.37
Cadmium	7440-43-9	SW6020	Wet	mg/kg	0.0123	0.0059
Iron	7439-89-6	SW6020	Wet	mg/kg	20.0	28.5
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0093	0.0285
Magnesium	7439-95-4	SW6010	Wet	mg/kg	608	575
Mercury	7439-97-6	SW7471	Wet	mg/kg	0.0819	0.0205
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	111	31.3
Selenium	7782-49-2	SW6020	Wet	mg/kg	0.94	1.19
Zinc	7440-66-6	SW6020	Wet	mg/kg	19.6	24.7

Table 5-1F: Bass, Catfish, Trout, and Sucker Analytical Results (Filet, Remains, and Ovary, Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
BT	Brown Trout
CC	Channel Catfish
CI	Curd's Inlet
DR	Dix River
dw	Dry Weight
EPA	Environmental Protection Agency
FD	Field Duplicate Sample
FF	Fish Filet Sample
FHC	Flathead Catfish
FO	Fish Ovary Sample
FWB	Fish Remains Sample
HS	Northern Hogsucker
INORG	Inorganic Chemistry
J	Concentration is greater than method detection limit but less than laboratory
KB	Kentucky Bass
LHL	Lower Herrington Lake
LMB	Largemouth Bass
mg/kg	milligrams per kilogram
MHL	Middle Herrington Lake
N	Normal Sample
ng/g	nanograms per gram
PHYS	Physical Characteristic
SS	Spotted Sucker
T	Total
U	Constituent was analyzed for, but not detected
ug/g	micrograms per gram

Table 5-2: Surface Water Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	CI1		CI1		CI1		CI2		CI2		CI2	
				Season	Stratification		Stratification		Overturn		Stratification		Stratification		Overturn	
				Sample Date	10/14/2017		10/14/2017		12/11/2017		10/14/2017		10/14/2017		12/11/2017	
				Sample Type	N		FD		N		N		FD		N	
				Lab ID	K1711263		K1711263		K1713449		K1711263		K1711263		K1713449	
				Sample ID	SW-001(5)-CI1-171014		DUP-01-171014		SW001(2)CI1-171211		SW-001(10)-CI2-171014		DUP-02-171014		SW001(4)CI2-171211	
Analyte	CAS RN	D/T	Method	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	D	E200.8	ug/l	1.44		1.41		2.24		1.42		1.53		2.65	
Arsenic	7440-38-2	T	E200.8	ug/l	1.74		1.39		3.55		1.59		1.72		5.48	
Boron	7440-42-8	D	E200.8	ug/l	552		442		2560		461		461		2240	
Boron	7440-42-8	T	E200.8	ug/l	391		452		2520		450		426		2290	
Cadmium	7440-43-9	D	E200.8	ug/l	< 0.020	U	< 0.020	U	0.211		< 0.020	U	< 0.020	U	0.180	
Cadmium	7440-43-9	T	E200.8	ug/l	0.156		< 0.020	U	0.343		0.028		< 0.020	U	0.377	
Iron	7439-89-6	D	E200.8	ug/l	77.1		16.9		6.5		47.7		86.3		11.5	
Iron	7439-89-6	T	E200.8	ug/l	142		53.2		295		99.2		140		614	
Lead	7439-92-1	D	E200.8	ug/l					< 0.010	U					< 0.010	U
Lead	7439-92-1	T	E200.8	ug/l					0.264						0.631	
Magnesium	7439-95-4	D	E200.8	ug/l	11800		11200		27400		11700		12100		25600	
Magnesium	7439-95-4	T	E200.8	ug/l	12200		11000		27400		11900		11900		25600	
Mercury	7439-97-6	D	E1631	ng/l	1710		535		1.03		715		1100		1.24	
Mercury	7439-97-6	T	SW7470	ug/l	7.78		3.03		< 0.20	U	4.28		5.02		< 0.20	U
Methyl mercury	22967-92-6	D	E1630	ng/l	0.59		0.23		< 0.1	U	0.12		0.27		< 0.1	U
Methyl mercury	22967-92-6	T	E1630	ng/l	0.86		0.2		< 0.1	U	0.18		0.39		0.06	J
Selenium	7782-49-2	D	E200.8	ug/l	2.0		1.2		4.9		1.7		2.2		4.5	
Selenium	7782-49-2	T	E200.8	ug/l	2.1		1.3		5.2		1.7		2.1		4.6	
Zinc	7440-66-6	D	E200.8	ug/l	2.8		< 2.0	U	3.4		< 2.0	U	< 2.0	U	< 2.0	U
Zinc	7440-66-6	T	E200.8	ug/l	9.8		2.9		3.6		3.3		4.2		5.3	
Dissolved Organic Carbon	DOC	D	SW9060	mg/l					3.41						3.39	
Hardness (Filtered)	FHARD	D	SM2340C	mg/l	184		152		256		166		179		251	
Hardness (total)	THARD	T	SM2340C	mg/l					265						257	
Hardness, Total	HARD	T	SM2340C	mg/l	183		153		265		170		183		257	
Organic Carbon (dissolved)	C-012D	D	SW9060	mg/l	4.07		3.57		3.41		3.57		3.64		3.39	
Organic Carbon (total)	C-012	T	SW9060	mg/l	4.64		3.55		3.14		3.59		3.44		3.25	
Sulfate	14808-79-8	D	E300	mg/l	64.5		51.5		107		59.8		64.7		99.8	
Sulfate	14808-79-8	T	E300	mg/l	63.6		52.1		107		59.3		64.3		100	

Table 5-2: Surface Water Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	CI3		CI3		CI3		CI4		CI4		CI4	
					Season	Stratification		Stratification		Overturn		Stratification		Stratification		Overturn	
					Sample Date	10/14/2017		10/14/2017		12/11/2017		10/14/2017		10/14/2017		12/12/2017	
					Sample Type	N		FD		N		N		N		N	
					Lab ID	K1711263		K1711263		K1713449		K1711263		K1711263		K1713449	
					Sample ID	SW-001(10)-CI3-171014		DUP-03-171014		SW001(9)CI3-171211		SW-001(70)-CI4-171014		SW-002(20)-CI4-171014		SW001(25)CI4-171212	
Analyte	CAS RN	D/T	Method	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	D	E200.8	ug/l	1.36		1.51		1.77		1.92		1.30		1.39	
Arsenic	7440-38-2	T	E200.8	ug/l	1.58		1.68		2.04		2.65		1.34		1.49	
Boron	7440-42-8	D	E200.8	ug/l	441		467		794		458		435		302	
Boron	7440-42-8	T	E200.8	ug/l	536		459		728		401		425		317	
Cadmium	7440-43-9	D	E200.8	ug/l	< 0.020	U	< 0.020	U	0.064		< 0.020	U	< 0.020	U	0.023	
Cadmium	7440-43-9	T	E200.8	ug/l	< 0.020	U	< 0.020	U	0.092		0.073		0.029		0.037	
Iron	7439-89-6	D	E200.8	ug/l	23.7		57.2		7.5		29.0		7.8		3.9	
Iron	7439-89-6	T	E200.8	ug/l	62.9		114		112		148		39.8		63.9	
Lead	7439-92-1	D	E200.8	ug/l					< 0.010	U					< 0.010	U
Lead	7439-92-1	T	E200.8	ug/l					< 0.010	U					< 0.010	U
Magnesium	7439-95-4	D	E200.8	ug/l	11300		11400		15000		11700		10700		11500	
Magnesium	7439-95-4	T	E200.8	ug/l	11400		11500		14700		11700		10900		11400	
Mercury	7439-97-6	D	E1631	ng/l	970		1500		0.68		319		522		< 0.5	U
Mercury	7439-97-6	T	SW7470	ug/l	6.46		5.69		< 0.20	U	1.96		3.19		< 0.20	U
Methyl mercury	22967-92-6	D	E1630	ng/l	0.16		0.34		0.03	J	0.29		0.14		0.03	J
Methyl mercury	22967-92-6	T	E1630	ng/l	0.59		0.27		0.05	J	0.2	J	0.61		0.04	J
Selenium	7782-49-2	D	E200.8	ug/l	1.4		2.2		1.6		1.5		0.9	J	0.8	J
Selenium	7782-49-2	T	E200.8	ug/l	1.4		2.0		1.2		1.6		1.0		0.8	J
Zinc	7440-66-6	D	E200.8	ug/l	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U	< 2.0	U	2.2	
Zinc	7440-66-6	T	E200.8	ug/l	2.3		4.5		< 2.0	U	4.2		< 2.0	U	6.7	
Dissolved Organic Carbon	DOC	D	SW9060	mg/l					3.18						3.33	
Hardness (Filtered)	FHARD	D	SM2340C	mg/l	159		166		181		166		156		155	
Hardness (total)	THARD	T	SM2340C	mg/l					175						155	
Hardness, Total	HARD	T	SM2340C	mg/l	166		179		175		156		154		155	
Organic Carbon (dissolved)	C-012D	D	SW9060	mg/l	3.86		3.85		3.18		3.85		3.71		3.33	
Organic Carbon (total)	C-012	T	SW9060	mg/l	3.55		3.49		3.25		3.94		3.40		3.16	
Sulfate	14808-79-8	D	E300	mg/l	53.5		61.7		43.7		47.7		49.1		31.8	
Sulfate	14808-79-8	T	E300	mg/l	53.0		61.1		43.7		47.7		49.1		31.2	

Table 5-2: Surface Water Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	CI4		HQ1		HQ1		LHL1		LHL1		LHL1	
					Season	Overturn		Stratification		Overturn		Stratification		Stratification		Overturn	
					Sample Date	12/12/2017		10/04/2017		12/11/2017		10/06/2017		10/06/2017		12/11/2017	
					Sample Type	FD		N		N		N		N		N	
					Lab ID	K1713449		K1711264		K1713449		K1711264		K1711264		K1713449	
					Sample ID	DUP-001-171212		SW-001(10)-HQ1-171004		SW001(9)HQ1-171211		SW-001(20)-LHL1-171006		SW-002(60)-LHL1-171006		SW001(25)LHL1-171211	
Analyte	CAS RN	D/T	Method	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	D	E200.8	ug/l	1.38		1.19		1.37		1.04		1.83		1.29	
Arsenic	7440-38-2	T	E200.8	ug/l	1.59		1.12		1.38		1.00		1.81		1.33	
Boron	7440-42-8	D	E200.8	ug/l	324		387		223		403		235		199	
Boron	7440-42-8	T	E200.8	ug/l	316		414		230		415		211		202	
Cadmium	7440-43-9	D	E200.8	ug/l	0.029		0.009	J	0.014	J	< 0.020	U	< 0.020	U	0.008	J
Cadmium	7440-43-9	T	E200.8	ug/l	0.040		< 0.020	U	0.023		< 0.020	U	< 0.020	U	0.016	J
Iron	7439-89-6	D	E200.8	ug/l	3.8		< 2.0	U	< 2.0	U	11.7		157		2.4	
Iron	7439-89-6	T	E200.8	ug/l	67.8		23.7		40.1		9.8		226		35.3	
Lead	7439-92-1	D	E200.8	ug/l	< 0.010	U			< 0.010	U					< 0.010	U
Lead	7439-92-1	T	E200.8	ug/l	< 0.010	U			< 0.010	U					< 0.010	U
Magnesium	7439-95-4	D	E200.8	ug/l	11300		10400		11000		10700		9140		10600	
Magnesium	7439-95-4	T	E200.8	ug/l	11400		10400		11100		10600		9320		11200	
Mercury	7439-97-6	D	E1631	ng/l	< 0.5	U	< 0.5	UJ	0.68		< 0.5	U	< 0.5	U	0.62	
Mercury	7439-97-6	T	SW7470	ug/l	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U
Methyl mercury	22967-92-6	D	E1630	ng/l	0.04	J	0.03	J	0.04	J	< 0.1	U	< 0.1	U	0.04	J
Methyl mercury	22967-92-6	T	E1630	ng/l	0.05	J	0.04	J	0.04	J	< 0.1	UJ	0.24	J	0.05	J
Selenium	7782-49-2	D	E200.8	ug/l	0.8	J	0.8	J	0.6	J	0.8	J	0.2	J	0.5	J
Selenium	7782-49-2	T	E200.8	ug/l	0.8	J	0.9	J	0.6	J	0.8	J	0.2	J	0.6	J
Zinc	7440-66-6	D	E200.8	ug/l	3.4		0.6	J	< 2.0	U	1.2	J	0.9	J	2.3	
Zinc	7440-66-6	T	E200.8	ug/l	2.2		1.0	J	< 2.0	U	2.5		0.7	J	< 2.0	U
Dissolved Organic Carbon	DOC	D	SW9060	mg/l	3.42				3.43						3.58	
Hardness (Filtered)	FHARD	D	SM2340C	mg/l	160		145		149		141		139		146	
Hardness (total)	THARD	T	SM2340C	mg/l	159				152						155	
Hardness, Total	HARD	T	SM2340C	mg/l	159		149		152		147		146		155	
Organic Carbon (dissolved)	C-012D	D	SW9060	mg/l	3.42		4.15		3.43		6.18		3.18		3.58	
Organic Carbon (total)	C-012	T	SW9060	mg/l	3.20		3.60		3.21		3.37		3.05		3.16	
Sulfate	14808-79-8	D	E300	mg/l	31.7		41.0		28.0		38.4		26.7		27.6	
Sulfate	14808-79-8	T	E300	mg/l	30.8		41.8		28.3		38.6		27.1		27.3	

Table 5-2: Surface Water Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL2		LHL2		LHL2		LHL2		LHL3		LHL3	
					Season	Stratification		Stratification		Stratification		Overturn		Stratification		Stratification	
					Sample Date	10/06/2017		10/06/2017		10/06/2017		12/11/2017		10/06/2017		10/06/2017	
					Sample Type	N		N		N		N		N		N	
					Lab ID	K1711264		K1711264		K1711264		K1713449		K1711264		K1711264	
					Sample ID	SW-001(25)-LHL2-171006		SW-002(50)-LHL2-171006		SW-003(100)-LHL2-171006		SW001(25)LHL2-171211		SW-001(20)-LHL3-171006		SW-002(70)-LHL3-171006	
Analyte	CAS RN	D/T	Method	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	D	E200.8	ug/l	1.03		1.34		1.46		1.16		1.12		1.63	
Arsenic	7440-38-2	T	E200.8	ug/l	1.08		1.40		1.51		1.21		1.15		1.73	
Boron	7440-42-8	D	E200.8	ug/l	414		238		212		200		416		162	
Boron	7440-42-8	T	E200.8	ug/l	419		243		221		207		356		168	
Cadmium	7440-43-9	D	E200.8	ug/l	< 0.020	U	< 0.020	U	< 0.020	U	0.011	J	< 0.020	U	< 0.020	U
Cadmium	7440-43-9	T	E200.8	ug/l	< 0.020	U	< 0.020	U	< 0.020	U	0.024		< 0.020	U	< 0.020	U
Iron	7439-89-6	D	E200.8	ug/l	2.1		6.7		128		2.7		3.6		161	
Iron	7439-89-6	T	E200.8	ug/l	9.1		16.1		147		33.9		13.9		195	
Lead	7439-92-1	D	E200.8	ug/l							< 0.010	U				
Lead	7439-92-1	T	E200.8	ug/l							< 0.010	U				
Magnesium	7439-95-4	D	E200.8	ug/l	10500		9380		9280		10800		10600		8960	
Magnesium	7439-95-4	T	E200.8	ug/l	10700		9480		9270		11000		10800		9060	
Mercury	7439-97-6	D	E1631	ng/l	< 0.5	U	0.77		< 0.5	U	< 0.5	U	< 0.5	UJ	< 0.5	UJ
Mercury	7439-97-6	T	SW7470	ug/l	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U
Methyl mercury	22967-92-6	D	E1630	ng/l	< 0.1	U	0.45		< 0.1	U	0.04	J	0.06	J	0.04	J
Methyl mercury	22967-92-6	T	E1630	ng/l	< 0.1	UJ	0.18	J	< 0.1	UJ	0.06	J	0.04	J	0.1	
Selenium	7782-49-2	D	E200.8	ug/l	0.8	J	0.3	J	< 1.0	U	0.6	J	0.8	J	0.2	J
Selenium	7782-49-2	T	E200.8	ug/l	0.8	J	0.3	J	0.3	J	0.6	J	0.8	J	0.3	J
Zinc	7440-66-6	D	E200.8	ug/l	0.6	J	1.6	J	0.5	J	< 2.0	U	0.5	J	0.5	J
Zinc	7440-66-6	T	E200.8	ug/l	0.8	J	0.7	J	0.6	J	< 2.0	U	1.1	J	0.8	J
Dissolved Organic Carbon	DOC	D	SW9060	mg/l							3.29					
Hardness (Filtered)	FHARD	D	SM2340C	mg/l	138		140		145		150		142		146	
Hardness (total)	THARD	T	SM2340C	mg/l							156					
Hardness, Total	HARD	T	SM2340C	mg/l	144		146		146		156		142		144	
Organic Carbon (dissolved)	C-012D	D	SW9060	mg/l	3.57		3.86		4.20		3.29		3.40		3.22	
Organic Carbon (total)	C-012	T	SW9060	mg/l	3.40				3.02		3.07		3.18		3.09	
Sulfate	14808-79-8	D	E300	mg/l	38.9		28.7		27.3		27.4		39.5		26.2	
Sulfate	14808-79-8	T	E300	mg/l	38.7		29.5		27.9		29.0		40.0		26.7	

Table 5-2: Surface Water Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	LHL3		LHL3		LHL4		LHL4		LHL4		LHL4	
				Season	Stratification		Overturn		Stratification		Stratification		Stratification		Overturn	
				Sample Date	10/06/2017		12/12/2017		10/07/2017		10/07/2017		10/07/2017		12/12/2017	
				Sample Type	N		N		N		N		N		N	
				Lab ID	K1711264		K1713449		K1711264		K1711264		K1711264		K1713449	
				Sample ID	SW-003(100)-LHL3-171006		SW001(25)LHL3-171212		SW-001(20)-LHL4-171007		SW-002(70)-LHL4-171007		SW-003(100)-LHL4-171007		SW001(25)LHL4-171211	
Analyte	CAS RN	D/T	Method	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	D	E200.8	ug/l	1.22		1.16		1.04		1.15		0.91		1.19	
Arsenic	7440-38-2	T	E200.8	ug/l	1.23		1.19		1.14		1.27		0.94		1.10	
Boron	7440-42-8	D	E200.8	ug/l	188		200		356		72		135		183	
Boron	7440-42-8	T	E200.8	ug/l	210		207		317		68		141		183	
Cadmium	7440-43-9	D	E200.8	ug/l	< 0.020	U	0.011	J	< 0.020	U	< 0.020	U	< 0.020	U	0.011	J
Cadmium	7440-43-9	T	E200.8	ug/l	< 0.020	U	0.015	J	< 0.020	U	< 0.020	U	< 0.020	U	0.022	
Iron	7439-89-6	D	E200.8	ug/l	60.4		< 2.0	U	5.6		146		66.6		2.2	
Iron	7439-89-6	T	E200.8	ug/l	71.1		38.1		19.0		146		87.2		37.8	
Lead	7439-92-1	D	E200.8	ug/l			< 0.010	U							< 0.010	U
Lead	7439-92-1	T	E200.8	ug/l			< 0.010	U							< 0.010	U
Magnesium	7439-95-4	D	E200.8	ug/l	9090		10300		10000		8480		8630		10400	
Magnesium	7439-95-4	T	E200.8	ug/l	9530		10600		10200		8760		8820		10400	
Mercury	7439-97-6	D	E1631	ng/l	< 0.5	UJ	0.64		0.83	J	0.98	J	2.83	J	< 0.5	U
Mercury	7439-97-6	T	SW7470	ug/l	< 0.20	U	< 0.20	U	0.03	J+	< 0.20	U	< 0.20	U	< 0.20	U
Methyl mercury	22967-92-6	D	E1630	ng/l	0.09	J	0.03	J	0.05	J	0.06	J	0.03	J	0.05	J
Methyl mercury	22967-92-6	T	E1630	ng/l	0.12		0.04	J	0.07	J	0.22	J	0.15	J	0.05	J
Selenium	7782-49-2	D	E200.8	ug/l	0.2	J	0.5	J	0.7	J	< 1.0	U	0.2	J	0.5	J
Selenium	7782-49-2	T	E200.8	ug/l	0.3	J	0.5	J	0.7	J	< 1.0	U	0.3	J	0.5	J
Zinc	7440-66-6	D	E200.8	ug/l	0.8	J	< 2.0	U	1.0	J	1.0	J	1.2	J	2.0	
Zinc	7440-66-6	T	E200.8	ug/l	0.9	J	2.5		0.8	J	0.8	J	0.8	J	< 2.0	U
Dissolved Organic Carbon	DOC	D	SW9060	mg/l			5.53								3.41	
Hardness (Filtered)	FHARD	D	SM2340C	mg/l	136		146		143		135		137			
Hardness (total)	THARD	T	SM2340C	mg/l			153									
Hardness, Total	HARD	T	SM2340C	mg/l	140		153		139		137		138			
Organic Carbon (dissolved)	C-012D	D	SW9060	mg/l	4.68		5.53		3.54		3.83		4.03		3.41	
Organic Carbon (total)	C-012	T	SW9060	mg/l	3.30		3.07		3.44		3.71		2.98		3.03	
Sulfate	14808-79-8	D	E300	mg/l	27.6		27.6		35.4		18.0		23.1		26.1	
Sulfate	14808-79-8	T	E300	mg/l	28.2		27.4		36.5		18.4		23.1		26.6	

Table 5-2: Surface Water Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	HI1		HI1		LHL5		LHL5		LHL5		LHL5	
					Season	Stratification		Overturn		Stratification		Stratification		Stratification		Overturn	
					Sample Date	10/05/2017		12/11/2017		10/07/2017		10/07/2017		10/07/2017		12/12/2017	
					Sample Type	N		N		N		N		N		N	
					Lab ID	K1711264		K1713449		K1711264		K1711264		K1711264		K1713449	
					Sample ID	SW-001(10)-HI1-171005		SW001(3)HI1-171211		SW-001(20)-LHL5-171007		SW-002(70)-LHL5-171007		SW-003(100)-LHL5-171007		SW001(25)LHL5-171212	
Analyte	CAS RN	D/T	Method	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	D	E200.8	ug/l	1.07		1.17		0.97		1.19		0.96		1.12	
Arsenic	7440-38-2	T	E200.8	ug/l	1.03		1.20		1.09		1.15		0.94		1.10	
Boron	7440-42-8	D	E200.8	ug/l	374		190		353		76		226		164	
Boron	7440-42-8	T	E200.8	ug/l	397		179		328		73		191		171	
Cadmium	7440-43-9	D	E200.8	ug/l	< 0.020	U	0.010	J	< 0.020	U	< 0.020	U	< 0.020	U	0.007	J
Cadmium	7440-43-9	T	E200.8	ug/l	< 0.020	U	0.016	J	< 0.020	U	< 0.020	U	< 0.020	U	0.011	J
Iron	7439-89-6	D	E200.8	ug/l	2.5		2.8		7.5		41.3		47.5		2.3	
Iron	7439-89-6	T	E200.8	ug/l	35.1		51.2		12.1		49.7		63.0		36.5	
Lead	7439-92-1	D	E200.8	ug/l			< 0.010	U							< 0.010	U
Lead	7439-92-1	T	E200.8	ug/l			< 0.010	U							< 0.010	U
Magnesium	7439-95-4	D	E200.8	ug/l	10000		10500		10300		8410		8910		10400	
Magnesium	7439-95-4	T	E200.8	ug/l	10300		10700		9780		8250		8900		10500	
Mercury	7439-97-6	D	E1631	ng/l	< 0.5	UJ	< 0.5	U	4.49	J	4.37	J	< 0.5	UJ	< 0.5	U
Mercury	7439-97-6	T	SW7470	ug/l	< 0.20	U	< 0.20	U	0.08	J+	0.06	J+	< 0.20	U	< 0.20	U
Methyl mercury	22967-92-6	D	E1630	ng/l	< 0.1	U	0.03	J	0.09	J	0.07	J	0.04	J	0.05	J
Methyl mercury	22967-92-6	T	E1630	ng/l	0.04	J	0.03	J	0.09	J	0.19	J	0.06	J	0.06	J
Selenium	7782-49-2	D	E200.8	ug/l	0.8	J	0.5	J	0.6	J	< 1.0	U	0.3	J	0.4	J
Selenium	7782-49-2	T	E200.8	ug/l	0.7	J	0.5	J	0.7	J	< 1.0	U	0.3	J	0.5	J
Zinc	7440-66-6	D	E200.8	ug/l	1.0	J	7.1		0.8	J	2.2		0.6	J	5.4	
Zinc	7440-66-6	T	E200.8	ug/l	2.3		< 2.0	U	1.2	J	3.1		0.6	J	< 2.0	U
Dissolved Organic Carbon	DOC	D	SW9060	mg/l			2.99								5.10	
Hardness (Filtered)	FHARD	D	SM2340C	mg/l	139		147		137		137		149			
Hardness (total)	THARD	T	SM2340C	mg/l			152									
Hardness, Total	HARD	T	SM2340C	mg/l	142		152		140		134		142			
Organic Carbon (dissolved)	C-012D	D	SW9060	mg/l	3.55		2.99		3.31		3.66		3.51		5.10	
Organic Carbon (total)	C-012	T	SW9060	mg/l	3.53		2.91		3.52		3.54		2.99		3.07	
Sulfate	14808-79-8	D	E300	mg/l	36.6		25.8		34.4		19.2		29.2		26.0	
Sulfate	14808-79-8	T	E300	mg/l	37.3		25.1		35.4		19.5		29.2		25.5	

Table 5-2: Surface Water Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL6		LHL6		LHL6		LHL6		DR1	
					Season	Stratification		Stratification		Stratification		Overturn		Stratification	
					Sample Date	10/07/2017		10/07/2017		10/07/2017		12/12/2017		10/07/2017	
					Sample Type	N		N		N		N		N	
					Lab ID	K1711264		K1711264		K1711264		K1713449		K1711264	
					Sample ID	SW-001(20)-LHL6-171007		SW-002(70)-LHL6-171007		SW-003(100)-LHL6-171007		SW001(25)LHL6-171212		SW-001(10)-DR1-171007	
Analyte	CAS RN	D/T	Method	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	D	E200.8	ug/l	0.89		1.04		1.18		0.92		1.38	
Arsenic	7440-38-2	T	E200.8	ug/l	0.92		1.04		1.32		0.95		1.54	
Boron	7440-42-8	D	E200.8	ug/l	166		32.5		31.1		124		264	
Boron	7440-42-8	T	E200.8	ug/l	200		33.1		30.4		123		246	
Cadmium	7440-43-9	D	E200.8	ug/l	< 0.020	U	< 0.020	U	< 0.020	U	0.005	J	0.149	
Cadmium	7440-43-9	T	E200.8	ug/l	< 0.020	U	< 0.020	U	< 0.020	U	0.007	J	0.122	
Iron	7439-89-6	D	E200.8	ug/l	3.7		13.5		146		3.9		6.6	
Iron	7439-89-6	T	E200.8	ug/l	7.3		37.9		211		40.6		72.9	
Lead	7439-92-1	D	E200.8	ug/l							< 0.010	U		
Lead	7439-92-1	T	E200.8	ug/l							< 0.010	U		
Magnesium	7439-95-4	D	E200.8	ug/l	8810		7880		8080		10200		9440	
Magnesium	7439-95-4	T	E200.8	ug/l	8940		7710		9570		10100		9550	
Mercury	7439-97-6	D	E1631	ng/l	1.1	J	2.16	J	3.12	J	< 0.5	U	< 0.5	UJ
Mercury	7439-97-6	T	SW7470	ug/l	< 0.20	U	< 0.20	U	0.14	J+	< 0.20	U	< 0.20	U
Methyl mercury	22967-92-6	D	E1630	ng/l	0.07	J	0.06	J	0.13		0.04	J	< 0.1	U
Methyl mercury	22967-92-6	T	E1630	ng/l	0.04	J	0.07	J	0.19	J	0.05	J	0.05	J
Selenium	7782-49-2	D	E200.8	ug/l	0.4	J	< 1.0	U	< 1.0	U	0.3	J	0.5	J
Selenium	7782-49-2	T	E200.8	ug/l	0.4	J	< 1.0	U	< 1.0	U	0.4	J	0.5	J
Zinc	7440-66-6	D	E200.8	ug/l	0.6	J	1.7	J	1.9	J	2.1		0.8	J
Zinc	7440-66-6	T	E200.8	ug/l	1.5	J	1.3	J	1.6	J	< 2.0	U	1.5	J
Dissolved Organic Carbon	DOC	D	SW9060	mg/l							5.30			
Hardness (Filtered)	FHARD	D	SM2340C	mg/l	120		126		136				148	
Hardness (total)	THARD	T	SM2340C	mg/l										
Hardness, Total	HARD	T	SM2340C	mg/l	125		128		137				146	
Organic Carbon (dissolved)	C-012D	D	SW9060	mg/l	3.78		4.17		4.42		5.30		2.86	
Organic Carbon (total)	C-012	T	SW9060	mg/l	3.79		4.07		3.82		3.14		2.86	
Sulfate	14808-79-8	D	E300	mg/l	24.3		15.0		15.2		22.5		30.1	
Sulfate	14808-79-8	T	E300	mg/l	24.8		15.0		15.5		22.8		30.7	

Notes:	%	Percent
	CI	Curd's Inlet
	D	Dissolved
	DR	Dix River
	FD	Field Duplicate Sample
	HI	Hardin's Inlet
	HQ	HQ Inlet
	IQ	Interpreted qualifier, data flags from third party validation
	J	Concentration is greater than the method detection limit but less than the laboratory reporting limit
	J +	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, and may have a potential positive bias.
	LHL	Lower Herrington Lake
	mg/l	milligrams per liter
	N	Normal Sample
	ng/l	nanograms per liter
	T	Total
	U	Constituent was analyzed for, but not detected
	ug/l	micrograms per liter
	UJ	The material was analyzed for, but was not detected. The associated

Table 5-3: Sediment Pore Water Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
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					Location	CI1C		CI2A		CI2C		CI3C		CURDS1	
					Sample Date	11/03/2017		11/04/2017		11/03/2017		11/03/2017		11/03/2017	
					Sample Type	N		N		N		N		N	
					Lab ID	K1712059		K1712059		K1712059		K1712059		K1712055	
					Sample ID	PW001-CI1C-171103		PW001-CI2A-171104		PW001-CI2C-171103		PW001-CI3C-171103		K1712055-002 PW001-CURDS1-171103	
Analyte	CAS RN	D/T	Method	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	D	E200.8	ug/l	3.48		29.2		1.04		2.32			
Arsenic	7440-38-2	D	EPA 1632A	ug/l	2.7		30.9		0.515		0.946			
Arsenic III	22541-54-4	D	EPA 1632A	ug/l	< 0.02	U	0.0967		0.038		0.0397			
Arsenic V	17428-41-0	D	EPA 1632A	ug/l	2.69		30.8		0.477		0.906			
Boron	7440-42-8	D	E200.8	ug/l	1090		494		950		457			
Cadmium	7440-43-9	D	E200.8	ug/l	0.042		0.012	J	0.021		0.008	J		
Iron	7439-89-6	D	E200.8	ug/l	24.4		69.7		8.7		62.8			
Magnesium	7439-95-4	D	E200.8	ug/l	17000		11700		15600		11400			
Mercury	7439-97-6	D	E1631	ng/l	1.26		0.97		1.1		1.19			
Mercury	7439-97-6	D	SW7470	ug/l	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U		
Methyl mercury	22967-92-6	D	E1630	ng/l	< 0.1	UJ	< 0.1	UJ	< 0.1	UJ	< 0.1	UJ		
Selenium	7782-49-2	D	E200.8	ug/l	3.7		1.0	J	2.3		1.3			
Selenium (unknown)	UNKNOWN SE	T	SE-SPEC-HPLC/CCMSVA	ug/l	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
Selenium +4	SE +4	T	SE-SPEC-HPLC/CCMSVA	ug/l	0.32		0.14		0.12		0.22		0.65	
Selenium +6	SE +6	T	SE-SPEC-HPLC/CCMSVA	ug/l	2.64		0.32		1.77		0.75		4.04	
Selenocyanate	3425-46-5	T	SE-SPEC-HPLC/CCMSVA	ug/l	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U
Zinc	7440-66-6	D	E200.8	ug/l	< 2.0	U	4.6		2.1		3.6			
Organic Carbon (dissolved)	C-012D	D	SW9060	mg/l	3.51		4.16		2.74		3.25			
Sulfate	14808-79-8	D	E300	mg/l	120		46.8		92.9		48.9			

Table 5-3: Sediment Pore Water Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	CURDS1		CURDS2A		CURDS2B		CURDS2C		CURDSNB		CURDSNB		HQ1A	
					Sample Date	11/03/2017		11/04/2017		11/03/2017		11/03/2017		11/03/2017		11/03/2017		11/04/2017	
					Sample Type	N		N		N		N		N		N		N	
					Lab ID	K1712055		K1712059		K1712059		K1712059		K1712055		K1712055		K1712059	
					Sample ID	PW001-CURDS1-171103		PW001-CURDS2A-171104		PW001-CURDS2B-171103		PW001-CURDS2C-171103		K1712055-001 PW001-CURDSNB-171103		PW001-CURDSNB-171103		PW001-HQ1A-171104	
Analyte	CAS RN	D/T	Method	Unit		Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	D	E200.8	ug/l		4.59		123		14.4		5.05				5.83		2.87	
Arsenic	7440-38-2	D	EPA 1632A	ug/l		2.81		112		6.1		2.99				2.24		1.9	
Arsenic III	22541-54-4	D	EPA 1632A	ug/l		0.0322		71.6		0.078		0.0668				< 0.02	U	0.0591	
Arsenic V	17428-41-0	D	EPA 1632A	ug/l		2.77		40.1		6.02		2.92				2.22		1.84	
Boron	7440-42-8	D	E200.8	ug/l		1220		605		1020		940				1760		171	
Cadmium	7440-43-9	D	E200.8	ug/l		0.021		0.072		0.014	J	0.025				0.063		0.006	J
Iron	7439-89-6	D	E200.8	ug/l		11.2		739		36.9		28.8				83.0		31.9	
Magnesium	7439-95-4	D	E200.8	ug/l		16500		13000		14800		15300				21100		5840	
Mercury	7439-97-6	D	E1631	ng/l		0.98		4.03		1.16		1.33				1.69		1.18	
Mercury	7439-97-6	D	SW7470	ug/l		< 0.20	U	< 0.20	U	0.04	J	0.09	J			< 0.20	U	< 0.20	U
Methyl mercury	22967-92-6	D	E1630	ng/l		< 0.1	U	< 0.1	UJ	< 0.1	UJ	< 0.1	UJ			< 0.1	U	< 0.1	UJ
Selenium	7782-49-2	D	E200.8	ug/l		3.2		0.8	J	2.7		3.0				5.0		1.2	
Selenium (unknown)	UNKNOWN SE	T	SE-SPEC-HPLC/CCMSVA	ug/l				< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U			< 0.2	U
Selenium +4	SE +4	T	SE-SPEC-HPLC/CCMSVA	ug/l				< 0.1	U	0.46		0.54		0.38				0.29	
Selenium +6	SE +6	T	SE-SPEC-HPLC/CCMSVA	ug/l				< 0.1	U	1.82		2.17		2.12				0.56	
Selenocyanate	3425-46-5	T	SE-SPEC-HPLC/CCMSVA	ug/l				0.18		< 0.1	U	< 0.1	U	< 0.1	U			< 0.1	U
Zinc	7440-66-6	D	E200.8	ug/l		3.4		107		2.1		< 2.0	U			3.3		2.2	
Organic Carbon (dissolved)	C-012D	D	SW9060	mg/l						3.77		3.41				3.93		3.53	
Sulfate	14808-79-8	D	E300	mg/l				36.3		74.3		84.0				143		45.5	

Table 5-3: Sediment Pore Water Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	HQ1B		HQ1C		HI1A		HI1B		HI1C		HI1C	
				Sample Date	11/04/2017		11/04/2017		11/02/2017		11/03/2017		11/01/2017		11/04/2017	
				Sample Type	N		N		N		N		N		FD	
				Lab ID	K1712059		K1712059		K1712059		K1712059		K1712059		K1712059	
				Sample ID	PW001-HQ1B-171104		PW001-HQ1C-171104		PW001-HI1A-171102		PW001-HI1B-171103		PW001-HI1C-171101		PW001-DUP-171104	
Analyte	CAS RN	D/T	Method	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	D	E200.8	ug/l	38.8		1.14		4.47		9.07		5.71		1.05	
Arsenic	7440-38-2	D	EPA 1632A	ug/l	26.1		0.555		5.42		6.7		3.35		0.524	
Arsenic III	22541-54-4	D	EPA 1632A	ug/l	5.39		0.0642		2.99		1.15		1.76		0.0486	
Arsenic V	17428-41-0	D	EPA 1632A	ug/l	20.7		0.491		2.43		5.55		1.59		0.475	
Boron	7440-42-8	D	E200.8	ug/l	346		304		198		173		225		310	
Cadmium	7440-43-9	D	E200.8	ug/l	< 0.020	U	< 0.020	U	< 0.020	U	< 0.020	U	< 0.020	U	< 0.020	U
Iron	7439-89-6	D	E200.8	ug/l	2020		30.4		324		2510		148		20.9	
Magnesium	7439-95-4	D	E200.8	ug/l	16500		10200		13000		10900		13600		10400	
Mercury	7439-97-6	D	E1631	ng/l	1.39		1.03		0.95		1.55				1.29	
Mercury	7439-97-6	D	SW7470	ug/l	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U	< 0.20	U
Methyl mercury	22967-92-6	D	E1630	ng/l	< 0.1	UJ	< 0.1	UJ	0.06	J	0.1	J	0.12	J	< 0.1	UJ
Selenium	7782-49-2	D	E200.8	ug/l	0.6	J	0.8	J	0.3	J	0.3	J	0.2	J	0.8	J
Selenium (unknown)	UNKNOWN SE	T	SE-SPEC-HPLC/CCMSVA	ug/l	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U	< 0.2	U
Selenium +4	SE +4	T	SE-SPEC-HPLC/CCMSVA	ug/l	< 0.1	U	0.12		< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U
Selenium +6	SE +6	T	SE-SPEC-HPLC/CCMSVA	ug/l	< 0.1	U	0.4		< 0.1	U	< 0.1	U	0.11		< 0.1	U
Selenocyanate	3425-46-5	T	SE-SPEC-HPLC/CCMSVA	ug/l	0.15		< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U
Zinc	7440-66-6	D	E200.8	ug/l	2.1		2.5		2.5		3.8		2.8		4.8	
Organic Carbon (dissolved)	C-012D	D	SW9060	mg/l	4.49		2.86				3.79					
Sulfate	14808-79-8	D	E300	mg/l	34.2		39.3				17.5				39.5	

Table 5-3: Sediment Pore Water Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:	CI	Curd's Inlet
	D	Dissolved
	HI	Hardin's Inlet
	HQ	HQ Inlet
	IQ	Interpreted qualifier, data flags from third party validation
	J	Concentration is greater than the method detection limit but less than the laboratory reporting limit
	J+	Concentration is greater than the method detection limit but less than the laboratory reporting limit estimate and may be inaccurate or imprecise.
	mg/l	milligrams per liter
	ng/l	nanograms per liter
	T	Total
	U	Constituent was analyzed for, but not detected
	ug/l	micrograms per liter
	UJ	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

Table 5-4: Sediment Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	CI1A		CI1B		CI1B		CI1C		CI1C	
				Sample Date	10/11/2017		10/11/2017		10/11/2017		10/11/2017		10/11/2017	
				Sample Type	N		N		FD		N		FD	
				Lab ID	K1711369		K1711369		K1711369		K1711372		K1711369	
				Sample ID	SD-001(16)-CI1A-171011		SD-001(15)-CI1B-171011		DUP-006-171011		SD-001(12)-CI1C-171011		DUP-005-171011	
Analyte	CAS_RN	Method	BASIS	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	SW6020	Dry	mg/kg	391	J	64.7	J	90.7	J	35.6		70.5	J
Boron	7440-42-8	SW6020	Dry	mg/kg	72.3		13.4		20.5		8.86		6.38	
Cadmium	7440-43-9	SW6020	Dry	mg/kg	10.1		1.62		2.26		0.472		0.625	
Iron	7439-89-6	SW6010	Dry	mg/kg	51200	J	40800	J	38700	J	35200	J	64000	J
Lead	7439-92-1	SW6010	Dry	mg/kg	21		26		27		27		38.3	
Magnesium	7439-95-4	SW6010	Dry	mg/kg	5230	J	2990	J	2910	J	1790		1720	J
Mercury	7439-97-6	SW7471B	Dry	mg/kg	0.107	J	0.058	J	0.056	J	0.050		0.053	J
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	< 0.7	U	< 0.4	U	< 0.5	U	< 0.4	U	< 0.4	U
Selenium	7782-49-2	SW6020	Dry	mg/kg	14.1		3.4		4.5		1.4		1.4	
Zinc	7440-66-6	SW6020	Dry	mg/kg	245	J	76.3	J	124	J	112		114	J
Grain Size 0.001 MM	GRNSZ0.001MM	D422	Dry	%										
Grain Size 0.005 MM	GRNSZ0.005MM	D422	Dry	%										
Grain Size 0.074 MM	GRNSZ0.074MM	D422	Dry	%										
Grain Size 0.075 MM	GRNSZ0.075MM	D422	Dry	%										
Grain Size 0.106 mm	GRNSZ0.106MM	D422	Dry	%										
Grain Size 0.250 MM	GRNSZ0.250MM	D422	Dry	%										
Grain Size 0.425 mm	GRNSZ0.425MM	D422	Dry	%										
Grain Size 0.850 MM	GRNSZ0.85MM	D422	Dry	%										
Grain Size 2 MM	GRNSZ2MM	D422	Dry	%										
Grain Size 4.75 MM	GRNSZ4.75MM	D422	Dry	%										
Grain Size 9.5 MM	GRNSZ9.5MM	D422	Dry	%										
Grain Size 19 MM	GRNSZ19MM	D422	Dry	%										
Organic Carbon (total)	C-012	SW9060	Dry	%	7.46		1.73		2.50		1.62		1.51	
Solids (total)	C-008	E160.3	Dry	%							65.0			
Solids (total)	C-008	E160.3	Wet	%	39.6		60.6		58.7				64.3	
Water	7732-18-5	D2216	Wet	%	153		65.0		70.3		53.9		55.5	
Sulfate	14808-79-8	E300	Dry	mg/kg	1440		1120		980		106		176	

Table 5-4: Sediment Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	CI1C		CI2A		CI2A		CI2B		CI2C	
				Sample Date	11/03/2017		10/11/2017		11/04/2017		10/11/2017		10/11/2017	
				Sample Type	N		N		N		N		N	
				Lab ID	K1712054		K1711372		K1712054		K1711372		K1711372	
				Sample ID	SD-001-CI1C		SD-001(20)-CI2A-171011		SD-001-CI2A		SD-001(17)-CI2B-171011		SD-001(13)-CI2C-171011	
Analyte	CAS_RN	Method	BASIS	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	SW6020	Dry	mg/kg			132				115		32.0	
Boron	7440-42-8	SW6020	Dry	mg/kg			29.6				27.5		7.92	
Cadmium	7440-43-9	SW6020	Dry	mg/kg			4.72				4.86		0.367	
Iron	7439-89-6	SW6010	Dry	mg/kg			32300	J			36700	J	35100	J
Lead	7439-92-1	SW6010	Dry	mg/kg			20				24		24	
Magnesium	7439-95-4	SW6010	Dry	mg/kg			6720				3730		2980	
Mercury	7439-97-6	SW7471B	Dry	mg/kg			0.118				0.087		0.047	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g			< 0.5	U			< 0.6	U	< 0.4	U
Selenium	7782-49-2	SW6020	Dry	mg/kg			12.8				13.7		1.4	
Zinc	7440-66-6	SW6020	Dry	mg/kg			149				145		71.9	
Grain Size 0.001 MM	GRNSZ0.001MM	D422	Dry	%	17.34				0					
Grain Size 0.005 MM	GRNSZ0.005MM	D422	Dry	%	24.02				24.44					
Grain Size 0.074 MM	GRNSZ0.074MM	D422	Dry	%	35.19				68.60					
Grain Size 0.075 MM	GRNSZ0.075MM	D422	Dry	%	36.94				73.01					
Grain Size 0.106 mm	GRNSZ0.106MM	D422	Dry	%	37.94				82.19					
Grain Size 0.250 MM	GRNSZ0.250MM	D422	Dry	%	39.58				95.77					
Grain Size 0.425 mm	GRNSZ0.425MM	D422	Dry	%	40.43				98.25					
Grain Size 0.850 MM	GRNSZ0.85MM	D422	Dry	%	41.49				99.58					
Grain Size 2 MM	GRNSZ2MM	D422	Dry	%	42.38				99.92					
Grain Size 4.75 MM	GRNSZ4.75MM	D422	Dry	%	43.13				99.97					
Grain Size 9.5 MM	GRNSZ9.5MM	D422	Dry	%	44.22				99.97					
Grain Size 19 MM	GRNSZ19MM	D422	Dry	%	61.37				99.97					
Organic Carbon (total)	C-012	SW9060	Dry	%			3.22				4.92		1.17	
Solids (total)	C-008	E160.3	Dry	%			50.5				45.9		63.5	
Solids (total)	C-008	E160.3	Wet	%										
Water	7732-18-5	D2216	Wet	%			98.3				118		57.3	
Sulfate	14808-79-8	E300	Dry	mg/kg			1260				1120		124	

Table 5-4: Sediment Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	CI2C		CI2C		CI3A		CI3B		CI3C	
					Sample Date	10/11/2017		11/03/2017		10/11/2017		10/11/2017		10/11/2017	
					Sample Type	FD		N		N		N		N	
					Lab ID	K1711372		K1712054		K1711372		K1711372		K1711372	
					Sample ID	DUP-004-171011		SD-001-CI2C		SD-001(31)-CI3A-171011		SD-001(21)-CI3B-171011		SD-001(12)-CI3C-171011	
Analyte	CAS_RN	Method	BASIS	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	SW6020	Dry	mg/kg	27.6				448		93.6		18.1	
Boron	7440-42-8	SW6020	Dry	mg/kg	7.42				19.6		7.84		7.39	
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.338				1.48		0.573		0.299	
Iron	7439-89-6	SW6010	Dry	mg/kg	36000	J			58300	J	68500	J	23600	J
Lead	7439-92-1	SW6010	Dry	mg/kg	24				26		26		19	
Magnesium	7439-95-4	SW6010	Dry	mg/kg	2980				3610		2870		2700	
Mercury	7439-97-6	SW7471B	Dry	mg/kg	0.057	J			0.069		0.038		0.024	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	< 0.5	U			< 0.6	U	< 0.4	U	< 0.4	U
Selenium	7782-49-2	SW6020	Dry	mg/kg	1.3	J			32.8		1.6		1.2	
Zinc	7440-66-6	SW6020	Dry	mg/kg	65.7				130		68.2		48.1	
Grain Size 0.001 MM	GRNSZ0.001MM	D422	Dry	%			23.53							
Grain Size 0.005 MM	GRNSZ0.005MM	D422	Dry	%			39.01							
Grain Size 0.074 MM	GRNSZ0.074MM	D422	Dry	%			64.94							
Grain Size 0.075 MM	GRNSZ0.075MM	D422	Dry	%			75.41							
Grain Size 0.106 mm	GRNSZ0.106MM	D422	Dry	%			75.86							
Grain Size 0.250 MM	GRNSZ0.250MM	D422	Dry	%			76.68							
Grain Size 0.425 mm	GRNSZ0.425MM	D422	Dry	%			77.28							
Grain Size 0.850 MM	GRNSZ0.85MM	D422	Dry	%			78.14							
Grain Size 2 MM	GRNSZ2MM	D422	Dry	%			79.13							
Grain Size 4.75 MM	GRNSZ4.75MM	D422	Dry	%			79.89							
Grain Size 9.5 MM	GRNSZ9.5MM	D422	Dry	%			84.82							
Grain Size 19 MM	GRNSZ19MM	D422	Dry	%			99.91							
Organic Carbon (total)	C-012	SW9060	Dry	%	1.37				3.13		1.35		2.20	
Solids (total)	C-008	E160.3	Dry	%	57.1				44.5		67.4		65.2	
Solids (total)	C-008	E160.3	Wet	%										
Water	7732-18-5	D2216	Wet	%	75.1				124		47.9		53.5	
Sulfate	14808-79-8	E300	Dry	mg/kg	88				454		58		91	

Table 5-4: Sediment Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	CI3C		CI4A		CI4A		CI4A		CI4B	
				Sample Date	11/03/2017		11/02/2017		11/02/2017		11/02/2017		10/12/2017	
				Sample Type	N		N		N		FD		N	
				Lab ID	K1712054		K1712054		K1712090		K1712090		K1711369	
				Sample ID	SD-001-CI3C		SD-001-CI4A		SD-001(76)-CI4A-171102		SD-DUP-009-171102		SD-001(20)-CI4B-171012	
Analyte	CAS_RN	Method	BASIS	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	SW6020	Dry	mg/kg					120		123		40.0	J
Boron	7440-42-8	SW6020	Dry	mg/kg					46.6		43.5		2.95	
Cadmium	7440-43-9	SW6020	Dry	mg/kg					3.35		3.19		0.332	
Iron	7439-89-6	SW6010	Dry	mg/kg					35200		35200		10300	J
Lead	7439-92-1	SW6010	Dry	mg/kg					28.6		25.8		2.2	J
Magnesium	7439-95-4	SW6010	Dry	mg/kg					4930		4900		6220	J
Mercury	7439-97-6	SW7471B	Dry	mg/kg					0.143		0.140		0.006	J
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g					< 0.6	U	0.3	J	< 0.3	U
Selenium	7782-49-2	SW6020	Dry	mg/kg					9.2		8.8		0.66	
Zinc	7440-66-6	SW6020	Dry	mg/kg					121		118		18.8	J
Grain Size 0.001 MM	GRNSZ0.001MM	D422	Dry	%	14.92		32.78							
Grain Size 0.005 MM	GRNSZ0.005MM	D422	Dry	%	19.50		52.94							
Grain Size 0.074 MM	GRNSZ0.074MM	D422	Dry	%	27.17		86.70							
Grain Size 0.075 MM	GRNSZ0.075MM	D422	Dry	%	28.49		93.79							
Grain Size 0.106 mm	GRNSZ0.106MM	D422	Dry	%	28.82		96.07							
Grain Size 0.250 MM	GRNSZ0.250MM	D422	Dry	%	29.68		98.82							
Grain Size 0.425 mm	GRNSZ0.425MM	D422	Dry	%	30.34		99.47							
Grain Size 0.850 MM	GRNSZ0.85MM	D422	Dry	%	31.16		99.77							
Grain Size 2 MM	GRNSZ2MM	D422	Dry	%	32.10		99.90							
Grain Size 4.75 MM	GRNSZ4.75MM	D422	Dry	%	32.53		100.00							
Grain Size 9.5 MM	GRNSZ9.5MM	D422	Dry	%	36.42		100.00							
Grain Size 19 MM	GRNSZ19MM	D422	Dry	%	41.46		100.00							
Organic Carbon (total)	C-012	SW9060	Dry	%					3.02		3.00		0.41	
Solids (total)	C-008	E160.3	Dry	%										
Solids (total)	C-008	E160.3	Wet	%					42.8		42.6		75.7	
Water	7732-18-5	D2216	Wet	%					133		135		32.4	
Sulfate	14808-79-8	E300	Dry	mg/kg					2090	J	2630	J	185	

Table 5-4: Sediment Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	CI4C		CURDS1		CURDS1A		CURDS2A		CURDS2B	
					Sample Date	10/12/2017		11/03/2017		10/11/2017		11/04/2017		11/03/2017	
					Sample Type	N		N		N		N		N	
					Lab ID	K1711619		K1712054		K1711619		K1712054		K1712054	
					Sample ID	SD-001(19)-CI4C-171012		SD-001-CURDS1		SD-001(12)-CURDS1A-171011		SD-001-CURDS2A		SD-001-CURDS2B	
Analyte	CAS_RN	Method	BASIS	Unit		Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	SW6020	Dry	mg/kg		17.6				91.6					
Boron	7440-42-8	SW6020	Dry	mg/kg		4.59				11.5					
Cadmium	7440-43-9	SW6020	Dry	mg/kg		0.292				0.333					
Iron	7439-89-6	SW6010	Dry	mg/kg		25400				33300					
Lead	7439-92-1	SW6010	Dry	mg/kg		16.0				26					
Magnesium	7439-95-4	SW6010	Dry	mg/kg		5720				2640					
Mercury	7439-97-6	SW7471B	Dry	mg/kg		0.026				0.021	J				
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g		0.09	J			0.34	J				
Selenium	7782-49-2	SW6020	Dry	mg/kg		0.7	J			1.4					
Zinc	7440-66-6	SW6020	Dry	mg/kg		43.9				62.4					
Grain Size 0.001 MM	GRNSZ0.001MM	D422	Dry	%				4.31				1.66		10.26	
Grain Size 0.005 MM	GRNSZ0.005MM	D422	Dry	%				11.51				28.34		18.48	
Grain Size 0.074 MM	GRNSZ0.074MM	D422	Dry	%				23.54				73.00		32.24	
Grain Size 0.075 MM	GRNSZ0.075MM	D422	Dry	%				27.85				89.39		33.82	
Grain Size 0.106 mm	GRNSZ0.106MM	D422	Dry	%				27.93				89.79		34.64	
Grain Size 0.250 MM	GRNSZ0.250MM	D422	Dry	%				29.18				97.51		36.98	
Grain Size 0.425 mm	GRNSZ0.425MM	D422	Dry	%				30.50				98.81		39.23	
Grain Size 0.850 MM	GRNSZ0.85MM	D422	Dry	%				33.48				99.62		43.54	
Grain Size 2 MM	GRNSZ2MM	D422	Dry	%				38.91				99.98		50.16	
Grain Size 4.75 MM	GRNSZ4.75MM	D422	Dry	%				44.81				100.00		59.62	
Grain Size 9.5 MM	GRNSZ9.5MM	D422	Dry	%				56.38				100.00		79.34	
Grain Size 19 MM	GRNSZ19MM	D422	Dry	%				99.78				100.00		99.35	
Organic Carbon (total)	C-012	SW9060	Dry	%		0.88				0.63					
Solids (total)	C-008	E160.3	Dry	%											
Solids (total)	C-008	E160.3	Wet	%		65.7				64.0					
Water	7732-18-5	D2216	Wet	%		52.2				56.2					
Sulfate	14808-79-8	E300	Dry	mg/kg		79				81					

Table 5-4: Sediment Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	CURDS2C		CURDSNB		HQ1A		HQ1A		HQ1A	
				Sample Date	11/03/2017		11/03/2017		10/11/2017		10/11/2017		11/04/2017	
				Sample Type	N		N		N		N		N	
				Lab ID	K1712054		K1712054		K1711619		K1711619		K1712054	
				Sample ID	SD-001-CURDS2C		SD-001-CURDSNB		DS-001(20)-H21A-171011		SD-001(20)-H21A-171011		SD-001-HQ1A	
Analyte	CAS_RN	Method	BASIS	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	SW6020	Dry	mg/kg							32.9			
Boron	7440-42-8	SW6020	Dry	mg/kg							48.4			
Cadmium	7440-43-9	SW6020	Dry	mg/kg							2.36			
Iron	7439-89-6	SW6010	Dry	mg/kg							17400			
Lead	7439-92-1	SW6010	Dry	mg/kg							15	J		
Magnesium	7439-95-4	SW6010	Dry	mg/kg							4720			
Mercury	7439-97-6	SW7471B	Dry	mg/kg							0.059	J		
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g							1.7			
Selenium	7782-49-2	SW6020	Dry	mg/kg							15.5			
Zinc	7440-66-6	SW6020	Dry	mg/kg							67.6			
Grain Size 0.001 MM	GRNSZ0.001MM	D422	Dry	%	19.20		17.91						23.15	
Grain Size 0.005 MM	GRNSZ0.005MM	D422	Dry	%	24.56		32.29						36.05	
Grain Size 0.074 MM	GRNSZ0.074MM	D422	Dry	%	33.55		56.35						57.64	
Grain Size 0.075 MM	GRNSZ0.075MM	D422	Dry	%	35.10		58.61						57.33	
Grain Size 0.106 mm	GRNSZ0.106MM	D422	Dry	%	35.52		61.29						59.82	
Grain Size 0.250 MM	GRNSZ0.250MM	D422	Dry	%	36.62		69.20						64.73	
Grain Size 0.425 mm	GRNSZ0.425MM	D422	Dry	%	37.61		72.96						69.73	
Grain Size 0.850 MM	GRNSZ0.85MM	D422	Dry	%	38.92		78.80						77.85	
Grain Size 2 MM	GRNSZ2MM	D422	Dry	%	40.26		86.88						83.62	
Grain Size 4.75 MM	GRNSZ4.75MM	D422	Dry	%	41.45		98.68						86.67	
Grain Size 9.5 MM	GRNSZ9.5MM	D422	Dry	%	48.55		99.18						94.70	
Grain Size 19 MM	GRNSZ19MM	D422	Dry	%	99.89		99.18						99.67	
Organic Carbon (total)	C-012	SW9060	Dry	%							15.5			
Solids (total)	C-008	E160.3	Dry	%										
Solids (total)	C-008	E160.3	Wet	%					23.2					
Water	7732-18-5	D2216	Wet	%							331			
Sulfate	14808-79-8	E300	Dry	mg/kg							654			

Table 5-4: Sediment Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	HQ1B		HQ1B		HQ1C		HQ1C		LHL1B	
				Sample Date	10/11/2017		11/04/2017		10/11/2017		11/04/2017		10/12/2017	
				Sample Type	N		N		N		N		N	
				Lab ID	K1711619		K1712054		K1711619		K1712054		K1711619	
				Sample ID	SD-001(17)-H21B-171011		SD-001-HQ1B		SD-001(13)-HQ1C-171011		SD-001-HQ1C		SD-001(20)-LHL1B-171012	
Analyte	CAS_RN	Method	BASIS	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	SW6020	Dry	mg/kg	50.2				19.1				9.3	
Boron	7440-42-8	SW6020	Dry	mg/kg	21.3				8.63				17.2	
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.999				0.268				0.910	
Iron	7439-89-6	SW6010	Dry	mg/kg	23200				27600				17300	
Lead	7439-92-1	SW6010	Dry	mg/kg	20				18				13	J
Magnesium	7439-95-4	SW6010	Dry	mg/kg	3560				4320				17600	
Mercury	7439-97-6	SW7471B	Dry	mg/kg	0.034	J			0.034				0.041	J
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	0.41	J			0.46				0.46	J
Selenium	7782-49-2	SW6020	Dry	mg/kg	7.1				0.9	J			4.9	
Zinc	7440-66-6	SW6020	Dry	mg/kg	44.7				56.6				72.0	
Grain Size 0.001 MM	GRNSZ0.001MM	D422	Dry	%			20.74				15.01			
Grain Size 0.005 MM	GRNSZ0.005MM	D422	Dry	%			34.72				25.99			
Grain Size 0.074 MM	GRNSZ0.074MM	D422	Dry	%			58.12				44.38			
Grain Size 0.075 MM	GRNSZ0.075MM	D422	Dry	%			60.07				51.12			
Grain Size 0.106 mm	GRNSZ0.106MM	D422	Dry	%			62.68				51.54			
Grain Size 0.250 MM	GRNSZ0.250MM	D422	Dry	%			68.35				52.39			
Grain Size 0.425 mm	GRNSZ0.425MM	D422	Dry	%			72.12				53.16			
Grain Size 0.850 MM	GRNSZ0.85MM	D422	Dry	%			77.30				54.17			
Grain Size 2 MM	GRNSZ2MM	D422	Dry	%			83.55				55.51			
Grain Size 4.75 MM	GRNSZ4.75MM	D422	Dry	%			87.30				57.07			
Grain Size 9.5 MM	GRNSZ9.5MM	D422	Dry	%			95.78				62.81			
Grain Size 19 MM	GRNSZ19MM	D422	Dry	%			99.51				78.76			
Organic Carbon (total)	C-012	SW9060	Dry	%	7.38				1.26				3.87	
Solids (total)	C-008	E160.3	Dry	%										
Solids (total)	C-008	E160.3	Wet	%	46.4				67.1					
Water	7732-18-5	D2216	Wet	%	116				49.1				266	
Sulfate	14808-79-8	E300	Dry	mg/kg	209				134				529	

Table 5-4: Sediment Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	LHL1B		LHL1C		LHL2B		LHL2C		LHL3B	
				Sample Date	10/12/2017		10/12/2017		10/12/2017		10/12/2017		10/12/2017	
				Sample Type	N		N		N		N		N	
				Lab ID	K1711619		K1711619		K1711369		K1711369		K1711619	
				Sample ID	SD-001(20-LGL1B-171012		SD-001(20)-LHL1C-171012		SD-001(20)-LHL2B-171012		SD-001(20)-LHL2C-171012		SD-001(17)-LHL3B-171012	
Analyte	CAS_RN	Method	BASIS	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	SW6020	Dry	mg/kg			10.7		26.9	J	28.9	J	14.9	
Boron	7440-42-8	SW6020	Dry	mg/kg			20.2		7.89		6.86		11.1	
Cadmium	7440-43-9	SW6020	Dry	mg/kg			0.853		0.465		0.646		0.436	
Iron	7439-89-6	SW6010	Dry	mg/kg			17200		28300	J	34100	J	13600	
Lead	7439-92-1	SW6010	Dry	mg/kg			17	J	9.7		16.1		14	J
Magnesium	7439-95-4	SW6010	Dry	mg/kg			17800		4940	J	8950	J	12200	
Mercury	7439-97-6	SW7471B	Dry	mg/kg			0.061	J	0.033	J	0.0294	J	0.019	J
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g			0.48	J	< 0.4	U	< 0.5	U	0.71	
Selenium	7782-49-2	SW6020	Dry	mg/kg			4.7		1.57		3.61		1.7	J
Zinc	7440-66-6	SW6020	Dry	mg/kg			59.1		38.6	J	61.5	J	70.2	
Grain Size 0.001 MM	GRNSZ0.001MM	D422	Dry	%										
Grain Size 0.005 MM	GRNSZ0.005MM	D422	Dry	%										
Grain Size 0.074 MM	GRNSZ0.074MM	D422	Dry	%										
Grain Size 0.075 MM	GRNSZ0.075MM	D422	Dry	%										
Grain Size 0.106 mm	GRNSZ0.106MM	D422	Dry	%										
Grain Size 0.250 MM	GRNSZ0.250MM	D422	Dry	%										
Grain Size 0.425 mm	GRNSZ0.425MM	D422	Dry	%										
Grain Size 0.850 MM	GRNSZ0.85MM	D422	Dry	%										
Grain Size 2 MM	GRNSZ2MM	D422	Dry	%										
Grain Size 4.75 MM	GRNSZ4.75MM	D422	Dry	%										
Grain Size 9.5 MM	GRNSZ9.5MM	D422	Dry	%										
Grain Size 19 MM	GRNSZ19MM	D422	Dry	%										
Organic Carbon (total)	C-012	SW9060	Dry	%			6.30		2.20		4.02		2.58	
Solids (total)	C-008	E160.3	Dry	%										
Solids (total)	C-008	E160.3	Wet	%	27.3		27.7		64.0		54.7		49.9	
Water	7732-18-5	D2216	Wet	%			260		56.3		82.8		104	
Sulfate	14808-79-8	E300	Dry	mg/kg			642		803		1350		230	

Table 5-4: Sediment Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

					Location	LHL3C		LHL4B		LHL4C		HI1B		LHL5B	
					Sample Date	10/12/2017		10/12/2017		10/12/2017		11/03/2017		10/12/2017	
					Sample Type	N		N		N		N		N	
					Lab ID	K1711619		K1711619		K1711619		K1712054		K1711619	
					Sample ID	SD-001(24)-LHL3C-171012		SD-001(22)-LHL4B-171012		SD-001(19)-LHL4C-171012		SD-001-HI1B		SD-001(16)-LHL5B-171012	
Analyte	CAS_RN	Method	BASIS	Unit		Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	SW6020	Dry	mg/kg		8.58		16.9		6.44				7.98	
Boron	7440-42-8	SW6020	Dry	mg/kg		18.5		3.52		10.7				9.16	
Cadmium	7440-43-9	SW6020	Dry	mg/kg		0.470		0.128		0.237				0.279	
Iron	7439-89-6	SW6010	Dry	mg/kg		10400		18800		10700				19700	
Lead	7439-92-1	SW6010	Dry	mg/kg		8	J	9	J	8	J			12.7	
Magnesium	7439-95-4	SW6010	Dry	mg/kg		8180		5140		18200				5360	
Mercury	7439-97-6	SW7471B	Dry	mg/kg		0.018	J	0.006	J	0.016	J			0.026	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g		0.34	J	0.13	J	< 0.6	U			0.04	J
Selenium	7782-49-2	SW6020	Dry	mg/kg		3.8		0.5	J	2.2				0.55	J
Zinc	7440-66-6	SW6020	Dry	mg/kg		24.6		24.3		37.7				47.7	
Grain Size 0.001 MM	GRNSZ0.001MM	D422	Dry	%								25.82			
Grain Size 0.005 MM	GRNSZ0.005MM	D422	Dry	%								47.26			
Grain Size 0.074 MM	GRNSZ0.074MM	D422	Dry	%								83.15			
Grain Size 0.075 MM	GRNSZ0.075MM	D422	Dry	%								97.62			
Grain Size 0.106 mm	GRNSZ0.106MM	D422	Dry	%								98.52			
Grain Size 0.250 MM	GRNSZ0.250MM	D422	Dry	%								99.45			
Grain Size 0.425 mm	GRNSZ0.425MM	D422	Dry	%								99.70			
Grain Size 0.850 MM	GRNSZ0.85MM	D422	Dry	%								99.86			
Grain Size 2 MM	GRNSZ2MM	D422	Dry	%								100.00			
Grain Size 4.75 MM	GRNSZ4.75MM	D422	Dry	%								100.00			
Grain Size 9.5 MM	GRNSZ9.5MM	D422	Dry	%								100.00			
Grain Size 19 MM	GRNSZ19MM	D422	Dry	%								100.00			
Organic Carbon (total)	C-012	SW9060	Dry	%		11.9		0.38		3.58				0.91	
Solids (total)	C-008	E160.3	Dry	%											
Solids (total)	C-008	E160.3	Wet	%		40.0		72.4		52.9				66.2	
Water	7732-18-5	D2216	Wet	%		150		38.1		89.0				51.1	
Sulfate	14808-79-8	E300	Dry	mg/kg		349		253		461				45	

Table 5-4: Sediment Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	LHL5C		LHL6B		LHL6C		DR1	
				Sample Date	10/12/2017		10/12/2017		10/12/2017		10/16/2017	
				Sample Type	N		N		N		N	
				Lab ID	K1711619		K1711619		K1711369		K1711619	
				Sample ID	SD-001(21)-LHL5C-171012		SD-001(20)-LHL6B-171012		SD-001(20)-LHL6C-171012		SD-001(1)-DR1-171016	
Analyte	CAS_RN	Method	BASIS	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Arsenic	7440-38-2	SW6020	Dry	mg/kg	22.2		1.73		8.44	J	12.0	
Boron	7440-42-8	SW6020	Dry	mg/kg	6.57		6.38		20.3		3.40	
Cadmium	7440-43-9	SW6020	Dry	mg/kg	0.363		0.057		0.394		0.327	
Iron	7439-89-6	SW6010	Dry	mg/kg	26600		4940		14100	J	29600	
Lead	7439-92-1	SW6010	Dry	mg/kg	28		< 11	U	9	J	18	
Magnesium	7439-95-4	SW6010	Dry	mg/kg	5810		23600		7890	J	3770	
Mercury	7439-97-6	SW7471B	Dry	mg/kg	0.023		0.004	J	0.031	J	0.029	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	0.06	J	0.21		1.74		0.05	J
Selenium	7782-49-2	SW6020	Dry	mg/kg	1.9		0.4	J	4.1		0.5	J
Zinc	7440-66-6	SW6020	Dry	mg/kg	63.9		10.9		44.8	J	67.2	
Grain Size 0.001 MM	GRNSZ0.001MM	D422	Dry	%								
Grain Size 0.005 MM	GRNSZ0.005MM	D422	Dry	%								
Grain Size 0.074 MM	GRNSZ0.074MM	D422	Dry	%								
Grain Size 0.075 MM	GRNSZ0.075MM	D422	Dry	%								
Grain Size 0.106 mm	GRNSZ0.106MM	D422	Dry	%								
Grain Size 0.250 MM	GRNSZ0.250MM	D422	Dry	%								
Grain Size 0.425 mm	GRNSZ0.425MM	D422	Dry	%								
Grain Size 0.850 MM	GRNSZ0.85MM	D422	Dry	%								
Grain Size 2 MM	GRNSZ2MM	D422	Dry	%								
Grain Size 4.75 MM	GRNSZ4.75MM	D422	Dry	%								
Grain Size 9.5 MM	GRNSZ9.5MM	D422	Dry	%								
Grain Size 19 MM	GRNSZ19MM	D422	Dry	%								
Organic Carbon (total)	C-012	SW9060	Dry	%	1.42		1.51		17.9		0.86	
Solids (total)	C-008	E160.3	Dry	%								
Solids (total)	C-008	E160.3	Wet	%	55.2		65.2		26.2		71.2	
Water	7732-18-5	D2216	Wet	%	81.1		53.3		281		40.5	
Sulfate	14808-79-8	E300	Dry	mg/kg	153		185		3620		12.0	

Table 5-4: Sediment Analytical Results
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
CI	Curd's Inlet
DR	Dix River
FD	Field Duplicate
HQ	HQ Inlet
IQ	Interpreted qualifier, data flags from third party validation
J	Concentration is greater than the method detection limit but less than the laboratory reporting limit
LHL	Lower Herrington Lake
mg/kg	milligrams per kilogram
mm	millimeter
N	Normal
ng/g	nanograms per gram
U	Constituent was analyzed for, but not detected

Table 5-5: Aquatic Vegetation Analytical Results (Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

			Location		CI1		CI2		CI3		CI4		CI4		HQ	
			Sample Date		10/04/2017		10/05/2017		10/05/2017		10/05/2017		10/05/2017		10/06/2017	
			Sample Type		N		N		N		N		FD		N	
			Lab ID		K1712478		K1712478		K1712478		K1712478		K1712478		K1712478	
			Sample ID		AV-001-CI1-171004		AV-001-CI2-171005		AV-001-CI3-171005		AV-001-CI4-171005		AV-001-CI4-171005-FD		AV-001-HQ-171006	
Analyte	CAS RN	Method	BASIS	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Solids (total)	C-008	ZFZDRY	Wet	%	12.9		11.9		14.2		10.6		11.0		7.43	
Arsenic	7440-38-2	SW6020A	Dry	mg/kg	8.33		8.60		4.41		3.98		4.07		7.30	
Arsenic	7440-38-2	SW6020A	Wet	mg/kg	1.07		1.02		0.626		0.422		0.448		0.543	
Boron	7440-42-8	SW6020A	Dry	mg/kg	274		129		119		98.9		90.5		160	
Boron	7440-42-8	SW6020A	Wet	mg/kg	35.4		15.3		16.9		10.5		9.96		11.9	
Cadmium	7440-43-9	SW6020A	Dry	mg/kg	1.67	J	0.786	J	2.77	J	1.15	J	1.05	J	0.604	J
Cadmium	7440-43-9	SW6020A	Wet	mg/kg	0.215		0.0935		0.393		0.122		0.116		0.0449	
Iron	7439-89-6	SW6020A	Dry	mg/kg	5870		6010		2900		2820		2690		5190	
Iron	7439-89-6	SW6020A	Wet	mg/kg	757		716		412		299		296		386	
Lead	7439-92-1	SW6020	Dry	mg/kg	3.28		8.13		10.2		4.83		6.20		20.1	
Lead	7439-92-1	SW6020	Wet	mg/kg	0.424		0.967		1.46		0.511		0.682		1.49	
Magnesium	7439-95-4	SW6010C	Dry	mg/kg	3110		3550		3640		4910		4810		3670	
Magnesium	7439-95-4	SW6010C	Wet	mg/kg	402		423		517		520		529		273	
Mercury	7439-97-6	SW7471B	Dry	mg/kg	0.019	J	0.036		0.024		0.025		0.023		0.027	
Mercury	7439-97-6	SW7471B	Wet	mg/kg	0.0024	J	0.0042		0.0034		0.0027		0.0025		0.0020	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	8.42	J	< 9.8	U	< 10	U	< 10	U	< 10	U		
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	1.09	J	< 1.2	U	< 1.4	U	< 1.1	U	< 1.1	U		
Selenium	7782-49-2	SW6020A	Dry	mg/kg	1.96		2.64		2.4		1.7		1.67		1.53	
Selenium	7782-49-2	SW6020A	Wet	mg/kg	0.25		0.31		0.34		0.18		0.18		0.113	
Zinc	7440-66-6	SW6020A	Dry	mg/kg	38.9		56.6		44.6		45.1		42.5		41.4	
Zinc	7440-66-6	SW6020A	Wet	mg/kg	5.02		6.74		6.34		4.78		4.67		3.07	
Moisture Content	MOISTURE	CALCULATED	Wet	%	87.1		88.1		85.8		89.4		89.0		92.6	

Table 5-5: Aquatic Vegetation Analytical Results (Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

		LHL1 10/12/2017 N K1712478 AV-001-LHL1-171012		LHL2 10/12/2017 N K1712478 AV-001-LHL2-171012		LHL3 10/12/2017 N K1712478 AV-001-LHL3-171012		LHL4 10/12/2017 N K1712478 AV-001-LHL4-171012		LHL5 10/12/2017 N K1712478 AV-001-LHL5-171012		LHL6 10/12/2017 N K1712478 AV-001-LHL6-171012		DR 10/07/2017 N K1712478 AV-001-DR-171007	
Analyte	CAS RN	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Solids (total)	C-008	34.7		29.5		32.9		22.5		20.5		20.3		18.2	
Arsenic	7440-38-2	4.91		9.59		3.61		3.82		4.97		3.73		14.9	
Arsenic	7440-38-2	1.70		2.83		1.19		0.86		1.02		0.76		2.71	
Boron	7440-42-8	44.9		47.1		40.0		41.2		37.9		35.7		40.6	
Boron	7440-42-8	15.6		13.9		13.1		9.28		7.77		7.24		7.38	
Cadmium	7440-43-9	0.147	J	0.165	J	0.091	J	0.096		0.128		0.332		0.868	J
Cadmium	7440-43-9	0.0512		0.0488		0.0300		0.0216		0.0262		0.0674		0.158	
Iron	7439-89-6	5290		9200		3850		1670		800		3310		14300	
Iron	7439-89-6	1840		2710		1270		376		164		672		2610	
Lead	7439-92-1	3.71		5.09		2.19		1.57		0.763		3.67		11.3	
Lead	7439-92-1	1.29		1.50		0.722		0.354		0.156		0.745		2.06	
Magnesium	7439-95-4	23800		6100		8800		5080		4450		4010		6820	
Magnesium	7439-95-4	8270		1800		2890		1140		913		814		1240	
Mercury	7439-97-6	0.023		0.024		0.008	J	< 0.020	U	< 0.020	U	0.023		0.052	
Mercury	7439-97-6	0.0079		0.0071		0.0025	J	0.0019	J	0.0022	J	0.0046		0.0095	
Methyl mercury	22967-92-6	< 9.8	U	< 9.8	U	< 10	U	< 9.9	U	< 9.9	U	< 9.9	U	4.12	J
Methyl mercury	22967-92-6	< 3.4	U	< 2.9	U	< 3.3	U	< 2.2	U	< 2	U	< 2	U	0.75	J
Selenium	7782-49-2	1.8		2.3		1.13		2.5		3.43		3.63		2.44	
Selenium	7782-49-2	0.64		0.69		0.37		0.56		0.70		0.74		0.44	
Zinc	7440-66-6	16.1		22.5		8.49		6.71		12.8		20.4		53.5	
Zinc	7440-66-6	5.58		6.63		2.79		1.51		2.62		4.13		9.73	
Moisture Content	MOISTURE	65.3		70.5		67.1		77.5		79.5		79.7		81.8	

Table 5-5: Aquatic Vegetation Analytical Results (Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
CI	Curd's Inlet
DR	Dix River
FD	Field Duplicate
HQ	HQ Inlet
IQ	Interpreted qualifier, data flags from third party validation
J	Concentration is greater than the method detection limit but less than the laboratory reporting limit
LHL	Lower Herrington Lake
mg/kg	milligrams per kilogram
N	Normal
ng/g	nanograms per gram
U	Constituent was analyzed for, but not detected

Table 5-6: Aquatic Invertebrate Analytical Results (Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

			Location		CI1		CI2		CI3		CI3		CI4		HQ	
			Sample Date		10/04/2017		10/05/2017		10/05/2017		10/05/2017		10/05/2017		10/06/2017	
			Sample Type		N		N		N		FD		N		N	
			Lab ID		K1712478		K1712478		K1712478		K1712478		K1712478		K1712478	
			Sample ID		AI-001-CI1-171004		AI-001-CI2-171005		AI-001-CI3-171005		AI-001-CI3-171005-FD		AI-001-CI4-171005		AI-001-HQ-171006	
Analyte	CAS RN	Method	BASIS	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Lipids	LIPIDS	NOAA LIPID	Dry	%	0.28		2.7		0.42		0.64		1.6		1.2	
Lipids	LIPIDS	NOAA LIPID	Wet	%	0.10		0.92		0.14		0.23		0.52		0.46	
Solids (total)	C-008	ZFZDRY	Wet	%	35.0		33.8		34.6		35.2		31.5		38.2	
Arsenic	7440-38-2	SW6020A	Dry	mg/kg	0.68		1.07		1.20		1.12		0.99		1.44	
Arsenic	7440-38-2	SW6020A	Wet	mg/kg	0.24		0.36		0.42		0.39		0.31		0.55	
Boron	7440-42-8	SW6020A	Dry	mg/kg	9.00		13.5		8.03		8.07		8.41		5.60	
Boron	7440-42-8	SW6020A	Wet	mg/kg	3.15		4.56		2.78		2.84		2.65		2.14	
Cadmium	7440-43-9	SW6020A	Dry	mg/kg	0.518	J	0.414	J	1.06	J	0.876	J	0.891	J	0.337	J
Cadmium	7440-43-9	SW6020A	Wet	mg/kg	0.181		0.140		0.366		0.308		0.281		0.129	
Iron	7439-89-6	SW6020A	Dry	mg/kg	227		121		125		130		99.3		273	
Iron	7439-89-6	SW6020A	Wet	mg/kg	79.6		40.8		43.1		45.9		31.3		104	
Lead	7439-92-1	SW6020	Dry	mg/kg	0.159		0.081		0.149		0.139		0.111		0.171	
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0557		0.0275		0.0516		0.0490		0.0348		0.0653	
Magnesium	7439-95-4	SW6010C	Dry	mg/kg	3510		2840		3060		3310		3810		2250	
Magnesium	7439-95-4	SW6010C	Wet	mg/kg	1230		960		1060		1160		1200		858	
Mercury	7439-97-6	SW7471B	Dry	mg/kg	0.025		0.025		0.033		0.022		0.033		0.024	
Mercury	7439-97-6	SW7471B	Wet	mg/kg	0.0086		0.0084		0.0115		0.0078		0.0103		0.0091	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	15.5		23.2		29.7		25.0		37.4		24.0	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	5.42		7.86		10.3		8.79		11.8		9.16	
Selenium	7782-49-2	SW6020A	Dry	mg/kg	1.54		2.18		2.3		1.87		1.71		1.9	
Selenium	7782-49-2	SW6020A	Wet	mg/kg	0.54		0.74		0.79		0.66		0.54		0.71	
Zinc	7440-66-6	SW6020A	Dry	mg/kg	62.1		61.6		61.8		62.9		71.2		46.8	
Zinc	7440-66-6	SW6020A	Wet	mg/kg	21.7		20.8		21.4		22.1		22.4		17.9	
Moisture Content	MOISTURE	CALCULATED	Wet	%	65.0		66.2		65.4		64.8		68.5		61.8	

Table 5-6: Aquatic Invertebrate Analytical Results (Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

			Location	LHL1		LHL1		LHL2		LHL3		LHL4		LHL5	
			Sample Date	10/12/2017		10/12/2017		10/12/2017		10/12/2017		10/12/2017		10/12/2017	
			Sample Type	N		FD		N		N		N		N	
			Lab ID	K1712478		K1712478		K1712478		K1712478		K1712478		K1712478	
			Sample ID	AI-001-LHL1-171012		AI-001-LHL1-171012-FD		AI-001-LHL2-171012		AI-001-LHL3-171012		AI-001-LHL4-171012		AI-001-LHL5-171012	
Analyte	CAS RN	Method	BASIS	Unit	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ	Result	IQ
Lipids	LIPIDS	NOAA LIPID	Dry	%	2.3		1.2		1.5		1.8		4.8		0.89	
Lipids	LIPIDS	NOAA LIPID	Wet	%	0.70		0.39		0.42		0.54		1.47		0.24	
Solids (total)	C-008	ZFZDRY	Wet	%	30.0		32.2		28.6		30.1		31.0		27.5	
Arsenic	7440-38-2	SW6020A	Dry	mg/kg	1.77		1.41		1.52		1.36		0.88		1.76	
Arsenic	7440-38-2	SW6020A	Wet	mg/kg	0.53		0.45		0.43		0.41		0.27		0.48	
Boron	7440-42-8	SW6020A	Dry	mg/kg	9.12		9.31		9.41		10.3		8.25		8.39	
Boron	7440-42-8	SW6020A	Wet	mg/kg	2.73		3.00		2.69		3.10		2.56		2.31	
Cadmium	7440-43-9	SW6020A	Dry	mg/kg	0.282	J	0.204	J	0.316	J	0.190		0.155		0.244	
Cadmium	7440-43-9	SW6020A	Wet	mg/kg	0.0845		0.0657		0.0904		0.0572		0.0481		0.0672	
Iron	7439-89-6	SW6020A	Dry	mg/kg	264		154		80.9		177		105		115	
Iron	7439-89-6	SW6020A	Wet	mg/kg	79.1		49.5		23.1		53.1		32.6		31.7	
Lead	7439-92-1	SW6020	Dry	mg/kg	0.259		0.160		0.098		0.456		0.116		0.172	
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0778		0.0516		0.0281		0.137		0.0359		0.0474	
Magnesium	7439-95-4	SW6010C	Dry	mg/kg	3870		3480		3280		3440		4370		2850	
Magnesium	7439-95-4	SW6010C	Wet	mg/kg	1160		1120		937		1030		1350		784	
Mercury	7439-97-6	SW7471B	Dry	mg/kg	0.037		0.029		0.063		< 0.019	U	0.047		0.036	
Mercury	7439-97-6	SW7471B	Wet	mg/kg	0.0112		0.0092		0.0180		0.0057	J	0.0145		0.0100	
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	45.1		43.3		54.7		48.1		38.5		45.1	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	13.5		13.9		15.7		14.5		12		12.4	
Selenium	7782-49-2	SW6020A	Dry	mg/kg	2.35		2.08		2.4		2.2		1.3		2.68	
Selenium	7782-49-2	SW6020A	Wet	mg/kg	0.71		0.67		0.69		0.66		0.41		0.74	
Zinc	7440-66-6	SW6020A	Dry	mg/kg	83.1		74.8		65.9		94.8		53.7		89.8	
Zinc	7440-66-6	SW6020A	Wet	mg/kg	24.9		24.1		18.9		28.5		16.7		24.7	
Moisture Content	MOISTURE	CALCULATED	Wet	%	70.0		67.8		71.4		69.9		69.0		72.5	

Table 5-6: Aquatic Invertebrate Analytical Results (Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

				Location	LHL6		DR	
				Sample Date	10/12/2017		10/07/2017	
				Sample Type	N		N	
				Lab ID	K1712478		K1712478	
				Sample ID	AI-001-LHL6-171012		AI-001-DR-171007	
Analyte	CAS RN	Method	BASIS	Unit	Result	IQ	Result	IQ
Lipids	LIPIDS	NOAA LIPID	Dry	%	1.8		2.2	
Lipids	LIPIDS	NOAA LIPID	Wet	%	0.49		0.69	
Solids (total)	C-008	ZFZDRY	Wet	%	27.6		30.6	
Arsenic	7440-38-2	SW6020A	Dry	mg/kg	1.05		2.08	
Arsenic	7440-38-2	SW6020A	Wet	mg/kg	0.29		0.64	
Boron	7440-42-8	SW6020A	Dry	mg/kg	6.11		4.92	
Boron	7440-42-8	SW6020A	Wet	mg/kg	1.69		1.50	
Cadmium	7440-43-9	SW6020A	Dry	mg/kg	0.138		0.499	J
Cadmium	7440-43-9	SW6020A	Wet	mg/kg	0.0381		0.153	
Iron	7439-89-6	SW6020A	Dry	mg/kg	219		357	
Iron	7439-89-6	SW6020A	Wet	mg/kg	60.4		109	
Lead	7439-92-1	SW6020	Dry	mg/kg	0.178		0.301	
Lead	7439-92-1	SW6020	Wet	mg/kg	0.0491		0.0921	
Magnesium	7439-95-4	SW6010C	Dry	mg/kg	2280		2380	
Magnesium	7439-95-4	SW6010C	Wet	mg/kg	628		727	
Mercury	7439-97-6	SW7471B	Dry	mg/kg	0.043		0.016	J
Mercury	7439-97-6	SW7471B	Wet	mg/kg	0.0118		0.0048	J
Methyl mercury	22967-92-6	ALS SOP	Dry	ng/g	46.6		14.5	
Methyl mercury	22967-92-6	ALS SOP	Wet	ng/g	12.9		4.45	
Selenium	7782-49-2	SW6020A	Dry	mg/kg	1.86		2.21	
Selenium	7782-49-2	SW6020A	Wet	mg/kg	0.51		0.68	
Zinc	7440-66-6	SW6020A	Dry	mg/kg	76.8		65.4	
Zinc	7440-66-6	SW6020A	Wet	mg/kg	21.2		20.0	
Moisture Content	MOISTURE	CALCULATED	Wet	%	72.4		69.4	

Table 5-6: Aquatic Invertebrate Analytical Results (Wet and Dry Weight)
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

CI	Curd's Inlet
HQ	HQ Inlet
LHL	Lower Herrington Lake
DR	Dix River
N	Normal
FD	Field Duplicate
IQ	Interpreted qualifier, data flags from third party validation
%	Percent
mg/kg	milligrams per kilogram
ng/g	nanograms per gram
U	Constituent was analyzed for, but not detected
J	Concentration is greater than the method detection limit but less than the laboratory reporting limit

Table 5-7A: Ecological Risk-Based Screening Values for Consideration
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent	Medium	Criterion	Units	Source
Selenium	Fish Whole Body	8.6	mg/kg dw	KY Eco WB Criterion
Selenium	Fish Ovary	19.3	mg/kg dw in ovary	KY Eco Ovary Criterion
Selenium	Fish Ovary	15.1	mg/kg dw in ovary	USEPA Selenium Aquatic Criteria
Selenium	Surface Water	0.005	mg/L	KY Eco Chronic
Selenium	Surface Water	0.0015	mg/L	USEPA R4 Chronic
Selenium - Selenite (SeVI or Se4+)	Surface Water	0.028	mg/L	USEPA R4 Chronic
Selenium - Selenate (SeVI or Se6+)	Surface Water	0.009	mg/L	USEPA R4 Chronic
Selenium	Sediment	2.9	mg/kg	USEPA R4 RSV
Selenium	Sediment	0.72	mg/kg	USEPA R4 ESV
Arsenic	Fish Whole Body Adult	5.5	mg/kg ww	Gilderhus, P.A. 1966. Trans Am Fish Soc 095:289-296 (In Jarvinen and Ankley 1999)
Arsenic	Fish Whole Body Early Life Stage	1	mg/kg ww	McGeachy SM, DG Dixon. 1990. Can J Fish Aquat Sci 47:2228-2234 (In Jarvinen and Ankley 1999)
Arsenic	Surface Water	0.15	mg/L	KY Eco Chronic and USEPA R4 Chronic
Arsenic	Surface Water	0.34	mg/L	KY Eco Acute and USEPA R4 Acute
Arsenic - Arsenite (AsIII or As3+)	Surface Water	0.148	mg/L	USEPA R4 Chronic
Arsenic	Sediment	33	mg/kg	USEPA R4 RSV
Arsenic	Sediment	9.8	mg/kg	USEPA R4 ESV
Methyl Mercury	Fish Whole Body	0.77	mg/kg ww	Dillon et al.
Methyl Mercury	Fish Whole Body	0.2	mg/kg ww	Beckvar et al.
Mercury	Surface Water	0.0014	mg/L	KY Eco Acute and USEPA R4 Acute
Mercury	Surface Water	0.00077	mg/L	KY Eco Chronic and USEPA R4 Chronic
Mercury	Surface Water (wildlife)	0.0000013	mg/L	USEPA Region 4 Chronic
Methyl Mercury	Surface Water	0.0000028	mg/L	USEPA Region 4 Chronic
Mercury	Sediment	1.1	mg/kg	USEPA R4 RSV
Mercury	Sediment	0.18	mg/kg	USEPA R4 ESV
Mercury	Sediment	0.17	mg/kg	USEPA R4 ESV/RSV
Methyl Mercury	Sediment (wildlife based)	0.00045	mg/kg	USEPA R4 RSV
Methyl Mercury	Sediment (wildlife based)	0.000045	mg/kg	USEPA R4 ESV
Cadmium	Fish Whole Body	0.09	mg/kg ww	Rombough PJ, Garside 1982. ET Can J Zool 60:2006–2014 (In Jarvinen and Ankley 1999)
Cadmium	Surface Water	0.0003762	mg/L	KY Eco Chronic - Hardness based
Cadmium	Sediment	5	mg/kg	USEPA R4 RSV
Cadmium	Sediment	1	mg/kg	USEPA R4 ESV

Table 5-7A: Ecological Risk-Based Screening Values for Consideration
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent	Medium	Criterion	Units	Source
Boron	Surface Water	1.5	mg/L	Ecological Canadian Screening Level
Boron	Sediment	117	mg/kg	Average of max backgrounds, Mason and Dragun 1996
Boron	Sediment	40	mg/kg	Average background, Mason and Dragun 1996
Boron	Surface Water	7.2	mg/L	USEPA R4 Chronic
Boron	Surface Water	34	mg/L	USEPA R4 Acute
Lead	Fish Whole Body Adult	0.34	mg/kg ww	Holcombe GW, DA Benoit, EN Leonard, JM McKim 1976 J Fish Res Board Can 33:1731-1741 (In Jarvinen and Ankley 1999)
Lead	Fish Whole Body Early Life Stage	2.6	mg/kg ww	Holcombe, G.W., D.A. Benoit, E.N. Leonard and J.M. Mckim. 1976. J Fish Res Bd Can 33:1731-1741 (In Jarvinen and Ankley 1999)
Lead	Surface Water	0.005604	mg/L	KY Eco Chronic - Hardness based
Lead	Surface Water	0.1438	mg/L	KY Eco Acute - Hardness based
Lead	Sediment	128	mg/kg	USEPA R4 RSV
Lead	Sediment	35.8	mg/kg	USEPA R4 ESV
Zinc	Fish Whole Body Adult	34	mg/kg ww	Spehar RL. 1976. J Fish Res Board Can 33:1939-1945. (In Jarvinen and Ankley 1999)
Zinc	Surface Water	0.174	mg/L	KY Eco Chronic - Hardness based
Zinc	Sediment	459	mg/kg	USEPA R4 RSV
Zinc	Sediment	121	mg/kg	USEPA R4 ESV

Sources:

Beckvar et al.	Beckvar N, Dillon T, Read L. 2005. Approaches for linking whole-body fish tissue residues of mercury or DDT to biological effects thresholds. Environ Toxicol Chem. Aug; 24(8):2094-105.
Dillon et al.	Dillon, T., N. Beckvar, and J. Kern. 2010. Residue-based mercury dose–response in fish: an analysis using lethality-equivalent test endpoints. Environ Toxicol Chem. 29:2559-2565.
Ecological Canadian Screening Level	Canadian Council of Ministers of the Environment. 2018. Boron. Water Quality for the Protection of Aquatic Life, Long Term Concentration. http://st-ts.ccme.ca/en/index.html?lang=en&factsheet=16
Jarvinen & Ankley	Jarvinen, A., and Ankley, G. 1999. Linkage Of Effects To Tissue Residues: Development Of A Comprehensive Database For Aquatic Organisms Exposed To Inorganic And Organic Chemicals.
KY Eco Acute - Hardness based	Acute surface water value for aquatic life, based on hardness from the Kentucky Administrative Record - 401 KAR 10:031. Surface water standards. http://www.lrc.ky.gov/kar/401/010/031.htm
KY Eco Acute and USEPA R4 Acute	Acute surface water value for aquatic life from the Kentucky Administrative Record - 401 KAR 10:031. Surface water standards. http://www.lrc.ky.gov/kar/401/010/031.htm Also equivalent to the 2016 USEPA Region 4 Ecological Risk Assessment Supplemental Guidance Interim Draft. https://www.epa.gov/sites/production/files/2015-09/documents/r4_era_guidance_document_draft_final_8-25-2015.pdf

Table 5-7A: Ecological Risk-Based Screening Values for Consideration
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

KY Eco Chronic - Hardness based	Chronic surface water value for aquatic life, based on hardness from the Kentucky Administrative Record - 401 KAR 10:031. Surface water standards. http://www.lrc.ky.gov/kar/401/010/031.htm
KY Eco Chronic and USEPA R4 Chronic	Chronic surface water value for aquatic life from the Kentucky Administrative Record - 401 KAR 10:031. Surface water standards. http://www.lrc.ky.gov/kar/401/010/031.htm Also equivalent to the 2016 USEPA Region 4 Ecological Risk Assessment Supplemental Guidance Interim Draft. https://www.epa.gov/sites/production/files/2015-09/documents/r4_era_guidance_document_draft_final_8-25-2015.pdf
KY Eco Ovary Criterion	Criterion for fish ovary concentration from the Kentucky Administrative Record - 401 KAR 10:031. Surface water standards. http://www.lrc.ky.gov/kar/401/010/031.htm
KY Eco WB Criterion	Criterion for whole body fish concentration from the Kentucky Administrative Record - 401 KAR 10:031. Surface water standards.
Mason and Dragun 1996.	Mason, S and Dragun, J. 1996. Natural chemicals in sediments.
USEPA R4 Acute	Acute surface water criterion from Region 4 Ecological Risk Assessment Supplemental Guidance Interim Draft. https://www.epa.gov/sites/production/files/2015-09/documents/r4_era_guidance_document_draft_final_8-25-2015.pdf
USEPA R4 Chronic	Chronic surface water criterion from Region 4 Ecological Risk Assessment Supplemental Guidance Interim Draft. https://www.epa.gov/sites/production/files/2015-09/documents/r4_era_guidance_document_draft_final_8-25-2015.pdf
USEPA R4 ESV	Ecological screening value sediment criterion from Region 4 Ecological Risk Assessment Supplemental Guidance Interim Draft. https://www.epa.gov/sites/production/files/2015-09/documents/r4_era_guidance_document_draft_final_8-25-2015.pdf
USEPA R4 RSV	Refined screening value sediment criterion from Region 4 Ecological Risk Assessment Supplemental Guidance Interim Draft. https://www.epa.gov/sites/production/files/2015-09/documents/r4_era_guidance_document_draft_final_8-25-2015.pdf
USEPA Selenium Aquatic Criteria	USEPA 2016. Office of Water, EPA 822-F-16-005, "Aquatic Life Ambient Water Quality Criterion for Selenium in Freshwater 2016 – Fact Sheet". https://www.epa.gov/sites/production/files/2016-06/documents/se_2016_fact_sheet_final.pdf

Table 5-7B: Human Health Risk-Based Screening Values for Consideration
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent	Matrix				Detail on Surface Water values ug/L			
	Fish RBC assuming a meal a week for adults 10-6 for carcinogens		Sediment (mg/kg) Residential soil 10-6 (a)	Surface water ug/L MCL or RBCa	KY DW	KY Fish	MCL	RBC
	Value (a)	unit						
Arsenic	--		0.68	10	10		10	
Total inorganic Arsenic (b)	0.005	mg/kg ww						
Boron (Boron and borates)	516	mg/kg ww	16,000	4,000				4,000
Cadmium	2.58	mg/kg ww	71	5	5		5	
Lead (c)	0.375	mg/kg ww	400	15	15		15	
Mercury (d)		ug/kg ww	23	2	2	0.051	2	
Methylmercury	0.30	mg/kg ww	7.8	2	2	0.3 mg/kg fish tissue	2	
Selenium	12.9	mg/kg ww	390	50	170	4200	50	
Zinc	774.0	mg/kg ww	23,000	6,000	7,400	26,000		6,000

Notes:
NT: no toxicity value
KY From the Kentucky Administrative Record. http://www.lrc.ky.gov/kar/401/010/031.htm
(a) Regional Screening Levels (RSLs) for residential soil. Assumes a 1x10-6 cancer risk level for arsenic and a hazard index of 1 for all others except lead. Assumes 52 meals a year. https://www.epa.gov/risk/regional-screening-levels-rsls.
(b) Total inorganic arsenic is AsIII + AsV
(c) HH screening level based on the USFDA Total Tolerable Daily Intake concentration of 6.0 µg/day is used in Ohio as the basis for a 1 meal / week fish consumption advisory with a concentration basis of 0.4 mg/kg ww.
(d) Mercury in fish is nearly all methyl mercury and the methyl mercury RBC is used. Soil and water mercury assumed to be inorganic.

Table 5-8A-1: Bluegill and Green Sunfish Tissue Results Summary (Whole Body, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent	CAS Number	Dry/ Wet	Fish ID For Maximum Detect	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect	Average Of Detects
Arsenic EPA 1632A	7440-38-2	W	CI-BG-2 Dup	mg/kg	26	23	88	0.0873	0.00622	0.018
Arsenic III	22541-54-4	W	CI-BG-2 Dup	mg/kg	26	11	42	0.0734	0	0.014
Arsenic SW6020	7440-38-2	W	CI-BG-2 Dup	mg/kg	26	26	100	0.253	0.0642	0.093
Arsenic V	17428-41-0	W	CI-BG-2	mg/kg	26	4	15	0.0217	0	0.0023
Boron	7440-42-8	W	CI-BG-2 Dup	mg/kg	26	24	92	1.6	0.224	0.36
Cadmium	7440-43-9	W	CI-BG-1 Dup	mg/kg	26	26	100	0.0787	0.0205	0.024
Iron	7439-89-6	W	CI-BG-2 Dup	mg/kg	26	26	100	48.4	15.7	21
Lead	7439-92-1	W	MHL3-BG-1	mg/kg	26	26	100	0.0545	0.0189	0.023
Magnesium	7439-95-4	W	LHL4-BG-1	mg/kg	26	26	100	664	543	540
Mercury	7439-97-6	W	DR-GS-1	mg/kg	26	26	100	0.0612	0.0233	0.026
Methyl mercury	22967-92-6	W	DR-GS-1	ug/kg	26	26	100	0.0593	0.0238	0.025
Selenium DW	7782-49-2	D	CI-BG-1 Dup	mg/kg	26	26	100	7.38	3.63	3.9
Selenium WW	7782-49-2	W	CI-BG-1 Dup	mg/kg	26	26	100	2	0.956	0.99
Zinc	7440-66-6	W	LHL2-BG-2	mg/kg	26	26	100	32.6	25.9	26
Lipids %	LIPIDS	W	CI-BG-1	%	26	26	100	4.48	1.73	1.9
Moisture Content %	MOISTURE	D	MHL1-BG-2	%	26	26	100	76.2	73.5	73
Solids (total) %	C-008	W	CI-BG-2 Dup	%	26	26	100	29.5	26.5	27

Notes:

%	Percent	LHL	Lower Herrington Lake
BG	Bluegill	mg/kg	Milligrams per kilogram
CI	Curd's Inlet	MHL	Middle Herrington Lake
D or DW	Dry weight	Spp	Species
DR	Dix River	ug/kg	Micrograms per kilogram
Dup	Duplicate sample	W or WW	Wet weight
EPA	Environmental Protection Agency		
GS	Green Sunfish		

Table 5-8A-2: Bluegill and Green Sunfish Tissue Results Summary (Filet, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dry/ Wet	Location of Maximum Detect	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect (ND = 1/2 RDL)	Median Detect (ND = 1/2 MDL)	Average Of Detects (ND = no data)
Arsenic EPA 1632A	7440-38-2	W	CI/HQ	ug/g	26	3	12%	0.004	0.004	0.0015	0.004
Arsenic SW6020	7440-38-2	W	CI	mg/kg	26	26	100%	0.11	0.06	0.06	0.058
Arsenic III	22541-54-4	W	CI	ug/g	26	1	4%	0.009	0.008	0.004	0.009
Arsenic V	17428-41-0	W	--	ug/g	26	0	0%	--	0.008	0.004	--
Boron	7440-42-8	W	CI	mg/kg	26	19	73%	0.52	0.06	0.06	0.12
Cadmium	7440-43-9	W	CI	mg/kg	26	24	92%	0.0095	0.0034	0.0034	0.0043
Iron	7439-89-6	W	MHL1	mg/kg	26	26	100%	7.38	3.605	3.605	3.8
Lead	7439-92-1	W	LHL3	mg/kg	26	21	81%	0.0063	0.0019	0.0015	0.0019
Magnesium	7439-95-4	W	MHL1	mg/kg	26	26	100%	350	234	234	240
Mercury	7439-97-6	W	DR	mg/kg	26	26	100%	0.0891	0.0342	0.0342	0.038
Methyl mercury	22967-92-6	W	DR	ng/g	26	26	100%	76.5	31	31	35
Selenium	7782-49-2	W	CI	mg/kg	26	26	100%	2.24	1.015	1.015	1.1
Zinc	7440-66-6	W	MHL1	mg/kg	26	26	100%	14.5	10.4	10.4	10
Lipids	LIPIDS	W	LHL3	%	26	26	100%	2.94	0.355	0.355	0.47
Solids (total)	C-008	W	MHL1	%	26	26	100%	30	20.3	20.3	21
Moisture Content	MOISTURE	W	LHL4	%	26	26	100%	81.9	79.7	79.7	79
Weight, Tissue	WTBIOT	W	CI	g	26	26	100%	100.546	56.908	56.908	59

Table 5-8A-2: Bluegill and Green Sunfish Tissue Results Summary (Filet, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dry/ Wet	Location of Maximum Detect	Units	Average of Detects (ND=1/2 RDL)	Average of Detects (ND=1/2 MDL)	Range of RDL (low)	Range of RDLs (high)	Range of MDL (low)	Range of MDLs (high)
Arsenic EPA 1632A	7440-38-2	W	CI/HQ	ug/g	0.0041	0.0018	0.007	0.012	0.002	0.004
Arsenic SW6020	7440-38-2	W	CI	mg/kg	0.058	0.058	0.091	0.15	0.004	0.006
Arsenic III	22541-54-4	W	CI	ug/g	0.0081	0.0043	0.014	0.024	0.007	0.012
Arsenic V	17428-41-0	W	--	ug/g	0.0081	0.0041	0.014	0.024	0.007	0.012
Boron	7440-42-8	W	CI	mg/kg	0.1	0.093	0.091	0.15	0.036	0.06
Cadmium	7440-43-9	W	CI	mg/kg	0.0042	0.004	0.0036	0.006	0.0005	0.0009
Iron	7439-89-6	W	MHL1	mg/kg	3.8	3.8	0.18	0.3	0.02	0.03
Lead	7439-92-1	W	LHL3	mg/kg	0.002	0.0016	0.0036	0.006	0.0005	0.0009
Magnesium	7439-95-4	W	MHL1	mg/kg	240	240	0.18	0.3	0.09	0.15
Mercury	7439-97-6	W	DR	mg/kg	0.038	0.038	0.0036	0.006	0.0007	0.0012
Methyl mercury	22967-92-6	W	DR	ng/g	35	35	1.8	2.9	0.5	0.9
Selenium	7782-49-2	W	CI	mg/kg	1.1	1.1	0.18	0.3	0.005	0.009
Zinc	7440-66-6	W	MHL1	mg/kg	10	10	0.091	0.15	0.014	0.02
Lipids	LIPIDS	W	LHL3	%	0.47	0.47	0.24	0.25	0.24	0.25
Solids (total)	C-008	W	MHL1	%	21	21	--	--	--	--
Moisture Content	MOISTURE	W	LHL4	%	79	79	--	--	--	--
Weight, Tissue	WTBIOT	W	CI	g	59	59	--	--	--	--

Table 5-8A-2: Bluegill and Green Sunfish Tissue Results Summary (Filet, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
BG	Bluegill
CI	Curd's Inlet
DR	Dix River
EPA	Environmental Protection Agency
g	Grams
GS	Green Sunfish
HQ	HQ Inlet
LHL	Lower Herrington Lake
MDL	Method Detection Limit
mg/kg	Milligrams per kilogram
MHL	Middle Herrington Lake
ND	Not Detected
ng/g	Nanograms per gram
RDL	Reporting Detection Limit
ug/g	Micrograms per gram
W	Wet weight

Table 5-8B-1: Bass Tissue Results Summary (Whole-body, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent	CAS Number	Dry/ Wet	Fish ID For Maximum Detect	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect	Average Of Detect
Arsenic EPA 1632A	7440-38-2	W	DR-LMB-1	mg/kg	21	5	24	0.00434	0	7E-04
Arsenic III	22541-54-4	W	CI-LMB-1	mg/kg	21	0	0	0	0	0
Arsenic SW6020	7440-38-2	W	LHL1-LMB-2	mg/kg	21	21	100	0.525	0.399	0.37
Arsenic V	17428-41-0	W	CI-LMB-1	mg/kg	21	0	0	0	0	0
Boron	7440-42-8	W	LHL5-LMB-1	mg/kg	21	3	14	0.11	0	0.009
Cadmium	7440-43-9	W	CI-LMB-2	mg/kg	21	21	100	0.0611	0.0058	0.008
Iron	7439-89-6	W	CI-LMB-2	mg/kg	21	21	100	57.2	9.65	11
Lead	7439-92-1	W	LHL4-KB-1	mg/kg	21	21	100	0.0163	0.0057	0.007
Magnesium	7439-95-4	W	LHL6-KB-1	mg/kg	21	21	100	502	425	410
Mercury	7439-97-6	W	MHL3-LMB-1	mg/kg	21	21	100	0.124	0.0702	0.074
Methyl mercury	22967-92-6	W	LHL5-LMB-2	ug/kg	21	21	100	236	86.4	96
Selenium DW	7782-49-2	D	CI-LMB-1	mg/kg	21	21	100	5.5	3.58	3.4
Selenium WW	7782-49-2	W	CI-LMB-1	mg/kg	21	21	100	1.48	0.95	0.91
Zinc	7440-66-6	W	LHL3-KB-1	mg/kg	21	21	100	21.4	14.3	15
Lipids %	LIPIDS	W	LHL1-LMB-2	%	21	18	86	23.3	19.4	15
Moisture Content %	MOISTURE	D	CI-LMB-2 FD	%	21	21	100	79.5	70.4	71

Table 5-8B-1: Bass Tissue Results Summary (Whole-body, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
CI	Curd's Inlet
D or DW	Dry weight
DR	Dix River
Dup	Duplicate sample
EPA	Environmental Protection Agency
FD	Field Duplicate Sample
KB	Kentucky Bass
LHL	Lower Herrington Lake
LMB	Largemouth Bass
mg/kg	Milligrams per kilogram
MHL	Middle Herrington Lake
Spp	Species
ug/kg	Micrograms per kilogram
W or WW	Wet weight

Table 5-8B-2: Bass Tissue Results Summary (Fillet, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dry/ Wet	Location of Maximum Detect	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect (ND = 1/2 RDL)	Median Detect (ND = 1/2 MDL)	Average Of Detects (ND = no data)
Arsenic EPA 1632A	7440-38-2	W	--	ug/g	21	0	0%	--	0.0045	0.0015	--
Arsenic SW6020	7440-38-2	W	LHL3	mg/kg	21	21	100%	0.38	0.29	0.29	0.27
Arsenic III	22541-54-4	W	--	ug/g	21	0	0%	--	0.0085	0.0045	--
Arsenic V	17428-41-0	W	--	ug/g	21	0	0%	--	0.0085	0.0045	--
Boron	7440-42-8	W	LHL5	mg/kg	21	1	5%	0.07	0.055	0.02	0.07
Cadmium	7440-43-9	W	LHL4	mg/kg	21	12	57%	0.0043	0.0022	0.0008	0.0019
Iron	7439-89-6	W	DR	mg/kg	21	21	100%	3.49	2.16	2.16	2.2
Lead	7439-92-1	W	LHL4	mg/kg	21	19	90%	0.0075	0.001	0.001	0.0016
Magnesium	7439-95-4	W	MHL3	mg/kg	21	21	100%	303	250	250	250
Mercury	7439-97-6	W	MHL3	mg/kg	21	21	100%	0.182	0.0872	0.0872	0.098
Methyl mercury	22967-92-6	W	DR	ng/g	21	21	100%	186	108	108	120
Selenium	7782-49-2	W	CI	mg/kg	21	21	100%	1.56	0.98	0.98	0.95
Zinc	7440-66-6	W	CI	mg/kg	21	21	100%	10.3	7.46	7.46	7.9
Lipids	LIPIDS	W	MHL1	%	18	18	100%	11	7.6	7.6	6.6
Solids (total)	C-008	W	LHL3	%	21	21	100%	24.6	22	22	22
Moisture Content	MOISTURE	W	CI	%	21	21	100%	79.6	78	78	78

Table 5-8B-2: Bass Tissue Results Summary (Fillet, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dry/ Wet	Location of Maximum Detect	Units	Average of Detects (ND=1/2 RDL)	Average of Detects (ND=1/2 MDL)	Range of RDL (low)	Range of RDLs (high)	Range of MDL (low)	Range of MDLs (high)
Arsenic EPA 1632A	7440-38-2	W	--	ug/g	0.0045	0.0015	0.008	0.01	0.003	0.003
Arsenic SW6020	7440-38-2	W	LHL3	mg/kg	0.27	0.27	0.1	0.12	0.004	0.005
Arsenic III	22541-54-4	W	--	ug/g	0.0087	0.0045	0.016	0.019	0.008	0.01
Arsenic V	17428-41-0	W	--	ug/g	0.0087	0.0045	0.016	0.019	0.008	0.01
Boron	7440-42-8	W	LHL5	mg/kg	0.056	0.024	0.1	0.12	0.04	0.05
Cadmium	7440-43-9	W	LHL4	mg/kg	0.002	0.0012	0.0041	0.0049	0.0006	0.0007
Iron	7439-89-6	W	DR	mg/kg	2.2	2.2	0.2	0.25	0.02	0.02
Lead	7439-92-1	W	LHL4	mg/kg	0.0016	0.0015	0.0041	0.0049	0.0006	0.0007
Magnesium	7439-95-4	W	MHL3	mg/kg	250	250	0.2	1.2	0.1	0.6
Mercury	7439-97-6	W	MHL3	mg/kg	0.098	0.098	0.0039	0.0047	0.0008	0.001
Methyl mercury	22967-92-6	W	DR	ng/g	120	120	2	2.4	0.8	1
Selenium	7782-49-2	W	CI	mg/kg	0.95	0.95	0.2	0.25	0.006	0.007
Zinc	7440-66-6	W	CI	mg/kg	7.9	7.9	0.1	0.12	0.02	0.02
Lipids	LIPIDS	W	MHL1	%	6.6	6.6	0.42	1.22	0.42	1.22
Solids (total)	C-008	W	LHL3	%	22	22	--	--	--	--
Moisture Content	MOISTURE	W	CI	%	78	78	--	--	--	--

Table 5-8B-2: Bass Tissue Results Summary (Fillet, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
CI	Curd's Inlet
DR	Dix River
EPA	Environmental Protection Agency
LHL	Lower Herrington Lake
MDL	Method Detection Limit
mg/kg	Milligrams per kilogram
MHL	Middle Herrington Lake
ND	Not Detected
ng/g	Nanograms per gram
RDL	Reporting Detection Limit
ug/g	Micrograms per gram
W	Wet weight

Table 5-8C-1: Catfish Tissue Results Summary (Whole-body, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent	CAS Number	Dry/ Wet	Fish ID For Maximum Detect	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect	Average Of Detects
Arsenic EPA 1632A	7440-38-2	W	LHL2-CC-1	mg/kg	19	9	47	0.00664	0	0.0023
Arsenic III	22541-54-4	W	CI-CC-1	mg/kg	19	0	0	0	0	0
Arsenic SW6020	7440-38-2	W	LHL6-CC-2	mg/kg	19	19	100	0.0866	0.043	0.045
Arsenic V	17428-41-0	W	CI-CC-1	mg/kg	19	0	0	0	0	0
Boron	7440-42-8	W	CI-FHC-1	mg/kg	19	17	89	0.619	0.119	0.19
Cadmium	7440-43-9	W	CI-FHC-1	mg/kg	19	19	100	0.0397	0.0072	0.01
Iron	7439-89-6	W	LHL3-CC-1	mg/kg	19	19	100	93.5	15.2	22
Lead	7439-92-1	W	LHL3-CC-2	mg/kg	19	19	100	0.0352	0.014	0.017
Magnesium	7439-95-4	W	MHL1-FHC-2	mg/kg	19	19	100	473	351	350
Mercury	7439-97-6	W	MHL1-FHC-2	mg/kg	19	19	100	0.266	0.0795	0.086
Methyl mercury	22967-92-6	W	MHL1-FHC-2	ug/kg	19	19	100	278	71.7	99
Selenium DW	7782-49-2	D	LHL2-FHC-1	mg/kg	19	19	100	5.13	1.62	2.2
Selenium WW	7782-49-2	W	CI-FHC-1	mg/kg	19	19	100	1.41	0.5	0.61
Zinc	7440-66-6	W	MHL1-FHC-2	mg/kg	19	19	100	25.2	17.3	18
Lipids %	LIPIDS	W	LHL3-CC-2	%	19	10	53	46.9	4.79	14
Moisture Content %	MOISTURE	D	LHL1-FHC-1	%	19	19	100	76.7	66.9	59

Table 5-8C-1: Catfish Tissue Results Summary (Whole-body, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
CC	Channel Catfish
CI	Curd's Inlet
D or DW	Dry weight
Dup	Duplicate sample
EPA	Environmental Protection Agency
FHC	Flathead Catfish
LHL	Lower Herrington Lake
mg/kg	Milligrams per kilogram
MHL	Middle Herrington Lake
Spp	Species
ug/kg	Micrograms per kilogram
W or WW	Wet weight

Table 5-8C-2: Catfish Tissue Results Summary (Fillet, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dry/ Wet	Location of Maximum Detect	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect (ND = 1/2 RDL)	Median Detect (ND = 1/2 MDL)	Average Of Detects (ND = no data)
Arsenic EPA 1632A	7440-38-2	W	--	ug/g	19	0	0%	--	0.005	0.0015	--
Arsenic SW6020	7440-38-2	W	LHL6	mg/kg	19	19	100%	0.07	0.03	0.03	0.03
Arsenic III	22541-54-4	W	--	ug/g	19	0	0%	--	0.0095	0.005	--
Arsenic V	17428-41-0	W	--	ug/g	19	0	0%	--	0.0095	0.005	--
Boron	7440-42-8	W	CI	mg/kg	19	9	47%	0.24	0.07	0.03	0.098
Cadmium	7440-43-9	W	CI	mg/kg	19	13	68%	0.0107	0.0023	0.0011	0.0024
Iron	7439-89-6	W	LHL1	mg/kg	19	19	100%	5.94	3.85	3.85	4.1
Lead	7439-92-1	W	LHL3	mg/kg	19	18	95%	0.0035	0.0018	0.0017	0.002
Magnesium	7439-95-4	W	LHL5	mg/kg	19	19	100%	246	202	202	200
Mercury	7439-97-6	W	MHL1	mg/kg	19	19	100%	0.329	0.095	0.095	0.12
Methyl mercury	22967-92-6	W	MHL1	ng/g	19	19	100%	427	108	108	150
Selenium	7782-49-2	W	CI	mg/kg	19	19	100%	1.53	0.46	0.46	0.6
Zinc	7440-66-6	W	LHL1	mg/kg	19	19	100%	11.9	7.62	7.62	7.3
Lipids	LIPIDS	W	LHL3	%	10	10	100%	52	22.5	22.5	24
Solids (total)	C-008	W	LHL3	%	19	19	100%	33	24	24	24
Moisture Content	MOISTURE	W	LHL1	%	19	19	100%	81.4	76	76	76

Table 5-8C-2: Catfish Tissue Results Summary (Fillet, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dry/ Wet	Location of Maximum Detect	Units	Average of Detects (ND=1/2 RDL)	Average of Detects (ND=1/2 MDL)	Range of RDL (low)	Range of RDLs (high)	Range of MDL (low)	Range of MDLs (high)
Arsenic EPA 1632A	7440-38-2	W	--	ug/g	0.0048	0.0017	0.007	0.013	0.003	0.005
Arsenic SW6020	7440-38-2	W	LHL6	mg/kg	0.03	0.03	0.093	0.17	0.004	0.007
Arsenic III	22541-54-4	W	--	ug/g	0.0097	0.0048	0.015	0.026	0.007	0.013
Arsenic V	17428-41-0	W	--	ug/g	0.01	0.0049	0.015	0.04	0.007	0.014
Boron	7440-42-8	W	CI	mg/kg	0.079	0.06	0.093	0.17	0.037	0.07
Cadmium	7440-43-9	W	CI	mg/kg	0.0025	0.0018	0.0037	0.0066	0.0006	0.001
Iron	7439-89-6	W	LHL1	mg/kg	4.1	4.1	0.18	0.33	0.02	0.03
Lead	7439-92-1	W	LHL3	mg/kg	0.002	0.0019	0.0037	0.0066	0.0006	0.001
Magnesium	7439-95-4	W	LHL5	mg/kg	200	200	0.18	1.4	0.09	0.7
Mercury	7439-97-6	W	MHL1	mg/kg	0.12	0.12	0.0035	0.0063	0.0007	0.0013
Methyl mercury	22967-92-6	W	MHL1	ng/g	150	150	1.8	3.3	0.7	1.3
Selenium	7782-49-2	W	CI	mg/kg	0.6	0.6	0.18	0.33	0.006	0.01
Zinc	7440-66-6	W	LHL1	mg/kg	7.3	7.3	0.093	0.17	0.015	0.03
Lipids	LIPIDS	W	LHL3	%	24	24	0.76	1.22	0.76	1.22
Solids (total)	C-008	W	LHL3	%	24	24	--	--	--	--
Moisture Content	MOISTURE	W	LHL1	%	76	76	--	--	--	--

Table 5-8C-2: Catfish Tissue Results Summary (Fillet, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
CI	Curd's Inlet
EPA	Environmental Protection Agency
LHL	Lower Herrington Lake
MDL	Method Detection Limit
mg/kg	Milligrams per kilogram
MHL	Middle Herrington Lake
ND	Not Detected
ng/g	Nanograms per gram
RDL	Reporting Detection Limit
ug/g	Micrograms per gram
W	Wet weight
CI	Curd's Inlet
D	Dry weight

Table 5-8D-1: Trout and Sucker Tissue Results Summary (Whole-body, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent	CAS Number	Dry/ Wet	Fish ID For Maximum	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect	Average Of Detects
Arsenic EPA 1632A	7440-38-2	W	DR-SS-1	mg/kg	3	3	100	0.00442	0.0032	0.003
Arsenic III	22541-54-4	W	DR-BT-1	mg/kg	3	0	0	0	0	0
Arsenic SW6020	7440-38-2	W	DR-BT-1	mg/kg	3	3	100	0.216	0.0436	0.097
Arsenic V	17428-41-0	W	DR-BT-1	mg/kg	3	0	0	0	0	0
Boron	7440-42-8	W	DR-SS-1	mg/kg	3	2	67	0.262	0.205	0.16
Cadmium	7440-43-9	W	DR-HS-1	mg/kg	3	3	100	0.0117	0.0047	0.0064
Iron	7439-89-6	W	DR-SS-1	mg/kg	3	3	100	17.5	10.7	12
Lead	7439-92-1	W	DR-SS-1	mg/kg	3	3	100	0.0167	0.0132	0.012
Magnesium	7439-95-4	W	DR-HS-1	mg/kg	3	3	100	444	431	380
Mercury	7439-97-6	W	DR-SS-1	mg/kg	3	3	100	0.0255	0.0198	0.02
Methyl mercury	22967-92-6	W	DR-SS-1	ug/kg	3	3	100	34.6	29	29
Selenium DW	7782-49-2	D	DR-SS-1	mg/kg	3	3	100	5.3	4.06	4.1
Selenium WW	7782-49-2	W	DR-SS-1	mg/kg	3	3	100	1.23	1.05	1
Zinc	7440-66-6	W	DR-BT-1	mg/kg	3	3	100	29.9	17.2	21
Lipids %	LIPIDS	W	DR-BT-1	%	3	1	33	6.11	0	2
Moisture Content %	MOISTURE	D	DR-BT-1	%	3	3	100	77.1	76.4	76

Table 5-8D-1: Trout and Sucker Tissue Results Summary (Whole-body, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
BT	Brown Trout
D or DW	Dry weight
DR	Dix River
Dup	Duplicate sample
EPA	Environmental Protection Agency
HS	Northern Hogsucker
mg/kg	Milligrams per kilogram
Spp	Species
SS	Spotted Sucker
ug/kg	Micrograms per kilogram
W or WW	Wet weight

Table 5-8D-2: Trout and Sucker Tissue Results Summary (Fillet, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dry/ Wet	Location of Maximum Detect	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect (ND = 1/2 RDL)	Median Detect (ND = 1/2 MDL)	Average Of Detects (ND = no data)
Arsenic EPA 1632A	7440-38-2	W	--	ug/g	3	0	0%	--	0.004	0.0015	--
Arsenic SW6020	7440-38-2	W	DR	mg/kg	3	3	100%	0.23	0.05	0.05	0.1
Arsenic III	22541-54-4	W	--	ug/g	3	0	0%	--	0.008	0.004	--
Arsenic V	17428-41-0	W	--	ug/g	3	0	0%	--	0.008	0.004	--
Boron	7440-42-8	W	DR	mg/kg	3	2	67%	0.13	0.11	0.11	0.12
Cadmium	7440-43-9	W	DR	mg/kg	3	3	100%	0.0032	0.0026	0.0026	0.0028
Iron	7439-89-6	W	DR	mg/kg	3	3	100%	5.47	4.67	4.67	4.7
Lead	7439-92-1	W	DR	mg/kg	3	3	100%	0.0022	0.0016	0.0016	0.0018
Magnesium	7439-95-4	W	DR	mg/kg	3	3	100%	281	253	253	250
Mercury	7439-97-6	W	DR	mg/kg	3	3	100%	0.0316	0.0269	0.0269	0.025
Methyl mercury	22967-92-6	W	DR	ng/g	3	3	100%	38.6	27.3	27.3	29
Selenium	7782-49-2	W	DR	mg/kg	3	3	100%	1.27	1.06	1.06	0.92
Zinc	7440-66-6	W	DR	mg/kg	3	3	100%	14.2	9.63	9.63	11
Lipids	LIPIDS	W	DR	%	1	1	100%	3.1	3.1	3.1	3.1
Solids (total)	C-008	W	DR	%	3	3	100%	20.9	20.7	20.7	21
Moisture Content	MOISTURE	W	DR	%	3	3	100%	79.8	79.3	79.3	79

Table 5-8D-2: Trout and Sucker Tissue Results Summary (Fillet, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dry/ Wet	Location of Maximum Detect	Units	Average of Detects (ND=1/2 RDL)	Average of Detects (ND=1/2 MDL)	Range of RDL (low)	Range of RDLs (high)	Range of MDL (low)	Range of MDLs (high)
Arsenic EPA 1632A	7440-38-2	W	--	ug/g	0.016	0.0015	0.008	0.08	0.003	0.003
Arsenic SW6020	7440-38-2	W	DR	mg/kg	0.1	0.1	0.1	0.1	0.004	0.004
Arsenic III	22541-54-4	W	--	ug/g	0.0082	0.004	0.016	0.017	0.008	0.008
Arsenic V	17428-41-0	W	--	ug/g	0.0082	0.004	0.016	0.017	0.008	0.008
Boron	7440-42-8	W	DR	mg/kg	0.097	0.087	0.1	0.1	0.04	0.04
Cadmium	7440-43-9	W	DR	mg/kg	0.0028	0.0028	0.004	0.0042	0.0006	0.0006
Iron	7439-89-6	W	DR	mg/kg	4.7	4.7	0.2	0.21	0.02	0.02
Lead	7439-92-1	W	DR	mg/kg	0.0018	0.0018	0.004	0.0042	0.0006	0.0006
Magnesium	7439-95-4	W	DR	mg/kg	250	250	0.2	0.21	0.1	0.1
Mercury	7439-97-6	W	DR	mg/kg	0.025	0.025	0.0038	0.0042	0.0008	0.0008
Methyl mercury	22967-92-6	W	DR	ng/g	29	29	2	2.1	0.8	0.8
Selenium	7782-49-2	W	DR	mg/kg	0.92	0.92	0.2	0.21	0.006	0.006
Zinc	7440-66-6	W	DR	mg/kg	11	11	0.1	0.1	0.02	0.02
Lipids	LIPIDS	W	DR	%	3.1	3.1	1.2	1.2	1.2	1.2
Solids (total)	C-008	W	DR	%	21	21	--	--	--	--
Moisture Content	MOISTURE	W	DR	%	79	79	--	--	--	--

Table 5-8D-2: Trout and Sucker Tissue Results Summary (Fillet, Wet and Dry Weight)
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
DR	Dix River
EPA	Environmental Protection Agency
MDL	Method Detection Limit
mg/kg	Milligrams per kilogram
ND	Not Detected
ng/g	Nanograms per gram
RDL	Reporting Detection Limit
ug/g	Micrograms per gram
W	Wet weight

Table 5-9: Surface Water: Stratification Results Summary
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dissolved/ Total	Location of Max	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect (ND = 1/2RDL)	Median Detect (ND = 1/2MDL)	Average Of Detects (ND = no data)
Arsenic	7440-38-2	D	CI4	ug/l	28	28	100%	1.92	1.205	1.205	1.3
Arsenic	7440-38-2	T	CI4	ug/l	28	28	100%	2.65	1.295	1.295	1.4
Boron	7440-42-8	D	CI1	ug/l	28	28	100%	552	354.5	354.5	300
Boron	7440-42-8	T	CI3	ug/l	28	28	100%	536	322.5	322.5	290
Cadmium	7440-43-9	D	DR1	ug/l	28	2	7%	0.149	0.01	0.0025	0.079
Cadmium	7440-43-9	T	CI1	ug/l	28	5	18%	0.156	0.01	0.0025	0.082
Iron	7439-89-6	D	LHL3	ug/l	28	27	96%	161	26.35	26.35	50
Iron	7439-89-6	T	LHL1	ug/l	28	28	100%	226	62.95	62.95	80
Magnesium	7439-95-4	D	CI2	ug/l	28	28	100%	12100	10000	10000	10,000
Magnesium	7439-95-4	T	CI1	ug/l	28	28	100%	12200	9990	9990	10,000
Mercury	7439-97-6	D	CI1	ng/l	28	17	61%	1710	1.04	1.04	430
Mercury	7439-97-6	T	CI1	ug/l	28	12	43%	7.78	0.1	0.01	3.1
Methyl mercury	22967-92-6	D	CI1	ng/l	28	22	79%	0.59	0.065	0.065	0.16
Methyl mercury	22967-92-6	T	CI1	ng/l	28	25	89%	0.86	0.135	0.135	0.21
Selenium	7782-49-2	D	CI2/CI3	ug/l	28	23	82%	2.2	0.65	0.65	0.9
Selenium	7782-49-2	T	CI1/CI2	ug/l	28	24	86%	2.1	0.7	0.7	0.9
Zinc	7440-66-6	D	CI1	ug/l	28	21	75%	2.8	1	0.7	1.1
Zinc	7440-66-6	T	CI1	ug/l	28	27	96%	9.8	1.25	1.25	2.1
Hardness (filtered)	FHARD	D	CI1	mg/l	28	28	100%	184	142.5	142.5	150
Hardness (total)	THARD	T	CI1/CI2	mg/l	28	28	100%	183	145	145	150
Organic Carbon (dissolved)	C-012D	D	LHL1	mg/l	28	28	100%	6.18	3.745	3.745	3.8
Organic Carbon (total)	C-012	T	CI1	mg/l	27	27	100%	4.64	3.49	3.49	3.5
Sulfate	14808-79-8	D	CI2	mg/l	28	28	100%	64.7	34.9	34.9	37
Sulfate	14808-79-8	T	CI2	mg/l	28	28	100%	64.3	35.95	35.95	37

Table 5-9: Surface Water: Stratification Results Summary
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dissolved/ Total	Location of Max	Units	Average of Detects (ND=1/2 RDL)	Average of Detects (ND=1/2 MDL)	Range of RDL (low)	Range of RDLs (high)	Range of MDL (low)	Range of MDLs (high)
Arsenic	7440-38-2	D	CI4	ug/l	1.3	1.3	0.5	0.5	0.08	0.08
Arsenic	7440-38-2	T	CI4	ug/l	1.4	1.4	0.5	0.5	0.08	0.08
Boron	7440-42-8	D	CI1	ug/l	300	300	2	40	0.2	4
Boron	7440-42-8	T	CI3	ug/l	290	290	2	40	0.2	4
Cadmium	7440-43-9	D	DR1	ug/l	0.015	0.008	0.02	0.02	0.005	0.005
Cadmium	7440-43-9	T	CI1	ug/l	0.023	0.017	0.02	0.02	0.005	0.005
Iron	7439-89-6	D	LHL3	ug/l	49	49	2	2	0.3	0.3
Iron	7439-89-6	T	LHL1	ug/l	80	80	2	2	0.3	0.3
Magnesium	7439-95-4	D	CI2	ug/l	10,000	10,000	10	200	0.7	10
Magnesium	7439-95-4	T	CI1	ug/l	10,000	10,000	10	10	0.7	0.7
Mercury	7439-97-6	D	CI1	ng/l	260	260	0.5	12.5	0.06	1.5
Mercury	7439-97-6	T	CI1	ug/l	1.4	1.4	0.2	0.2	0.02	0.02
Methyl mercury	22967-92-6	D	CI1	ng/l	0.13	0.13	0.1	0.1	0.03	0.03
Methyl mercury	22967-92-6	T	CI1	ng/l	0.19	0.19	0.1	0.1	0.03	0.03
Selenium	7782-49-2	D	CI2/CI3	ug/l	0.83	0.76	1	1	0.2	0.2
Selenium	7782-49-2	T	CI1/CI2	ug/l	0.84	0.78	1	1	0.2	0.2
Zinc	7440-66-6	D	CI1	ug/l	1.1	0.85	2	2	0.3	0.3
Zinc	7440-66-6	T	CI1	ug/l	2	2	2	2	0.3	0.3
Hardness (filtered)	FHARD	D	CI1	mg/l	150	150	2	2	0.9	0.9
Hardness (total)	THARD	T	CI1/CI2	mg/l	150	150	2	2	0.8	0.8
Organic Carbon (dissolved)	C-012D	D	LHL1	mg/l	3.8	3.8	0.5	0.5	0.07	0.07
Organic Carbon (total)	C-012	T	CI1	mg/l	3.5	3.5	0.5	0.5	0.07	0.07
Sulfate	14808-79-8	D	CI2	mg/l	37	37	0.5	2	0.05	0.2
Sulfate	14808-79-8	T	CI2	mg/l	37	37	0.5	2	0.05	0.2

Table 5-9: Surface Water: Stratification Results Summary
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
CI	Curd's Inlet
D	Dissolved
LHL	Lower Herrington Lake
MDL	Method Detection Limit
mg/l	milligrams per liter
ND	Not Detected
ng/l	nanograms per liter
RDL	Reporting Detection Limit
T	Total
ug/l	micrograms per liter

Table 5-10: Surface Water: Overturn Results Summary
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dissolved/ Total	Location of Maximum Detect	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect (ND = 1/2RDL)	Median Detect (ND = 1/2MDL)	Average Of Detects (ND = no
Arsenic	7440-38-2	D	CI2	ug/l	13	13	100%	2.65	1.29	1.29	1.4
Arsenic	7440-38-2	T	CI2	ug/l	13	13	100%	5.48	1.33	1.33	1.8
Boron	7440-42-8	D	CI1	ug/l	13	13	100%	2560	200	200	590
Boron	7440-42-8	T	CI1	ug/l	13	13	100%	2520	207	207	590
Cadmium	7440-43-9	D	CI1	ug/l	13	13	100%	0.211	0.011	0.011	0.045
Cadmium	7440-43-9	T	CI2	ug/l	13	13	100%	0.377	0.023	0.023	0.079
Iron	7439-89-6	D	CI2	ug/l	13	11	85%	11.5	2.8	2.8	4.5
Iron	7439-89-6	T	CI2	ug/l	13	13	100%	614	40.6	40.6	110
Lead	7439-92-1	D	--	ug/l	13	0	0%	--	0.005	0.002	--
Lead	7439-92-1	T	CI2	ug/l	13	2	15%	0.631	0.005	0.002	0.45
Magnesium	7439-95-4	D	CI1	ug/l	13	13	100%	27400	10800	10800	13,000
Magnesium	7439-95-4	T	CI1	ug/l	13	13	100%	27400	11100	11100	14,000
Mercury	7439-97-6	D	CI2	ng/l	13	6	46%	1.24	0.25	0.03	0.82
Mercury	7439-97-6	T	--	ug/l	13	0	0%	--	0.1	0.01	--
Methyl mercury	22967-92-6	D	LHL4/LHL5	ng/l	13	11	85%	0.05	0.04	0.04	0.038
Methyl mercury	22967-92-6	T	CI2/LHL2/LHL5	ng/l	13	12	92%	0.06	0.05	0.05	0.048
Selenium	7782-49-2	D	CI1	ug/l	13	13	100%	4.9	0.6	0.6	1.3
Selenium	7782-49-2	T	CI1	ug/l	13	13	100%	5.2	0.6	0.6	1.3
Zinc	7440-66-6	D	HI1	ug/l	13	8	62%	7.1	2.1	2.1	3.5
Zinc	7440-66-6	T	CI4	ug/l	13	5	38%	6.7	1	0.15	4.1
Dissolved Organic Carbon	DOC	D	LHL3	mg/l	13	13	100%	5.53	3.41	3.41	3.8
Hardness (filtered)	FHARD	D	CI1	mg/l	10	10	100%	256	152.5	152.5	170
Hardness (total)	THARD	T	CI1	mg/l	10	10	100%	265	155.5	155.5	180
Organic Carbon (dissolved)	C-012D	D	LHL3	mg/l	13	13	100%	5.53	3.41	3.41	3.8
Organic Carbon (total)	C-012	T	CI2/CI3	mg/l	13	13	100%	3.25	3.14	3.14	3.1
Sulfate	14808-79-8	D	CI1	mg/l	13	13	100%	107	27.6	27.6	40
Sulfate	14808-79-8	T	CI1	mg/l	13	13	100%	107	28.3	28.3	40

Table 5-10: Surface Water: Overturn Results Summary
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dissolved/ Total	Location of Maximum Detect	Units	Average of Detects (ND=1/2	Average of Detects (ND=1/2	Range of RDL (low)	Range of RDLs (high)	Range of MDL (low)	Range of MDLs (high)
Arsenic	7440-38-2	D	CI2	ug/l	1.4	1.4	0.5	0.5	0.08	0.08
Arsenic	7440-38-2	T	CI2	ug/l	1.8	1.8	0.5	0.5	0.08	0.08
Boron	7440-42-8	D	CI1	ug/l	590	590	10	200	1	20
Boron	7440-42-8	T	CI1	ug/l	590	590	10	200	1	20
Cadmium	7440-43-9	D	CI1	ug/l	0.045	0.045	0.02	0.02	0.005	0.005
Cadmium	7440-43-9	T	CI2	ug/l	0.079	0.079	0.02	0.02	0.005	0.005
Iron	7439-89-6	D	CI2	ug/l	4	3.8	2	2	0.3	0.3
Iron	7439-89-6	T	CI2	ug/l	110	110	2	2	0.3	0.3
Lead	7439-92-1	D	--	ug/l	0.005	0.002	0.01	0.01	0.004	0.004
Lead	7439-92-1	T	CI2	ug/l	0.073	0.071	0.01	0.01	0.004	0.004
Magnesium	7439-95-4	D	CI1	ug/l	13,000	13,000	10	10	0.7	0.7
Magnesium	7439-95-4	T	CI1	ug/l	14,000	14,000	10	10	0.7	0.7
Mercury	7439-97-6	D	CI2	ng/l	0.51	0.39	0.5	0.5	0.06	0.06
Mercury	7439-97-6	T	--	ug/l	0.1	0.01	0.2	0.2	0.02	0.02
Methyl mercury	22967-92-6	D	LHL4/LHL5	ng/l	0.04	0.035	0.1	0.1	0.03	0.03
Methyl mercury	22967-92-6	T	CI2/LHL2/LHL5	ng/l	0.048	0.046	0.1	0.1	0.03	0.03
Selenium	7782-49-2	D	CI1	ug/l	1.3	1.3	1	1	0.2	0.2
Selenium	7782-49-2	T	CI1	ug/l	1.3	1.3	1	1	0.2	0.2
Zinc	7440-66-6	D	HI1	ug/l	2.5	2.2	2	2	0.3	0.3
Zinc	7440-66-6	T	CI4	ug/l	2.2	1.7	2	2	0.3	0.3
Dissolved Organic Carbon	DOC	D	LHL3	mg/l	3.8	3.8	0.5	0.5	0.07	0.07
Hardness (filtered)	FHARD	D	CI1	mg/l	170	170	2	2	0.9	0.9
Hardness (total)	THARD	T	CI1	mg/l	180	180	2	2	0.8	0.8
Organic Carbon (dissolved)	C-012D	D	LHL3	mg/l	3.8	3.8	0.5	0.5	0.07	0.07
Organic Carbon (total)	C-012	T	CI2/CI3	mg/l	3.1	3.1	0.5	0.5	0.07	0.07
Sulfate	14808-79-8	D	CI1	mg/l	40	40	2	2	0.2	0.2
Sulfate	14808-79-8	T	CI1	mg/l	40	40	2	2	0.2	0.2

Table 5-10: Surface Water: Overturn Results Summary
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
CI	Curd's Inlet
D	Dissolved
DR	Dix River
HI	Hardin's Inlet
HQ	HQ Inlet
LHL	Lower Herrington Lake
MDL	Method Detection Limit
mg/l	milligrams per liter
ND	Not Detected
ng/l	nanograms per liter
RDL	Reporting Detection Limit
T	Total
ug/l	micrograms per liter

Table 5-11: Sediment Results Summary
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dry/ Wet	Location of Max	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect (ND = 1/2RDL)	Median Detect (ND = 1/2MDL)	Average Of Detects (ND = no data)
Arsenic	7440-38-2	D	CI3A	mg/kg	33	33	100%	448	28.9	28.9	66
Boron	7440-42-8	D	CI1A	mg/kg	33	33	100%	72.3	10.7	10.7	17
Cadmium	7440-43-9	D	CI1A	mg/kg	33	33	100%	10.1	0.47	0.47	1.3
Iron	7439-89-6	D	CI3B	mg/kg	33	33	100%	68500	28300	28300	29,000
Lead	7439-92-1	D	CI1C	mg/kg	33	32	97%	38.3	19	19	19
Magnesium	7439-95-4	D	LHL6B	mg/kg	33	33	100%	23600	4930	4930	6,600
Mercury	7439-97-6	D	CI4A	mg/kg	33	33	100%	0.143	0.034	0.034	0.047
Methyl mercury	22967-92-6	D	LHL6C	ng/g	33	16	48%	1.74	0.25	0.035	0.47
Selenium	7782-49-2	D	CI3A	mg/kg	33	33	100%	32.8	1.9	1.9	5
Zinc	7440-66-6	D	CI1A	mg/kg	33	33	100%	245	65.7	65.7	76
GRAIN SIZE 0.001 mm	GRNSZ0.001MM	D	CI4A	%	14	14	100%	32.78	17.625	17.625	16
GRAIN SIZE 0.005 mm	GRNSZ0.005MM	D	CI4A	%	14	14	100%	52.94	27.165	27.165	30
GRAIN SIZE 0.074 mm	GRNSZ0.074MM	D	CI4A	%	14	14	100%	86.7	56.995	56.995	53
GRAIN SIZE 0.075 mm	GRNSZ0.075MM	D	HI1B	%	14	14	100%	97.62	57.97	57.97	58
Grain Size 0.106 mm	GRNSZ0.106MM	D	HI1B	%	14	14	100%	98.52	60.555	60.555	60
GRAIN SIZE 0.250 mm	GRNSZ0.250MM	D	HI1B	%	14	14	100%	99.45	66.54	66.54	64
Grain Size 0.425 mm	GRNSZ0.425MM	D	HI1B	%	14	14	100%	99.7	70.925	70.925	66
GRAIN SIZE 0.850 mm	GRNSZ0.85MM	D	HI1B	%	14	14	100%	99.86	77.575	77.575	68
GRAIN SIZE 2 mm	GRNSZ2MM	D	HI1B	%	14	14	100%	100	81.34	81.34	71
GRAIN SIZE 4.75 mm	GRNSZ4.75MM	D	CI4A/CURDS2A/HI1B	%	14	14	100%	100	83.28	83.28	74
GRAIN SIZE 9.5 mm	GRNSZ9.5MM	D	CI4A/CURDS2A/HI1B	%	14	14	100%	100	89.76	89.76	79
GRAIN SIZE 19 mm	GRNSZ19MM	D	CI4A/CURDS2A/HI1B	%	14	14	100%	100	99.725	99.725	91
Organic Carbon (total)	C-012	D	LHL6C	%	33	33	100%	17.9	2.2	2.2	3.7
Solids (total)	C-008	D	CI3B	%	8	8	100%	67.4	60.3	60.3	57
Solids (total)	C-008	W	CI4B	%	25	25	100%	75.7	55.2	55.2	53
Water	7732-18-5	W	HQ1A	%	33	33	100%	331	75.1	75.1	100
Sulfate	14808-79-8	D	LHL6C	mg/kg	33	33	100%	3620	253	253	660

Table 5-11: Sediment Results Summary
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dry/ Wet	Location of Max	Units	Average of Detects (ND=1/2 RDL)	Average of Detects (ND=1/2 MDL)	Range of RDL (low)	Range of RDLs (high)	Range of MDL (low)	Range of MDLs (high)
Arsenic	7440-38-2	D	CI3A	mg/kg	66	66	0.29	1.7	0.02	0.1
Boron	7440-42-8	D	CI1A	mg/kg	17	17	0.29	1.7	0.03	0.2
Cadmium	7440-43-9	D	CI1A	mg/kg	1.3	1.3	0.011	0.066	0.004	0.023
Iron	7439-89-6	D	CI3B	mg/kg	29,000	29,000	4.9	66	1.3	33
Lead	7439-92-1	D	CI1C	mg/kg	19	19	0.073	33	0.029	7
Magnesium	7439-95-4	D	LHL6B	mg/kg	6,600	6,600	2.4	33	0.07	3
Mercury	7439-97-6	D	CI4A	mg/kg	0.047	0.047	0.0086	0.07	0.0009	0.007
Methyl mercury	22967-92-6	D	LHL6C	ng/g	0.35	0.24	0.3	1.3	0.03	0.13
Selenium	7782-49-2	D	CI3A	mg/kg	5	5	0.57	3.3	0.04	0.2
Zinc	7440-66-6	D	CI1A	mg/kg	76	76	0.29	1.7	0.11	0.7
GRAIN SIZE 0.001 mm	GRNSZ0.001MM	D	CI4A	%	16	16	--	--	--	--
GRAIN SIZE 0.005 mm	GRNSZ0.005MM	D	CI4A	%	30	30	--	--	--	--
GRAIN SIZE 0.074 mm	GRNSZ0.074MM	D	CI4A	%	53	53	--	--	--	--
GRAIN SIZE 0.075 mm	GRNSZ0.075MM	D	HI1B	%	58	58	--	--	--	--
Grain Size 0.106 mm	GRNSZ0.106MM	D	HI1B	%	60	60	--	--	--	--
GRAIN SIZE 0.250 mm	GRNSZ0.250MM	D	HI1B	%	64	64	--	--	--	--
Grain Size 0.425 mm	GRNSZ0.425MM	D	HI1B	%	66	66	--	--	--	--
GRAIN SIZE 0.850 mm	GRNSZ0.85MM	D	HI1B	%	68	68	--	--	--	--
GRAIN SIZE 2 mm	GRNSZ2MM	D	HI1B	%	71	71	--	--	--	--
GRAIN SIZE 4.75 mm	GRNSZ4.75MM	D	CI4A/CURDS2A/HI1B	%	74	74	--	--	--	--
GRAIN SIZE 9.5 mm	GRNSZ9.5MM	D	CI4A/CURDS2A/HI1B	%	79	79	--	--	--	--
GRAIN SIZE 19 mm	GRNSZ19MM	D	CI4A/CURDS2A/HI1B	%	91	91	--	--	--	--
Organic Carbon (total)	C-012	D	LHL6C	%	3.7	3.7	0.1	0.1	0.02	0.02
Solids (total)	C-008	D	CI3B	%	57	57	--	--	--	--
Solids (total)	C-008	W	CI4B	%	53	53	--	--	--	--
Water	7732-18-5	W	HQ1A	%	100	100	--	--	--	--
Sulfate	14808-79-8	D	LHL6C	mg/kg	660	660	3.1	47	1.5	47

Table 5-11: Sediment Results Summary
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
CI	Curd's Inlet
D	Dry
FD	Field Duplicate
HI	Hardin's Inlet
HQ	HQ Inlet
LHL	Lower Herrington Lake
MDL	Method Detection Limit
mg/kg	milligrams per kilogram
mm	millimeter
ND	Not Detected
ng/g	nanograms per gram
RDL	Reporting Detection Limit
W	Wet

Table 5-12: Sediment Pore Water Results Summary
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dissolved / Total	Location of Max	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect (ND = 1/2RDL)	Median Detect (ND = 1/2MDL)	Average Of Detects (ND = no data)
Arsenic E200.8	7440-38-2	D	CURDS2A	ug/l	16	16	100%	123	4.82	4.82	16
Arsenic 1632A	7440-38-2	D	CURDS2A	ug/l	16	16	100%	112	2.9	2.9	13
Arsenic III	22541-54-4	D	CURDS2A	ug/l	16	14	88%	71.6	0.0655	0.0655	6
Arsenic V	17428-41-0	D	CURDS2A	ug/l	16	16	100%	40.1	2.56	2.56	7.6
Boron	7440-42-8	D	CURDSNB	ug/l	16	16	100%	1760	475.5	475.5	640
Cadmium	7440-43-9	D	CURDS2A	ug/l	16	10	63%	0.072	0.011	0.01	0.028
Iron	7439-89-6	D	HI1B	ug/l	16	16	100%	2510	49.85	49.85	380
Magnesium	7439-95-4	D	CURDSNB	ug/l	16	16	100%	21100	13300	13300	14,000
Mercury E1631	7439-97-6	D	CURDS2A	ng/l	15	15	100%	4.03	1.19	1.19	1.4
Mercury SW7470	7439-97-6	D	CURDS2C	ug/l	16	2	13%	0.09	0.1	0.01	0.065
Methyl mercury	22967-92-6	D	HI1C	ng/l	16	3	19%	0.12	0.05	0.015	0.093
Selenium	7782-49-2	D	CURDSNB	ug/l	16	16	100%	5	1.1	1.1	1.7
Selenium (unknown)	UNKNOWN SE	T		ug/l	16	0	0%		0.1	0.1	--
Selenium +4	SE +4	T	CURDS1	ug/l	16	10	63%	0.65	0.13	0.13	0.32
Selenium +6	SE +6	T	CURDS1	ug/l	16	11	69%	4.04	0.48	0.48	1.5
Selenocyanate	3425-46-5	T	CURDS2A	ug/l	16	2	13%	0.18	0.05	0.05	0.17
Zinc	7440-66-6	D	CURDS2A	ug/l	16	14	88%	107	2.65	2.65	10
Organic Carbon (dissolved	C-012D	D	HQ1B	mg/l	11	11	100%	4.49	3.53	3.53	3.6
Sulfate	14808-79-8	D	CURDSNB	mg/l	13	13	100%	143	46.8	46.8	63

Table 5-12: Sediment Pore Water Results Summary
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dissolved / Total	Location of Max	Units	Average of Detects (ND=1/2 RDL)	Average of Detects (ND=1/2 MDL)	Range of RDL (low)	Range of RDLs (high)	Range of MDL (low)	Range of MDLs (high)
Arsenic E200.8	7440-38-2	D	CURDS2A	ug/l	16	16	0.5	0.5	0.09	0.09
Arsenic 1632A	7440-38-2	D	CURDS2A	ug/l	13	13	0.04	10	0.006	1.5
Arsenic III	22541-54-4	D	CURDS2A	ug/l	5.2	5.2	0.02	4	0.003	0.6
Arsenic V	17428-41-0	D	CURDS2A	ug/l	7.6	7.6	0.04	10	0.006	1.5
Boron	7440-42-8	D	CURDSNB	ug/l	640	640	20	200	5	50
Cadmium	7440-43-9	D	CURDS2A	ug/l	0.022	0.019	0.02	0.02	0.006	0.006
Iron	7439-89-6	D	HI1B	ug/l	380	380	2	2	0.3	0.3
Magnesium	7439-95-4	D	CURDSNB	ug/l	14,000	14,000	100	1000	20	200
Mercury E1631	7439-97-6	D	CURDS2A	ng/l	1.4	1.4	0.5	1.25	0.06	0.15
Mercury SW7470	7439-97-6	D	CURDS2C	ug/l	0.096	0.017	0.2	0.2	0.02	0.02
Methyl mercury	22967-92-6	D	HI1C	ng/l	0.058	0.03	0.1	0.1	0.03	0.04
Selenium	7782-49-2	D	CURDSNB	ug/l	1.7	1.7	1	1	0.2	0.2
Selenium (unknown)	UNKNOWN SE	T		ug/l	0.1	0.1	0.2	0.2	0.2	0.2
Selenium +4	SE +4	T	CURDS1	ug/l	0.22	0.22	0.1	0.1	0.1	0.1
Selenium +6	SE +6	T	CURDS1	ug/l	1.1	1.1	0.1	0.1	0.1	0.1
Selenocyanate	3425-46-5	T	CURDS2A	ug/l	0.064	0.064	0.1	0.1	0.1	0.1
Zinc	7440-66-6	D	CURDS2A	ug/l	9.3	9.2	2	2	0.2	0.2
Organic Carbon (dissolved	C-012D	D	HQ1B	mg/l	3.6	3.6	0.5	0.5	0.07	0.07
Sulfate	14808-79-8	D	CURDSNB	mg/l	63	63	0.5	5	0.05	0.5

Table 5-12: Sediment Pore Water Results Summary
EW Brown Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
CURDS	Curd's Inlet
D	Dissolved
HI	Hardin's Inlet
HQ	HQ Inlet
MDL	Method Detection Limit
mg/l	milligrams per liter
ND	Not Detected
ng/l	nanograms per liter
RDL	Reporting Detection Limit
T	Total
ug/l	micrograms per liter

Table 5-13: Aquatic Vegetation Results Summary
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dry/ Wet	Location of Max	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect (ND = 1/2RDL)	Median Detect (ND = 1/2MDL)	Average Of Detects (ND = no data)
Arsenic	7440-38-2	D	DR	mg/kg	13	13	100%	14.9	4.91	4.91	6.3
Arsenic	7440-38-2	W	LHL2	mg/kg	13	13	100%	2.83	1.02	1.02	1.2
Boron	7440-42-8	D	CI1	mg/kg	13	13	100%	274	47.1	47.1	89
Boron	7440-42-8	W	CI1	mg/kg	13	13	100%	35.4	11.9	11.9	13
Cadmium	7440-43-9	D	CI3	mg/kg	13	13	100%	2.77	0.604	0.604	0.76
Cadmium	7440-43-9	W	CI3	mg/kg	13	13	100%	0.393	0.0674	0.0674	0.11
Iron	7439-89-6	D	DR	mg/kg	13	13	100%	14300	3850	3850	4,900
Iron	7439-89-6	W	LHL2	mg/kg	13	13	100%	2710	672	672	960
Lead	7439-92-1	D	HQ	mg/kg	13	13	100%	20.1	4.83	4.83	6.2
Lead	7439-92-1	W	DR	mg/kg	13	13	100%	2.06	0.745	0.745	0.95
Magnesium	7439-95-4	D	LHL1	mg/kg	13	13	100%	23800	4810	4810	6,400
Magnesium	7439-95-4	W	LHL1	mg/kg	13	13	100%	8270	814	814	1,500
Mercury	7439-97-6	D	DR	mg/kg	13	11	85%	0.052	0.023	0.023	0.026
Mercury	7439-97-6	W	DR	mg/kg	13	13	100%	0.0095	0.0027	0.0027	0.0041
Methyl mercury	22967-92-6	D	CI1	ng/g	12	2	17%	8.42	4.95	2	6.3
Methyl mercury	22967-92-6	W	CI1	ng/g	12	2	17%	1.09	1	0.425	0.92
Selenium	7782-49-2	D	LHL6	mg/kg	13	13	100%	3.63	2.3	2.3	2.2
Selenium	7782-49-2	W	LHL6	mg/kg	13	13	100%	0.74	0.37	0.37	0.42
Zinc	7440-66-6	D	CI2	mg/kg	13	13	100%	56.6	38.9	38.9	32
Zinc	7440-66-6	W	DR	mg/kg	13	13	100%	9.73	4.78	4.78	4.9
Solids (total)	C-008	W	LHL1	%	13	13	100%	34.7	18.2	18.2	19
Moisture Content	MOISTURE	W	HQ	%	13	13	100%	92.6	81.8	81.8	81

Table 5-13: Aquatic Vegetation Results Summary
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Name	CAS Number	Dry/ Wet	Location of Max	Units	Average of Detects (ND=1/2 RDL)	Average of Detects (ND=1/2 MDL)	Range of RDL (low)	Range of RDLs (high)	Range of MDL (low)	Range of MDLs (high)
Arsenic	7440-38-2	D	DR	mg/kg	6.3	6.3	0.5	0.5	0.02	0.02
Arsenic	7440-38-2	W	LHL2	mg/kg	1.2	1.2	0.037	0.17	0.001	0.007
Boron	7440-42-8	D	CI1	mg/kg	89	89	0.5	10	0.2	4
Boron	7440-42-8	W	CI1	mg/kg	13	13	0.091	1.3	0.036	0.5
Cadmium	7440-43-9	D	CI3	mg/kg	0.76	0.76	0.02	0.02	0.003	0.003
Cadmium	7440-43-9	W	CI3	mg/kg	0.11	0.11	0.0015	0.0069	0.0002	0.001
Iron	7439-89-6	D	DR	mg/kg	4,900	4,900	0.99	1	0.09	0.09
Iron	7439-89-6	W	LHL2	mg/kg	960	960	0.074	0.35	0.007	0.03
Lead	7439-92-1	D	HQ	mg/kg	6.2	6.2	0.02	0.02	0.003	0.003
Lead	7439-92-1	W	DR	mg/kg	0.95	0.95	0.0015	0.0069	0.0002	0.001
Magnesium	7439-95-4	D	LHL1	mg/kg	6,400	6,400	0.99	1	0.6	0.6
Magnesium	7439-95-4	W	LHL1	mg/kg	1,500	1,500	0.074	0.35	0.045	0.21
Mercury	7439-97-6	D	DR	mg/kg	0.023	0.022	0.019	0.022	0.004	0.004
Mercury	7439-97-6	W	DR	mg/kg	0.0041	0.0041	0.0016	0.0066	0.0003	0.0014
Methyl mercury	22967-92-6	D	CI1	ng/g	5.2	2.7	9.8	10	3.9	4
Methyl mercury	22967-92-6	W	CI1	ng/g	1	0.5	1.1	3.4	0.4	1.4
Selenium	7782-49-2	D	LHL6	mg/kg	2.2	2.2	0.99	1	0.03	0.03
Selenium	7782-49-2	W	LHL6	mg/kg	0.42	0.42	0.074	0.35	0.002	0.01
Zinc	7440-66-6	D	CI2	mg/kg	32	32	0.5	0.5	0.08	0.08
Zinc	7440-66-6	W	DR	mg/kg	4.9	4.9	0.037	0.17	0.006	0.03
Solids (total)	C-008	W	LHL1	%	19	19	--	--	--	--
Moisture Content	MOISTURE	W	HQ	%	81	81	--	--	--	--

Table 5-13: Aquatic Vegetation Results Summary
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
CI	Curd's Inlet
D	Dry
DR	Dix River
HQ	HQ Inlet
LHL	Lower Herrington Lake
MDL	Method Detection Limit
mg/kg	milligrams per kilogram
ND	Not Detected
ng/g	Nanograms per gram
RDL	Reporting Detection Limit
W	Wet

Table 5-14: Aquatic Invertebrate Results Summary
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Nam	CAS Number	Dry/ Wet	Location of Max	Units	Number of Samples	Number of Detects	% Detects	Maximum Detect	Median Detect (ND = 1/2RDL)	Median Detect (ND = 1/2MDL)	Average Of Detects (ND = no data)
Arsenic	7440-38-2	D	DR	mg/kg	14	14	100%	2.08	1.28	1.28	1.3
Arsenic	7440-38-2	W	DR	mg/kg	14	14	100%	0.64	0.415	0.415	0.41
Boron	7440-42-8	D	CI2	mg/kg	14	14	100%	13.5	8.4	8.4	8.5
Boron	7440-42-8	W	CI2	mg/kg	14	14	100%	4.56	2.71	2.71	2.7
Cadmium	7440-43-9	D	CI3	mg/kg	14	14	100%	1.06	0.3265	0.3265	0.44
Cadmium	7440-43-9	W	CI3	mg/kg	14	14	100%	0.366	0.1097	0.1097	0.14
Iron	7439-89-6	D	DR	mg/kg	14	14	100%	357	142	142	170
Iron	7439-89-6	W	DR	mg/kg	14	14	100%	109	47.7	47.7	56
Lead	7439-92-1	D	LHL3	mg/kg	14	14	100%	0.456	0.1595	0.1595	0.18
Lead	7439-92-1	W	LHL3	mg/kg	14	14	100%	0.137	0.05035	0.05035	0.057
Magnesium	7439-95-4	D	LHL4	mg/kg	14	14	100%	4370	3295	3295	3,200
Magnesium	7439-95-4	W	LHL4	mg/kg	14	14	100%	1350	1045	1045	1,000
Mercury	7439-97-6	D	LHL2	mg/kg	14	13	93%	0.063	0.031	0.031	0.033
Mercury	7439-97-6	W	LHL2	mg/kg	14	14	100%	0.018	0.0096	0.0096	0.01
Methyl mercury	22967-92-6	D	LHL2	ng/g	14	14	100%	54.7	37.95	37.95	35
Methyl mercury	22967-92-6	W	LHL2	ng/g	14	14	100%	15.7	11.9	11.9	11
Selenium	7782-49-2	D	LHL5	mg/kg	14	14	100%	2.68	2.13	2.13	2
Selenium	7782-49-2	W	CI3	mg/kg	14	14	100%	0.79	0.675	0.675	0.65
Zinc	7440-66-6	D	LHL3	mg/kg	14	14	100%	94.8	65.65	65.65	69
Zinc	7440-66-6	W	LHL3	mg/kg	14	14	100%	28.5	21.55	21.55	22
Lipids	LIPIDS	D	LHL4	%	14	14	100%	4.8	1.55	1.55	1.7
Lipids	LIPIDS	W	LHL4	%	14	14	100%	1.47	0.475	0.475	0.52
Solids (total)	C-008	W	HQ	%	14	14	100%	38.2	31.25	31.25	32
Moisture Content	MOISTURE	W	LHL5	%	14	14	100%	72.5	68.75	68.75	68

Table 5-14: Aquatic Invertebrate Results Summary
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Constituent Nam	CAS Number	Dry/ Wet	Location of Max	Units	Average of Detects (ND=1/2 RDL)	Average of Detects (ND=1/2 MDL)	Range of RDL (low)	Range of RDLs (high)	Range of MDL (low)	Range of MDLs (high)
Arsenic	7440-38-2	D	DR	mg/kg	1.3	1.3	0.5	0.5	0.02	0.02
Arsenic	7440-38-2	W	DR	mg/kg	0.41	0.41	0.14	0.19	0.006	0.008
Boron	7440-42-8	D	CI2	mg/kg	8.5	8.5	0.5	0.5	0.2	0.2
Boron	7440-42-8	W	CI2	mg/kg	2.7	2.7	0.14	0.19	0.06	0.08
Cadmium	7440-43-9	D	CI3	mg/kg	0.44	0.44	0.02	0.02	0.003	0.003
Cadmium	7440-43-9	W	CI3	mg/kg	0.14	0.14	0.0055	0.0076	0.0008	0.0011
Iron	7439-89-6	D	DR	mg/kg	170	170	0.99	1	0.09	0.09
Iron	7439-89-6	W	DR	mg/kg	56	56	0.28	0.38	0.02	0.03
Lead	7439-92-1	D	LHL3	mg/kg	0.18	0.18	0.02	0.02	0.003	0.003
Lead	7439-92-1	W	LHL3	mg/kg	0.057	0.057	0.0055	0.0076	0.0008	0.0011
Magnesium	7439-95-4	D	LHL4	mg/kg	3,200	3,200	0.99	1	0.6	0.6
Magnesium	7439-95-4	W	LHL4	mg/kg	1,000	1,000	0.28	0.38	0.17	0.23
Mercury	7439-97-6	D	LHL2	mg/kg	0.032	0.031	0.019	0.031	0.004	0.006
Mercury	7439-97-6	W	LHL2	mg/kg	0.01	0.01	0.0052	0.0089	0.0011	0.0017
Methyl mercury	22967-92-6	D	LHL2	ng/g	35	35	9.8	10	3.9	4
Methyl mercury	22967-92-6	W	LHL2	ng/g	11	11	2.7	3.8	1.1	1.5
Selenium	7782-49-2	D	LHL5	mg/kg	2	2	0.99	1	0.03	0.03
Selenium	7782-49-2	W	CI3	mg/kg	0.65	0.65	0.28	0.38	0.008	0.01
Zinc	7440-66-6	D	LHL3	mg/kg	69	69	0.5	0.5	0.08	0.08
Zinc	7440-66-6	W	LHL3	mg/kg	22	22	0.14	0.19	0.02	0.03
Lipids	LIPIDS	D	LHL4	%	1.7	1.7	0.13	0.18	0.13	0.18
Lipids	LIPIDS	W	LHL4	%	0.52	0.52	0.05	0.05	0.05	0.05
Solids (total)	C-008	W	HQ	%	32	32	--	--	--	--
Moisture Content	MOISTURE	W	LHL5	%	68	68	--	--	--	--

Table 5-14: Aquatic Invertebrate Results Summary
EW Station Phase I Technical Memorandum and Phase II Plan
Herrington Lake - Mercer County - Kentucky

Notes:

%	Percent
CI	Curd's Inlet
D	Dry
DR	Dix River
HQ	HQ Inlet
LHL	Lower Herrington Lake
MDL	Method Detection Limit
mg/kg	milligrams per kilogram
ND	Not Detected
ng/g	Nanograms per gram
RDL	Reporting Detection Limit
W	Wet

Table 6-1: Phase II Proposed Sample Locations and Types
EW Station Phase I Technical Memorandum Herrington Lake
Mercer County, Kentucky

Focus Regions ↓	Herrington Lake Areas		# of Samples for Each Sample Type						
			Young Of the Year (YOY)	Adult Fish[b]					
	Sampling Location ID	Location Description	Bass[c]	Bass	Catfish	Bluegill	Surface Water[a]	Sediment	Pore Water
Curds Inlet	CI-1, Curds NB	Upper Curds Inlet	—	1	1	1	—	—	2
	CI-2, CI-2.1, CI 2.2	Middle Curds Inlet	2				1	6	5
	CI-3, CI-3.1, CI 3.2						1	9	6
	CI4	Lower / Mouth of Curds Inlet	2				2	3	2
LHL Outside Curds Inlet	HQ-1	HQ Inlet	2	—	—	1	1	—	—
	LHL-1	Rocky Run Embayment	2	1	1	1	2	—	—
	LHL-3 Cove	Lower Herrington Lake Main Channel Southside Cove	2	—	—	1	3	—	—
	LHL-6 Cove	Lower Herrington Lake Main Channel Eastside Cove	2	1	1	1	3	—	—
	Total for each Sample Type =		12	3	3	5	13	18	15
				Total # of proposed samples = 69					

Notes:

a Water sampling during summer stratification will involve one sample for each stratified surface water layer.

b Fish sampling will include the three main target species, bluegill, bass, and catfish. Larger bass and catfish samples will consist of single-fish or will be composited from 2–5 fish wherever required for sufficient sample volume. All bluegill samples will be composite samples.

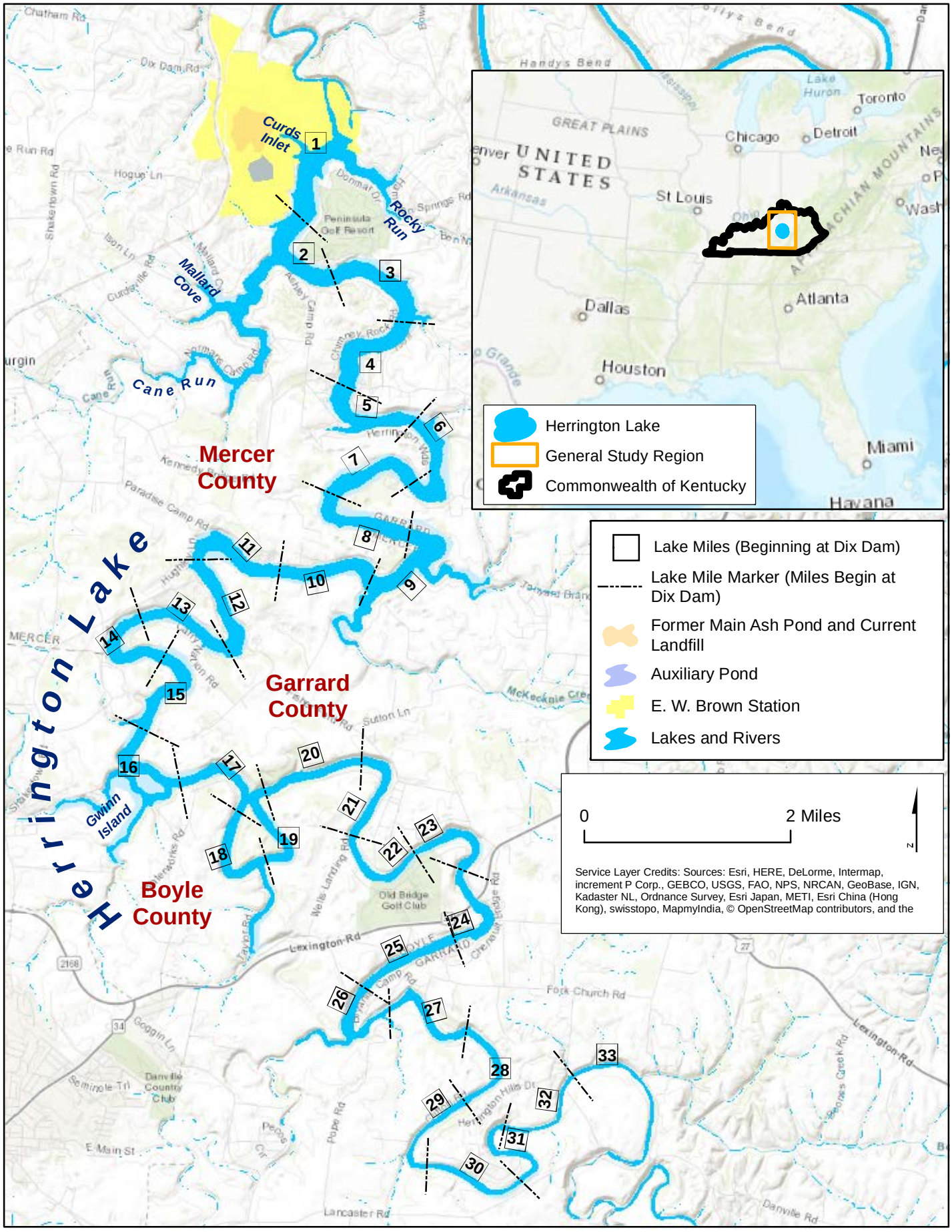
c One Young Of the Year (YOY) fish sample will consist of a minimum of 500 young bass, including largemouth and spotted (Kentucky) bass wherever available. If sufficient sample sizes are not reached within Curds Inlet, then the samples may be combined to reach the minimum sample requirement of 500 fish. The 500 fish samples are planned for the deformities assessment. YOY fish tissue residue samples will be whole body and will be comprised of approximately 10 fish in each composite sample, with 12 samples (120 individual fish).

Table 6-2: Phase II Proposed Laboratory Analytical Methods Per Matrix
EW Station Phase I Technical Memorandum Herrington Lake
Mercer County, Kentucky

Phase II Target Analytes	Fish		Surface[1] Water	Sediment	Pore Water[2]
	YOY Bass	Adult Multi-Species			
Selenium Only	USEPA 6020A		--	--	--
Speciated Selenium	--	--	--	--	HPLC with ICP-MS
Speciated Arsenic	--	--	--	--	1632A
Metals (Total Se, As, Cd, Zn, B, Mg, Fe, Pb)	--	--	USEPA 200.8	USEPA 6020A (Se, As, Cd, Zn, B), USEPA 6010D (Mg, Fe, Pb)	--
Metals (Dissolved Se, As, Cd, Zn, B, Mg, Fe, Pb)	--	--		--	USEPA 200.8
Mercury (Total)	--	--	USEPA 1631E	7471B	--
Mercury (Dissolved)	--	--		--	USEPA 1631E
Methylmercury (Total)	--	--	USEPA 1630	Lab SOP	--
Methylmercury (Dissolved)	--	--		--	USEPA 1630
Percent Solids	--	--	--	E160.3	--
Percent Lipids	Lab SOP	--	--	--	--
Percent Moisture	Lab SOP	--	--	--	--

Notes:
USEPA United States Environmental Protection Agency
HPLC High Performance Liquid Chromatography
ICP-MS Inductively Coupled Plasma/Mass Spectrometry
SOP Standard Operating Procedure
1 Non-Filtered and Field-Filtered (0.45µm)
2 Field-Filtered (0.45µm)
Se, As, Cd, Zn, B, Mg, Fe, Pb Selenium, Arsenic, Cadmium, Zinc, Boron, Magnesium, Iron, Lead
-- Not appicable

Figures



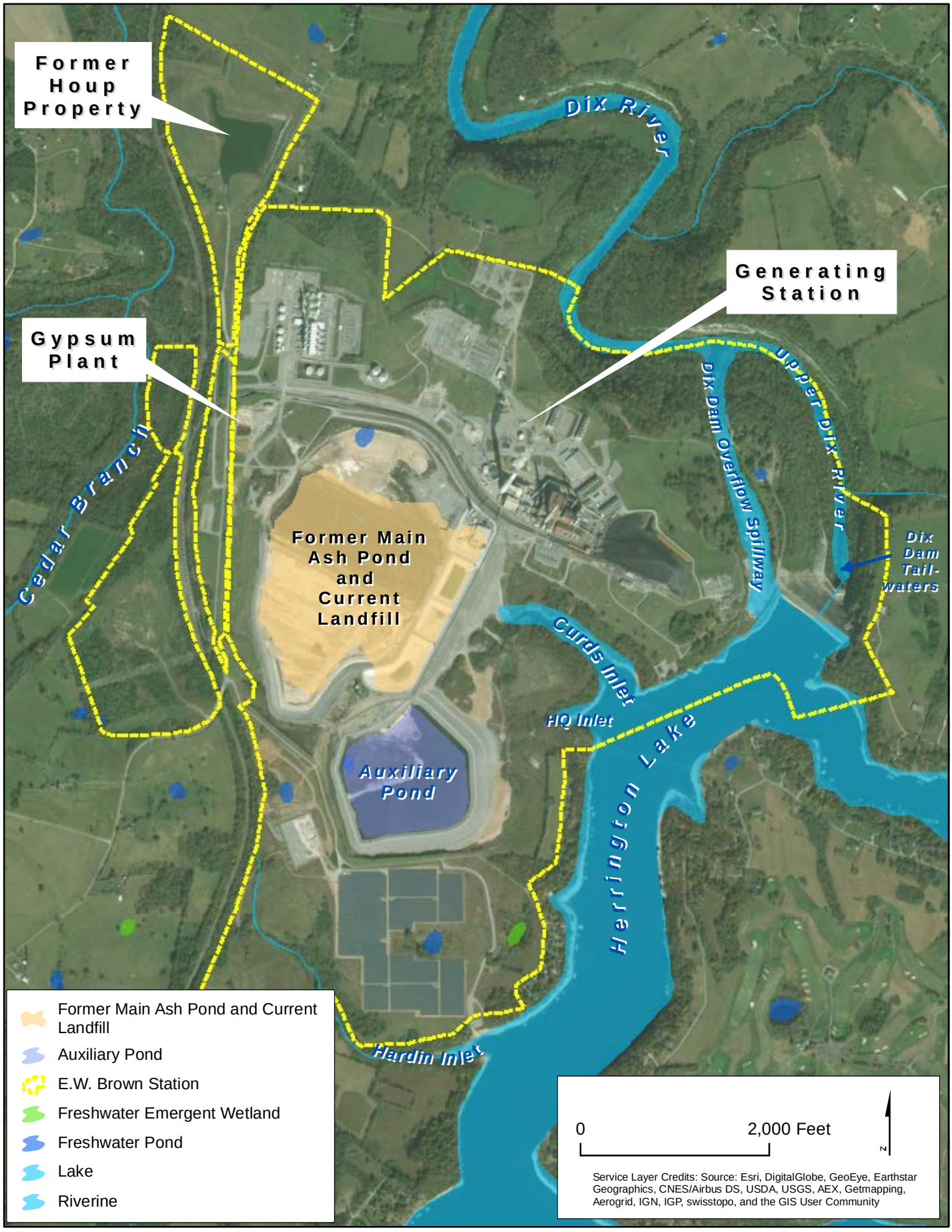
RAMBOLL

Map Design: AJS, Date: March 7, 2018

E.W. Brown Station Location Map
Herrington Lake Corrective Action Plan
Phase I Technical Memorandum
Mercer County, Kentucky

FIGURE
1-1

Project Code:



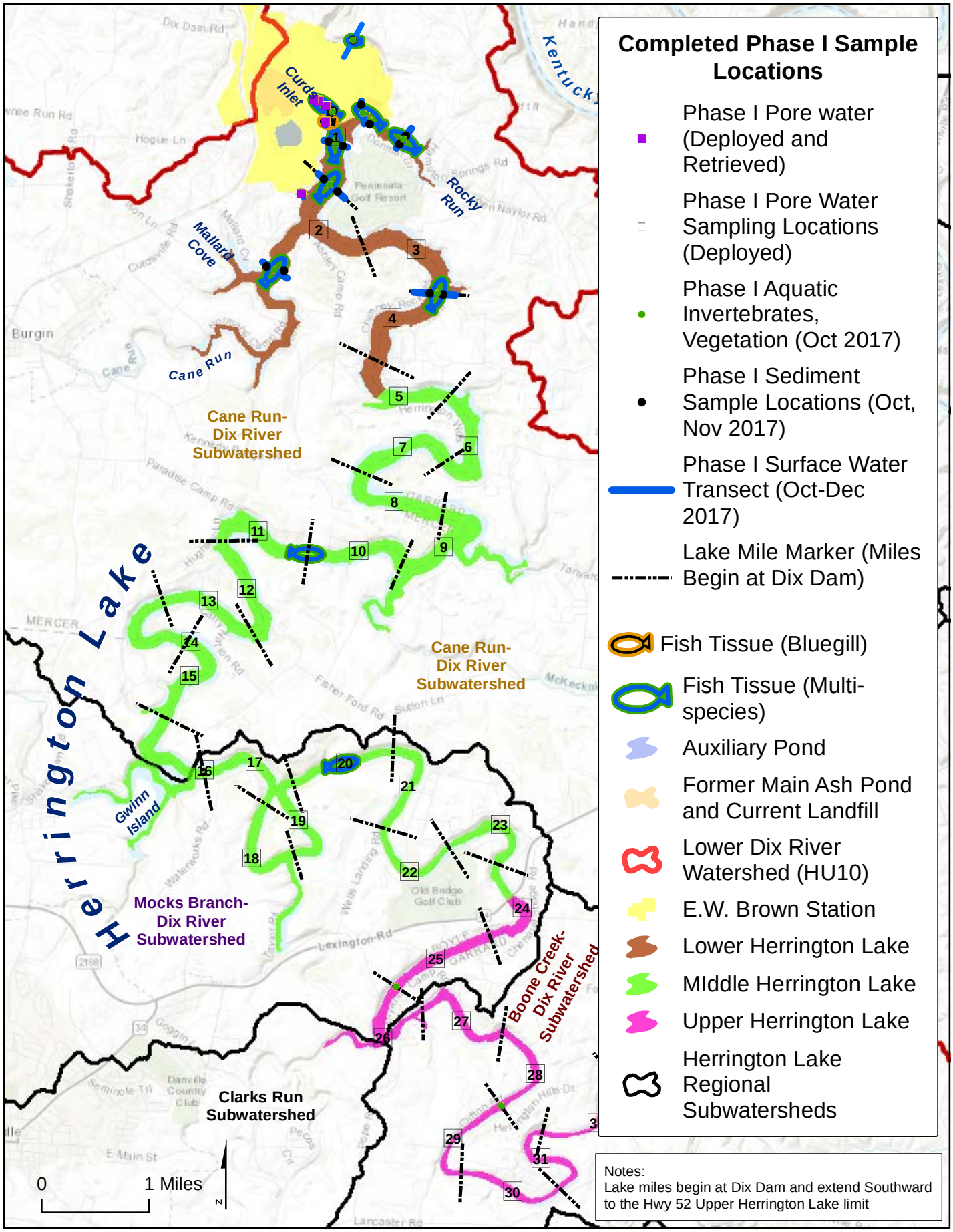
RAMBOLL

Map Design: AJS, Date: March 7, 2018

Site Layout
Herrington Lake Corrective Action Plan
Phase I Technical Memorandum
Mercer County, Kentucky

FIGURE
1-2

Project Code:



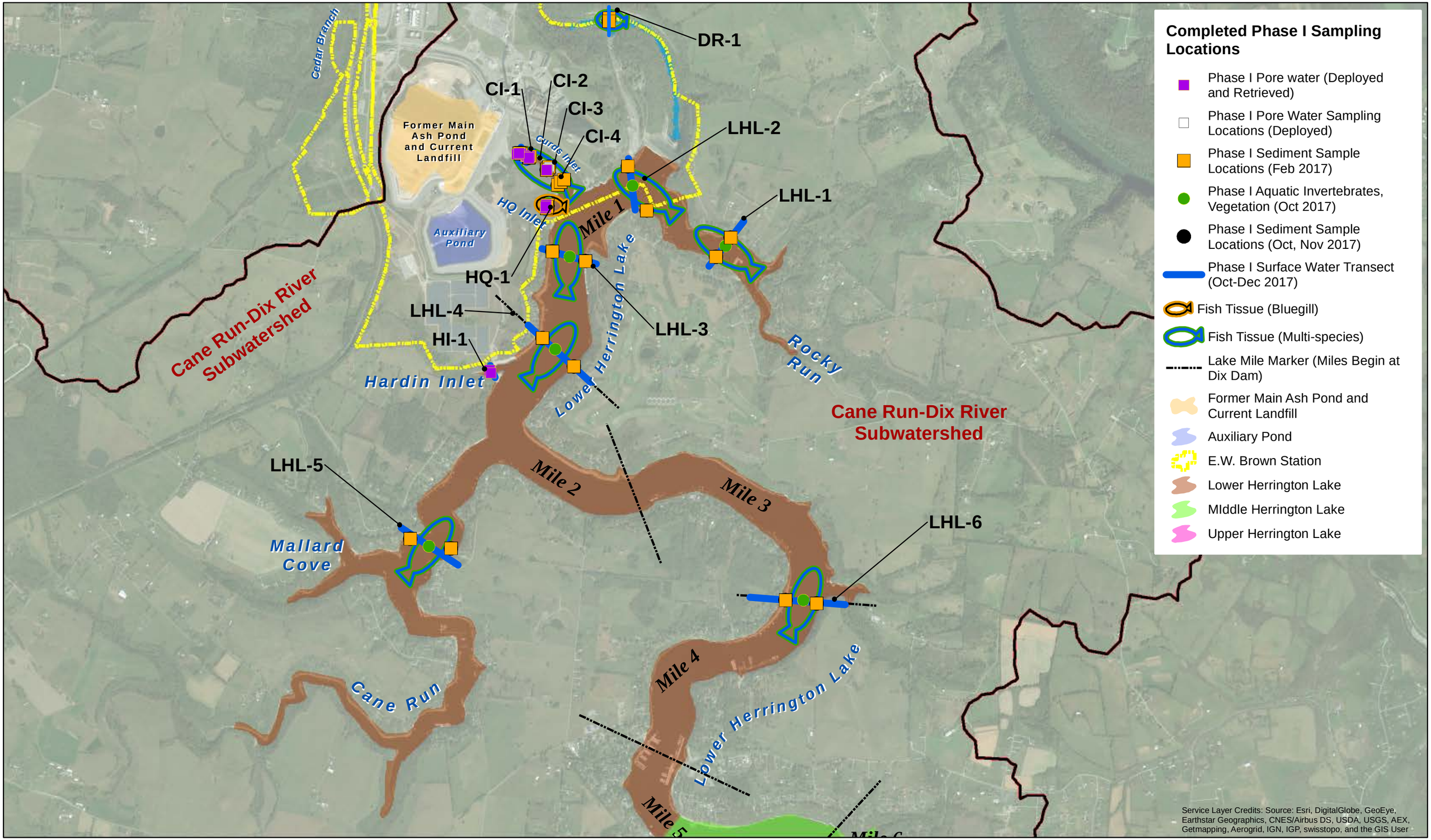
RAMBOLL

Map Design: AJS, Date: March 7, 2018

Phase I Sample Collection Overview
Herrington Lake Corrective Action Plan
Phase 1 Technical Memorandum
Mercer County, Kentucky

FIGURE 2-1

Project Code:



RAMBOLL

Map Design: AJS, Date: Mar 22, 2018

0 2,000 Feet

N

Notes:
Lake miles begin at Dix Dam and extend Southward to the Hwy 52 Upper Herrington Lake limit

Phase I Completed Sampling for Lower Herrington Lake
Herrington Lake Corrective Action Plan Phase 1 Technical Memorandum
Mercer County, Kentucky

FIGURE
2-1A

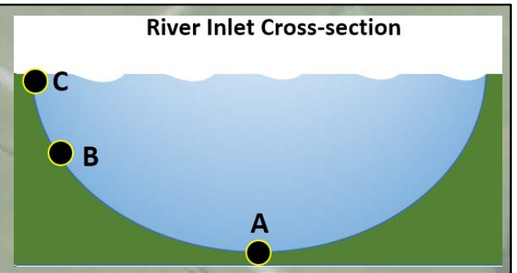
Project:

Completed Phase I Sampling Locations

- Phase I Pore water (Deployed and Retrieved)
- Phase I Pore Water Sampling Locations (Deployed)
- Phase I Aquatic Invertebrates, Vegetation (Oct 2017)
- Phase I Sediment Sample Locations (Feb 2017)
- Phase I Sediment Sample Locations (Oct, Nov 2017)
- Phase I Surface Water Transect (Oct-Dec 2017)
- Fish Tissue (Bluegill)
- Fish Tissue (Multi-Species)
- E.W. Brown Station

Curds-1
CI-1
Curds-2
CI-2
CI-3
CI-4
HQ-1
Curds North Bank
Curds Inlet
HQ Inlet
A
B
C

River Inlet Cross-section



NOTES:
Location A:
Subaqueous, close to the deepest point (thalweg) of the channel.
Location B:
Subaqueous ~ 3-5 feet below the water line at the time of sampling.
Location C:
Above winter pool elevation (~725 feet msl) and below summer pool elevation (~740 feet msl).

Text

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN,

RAMBOLL

Map Design: AJS, Date: Mar 22, 2018

0 100 Feet

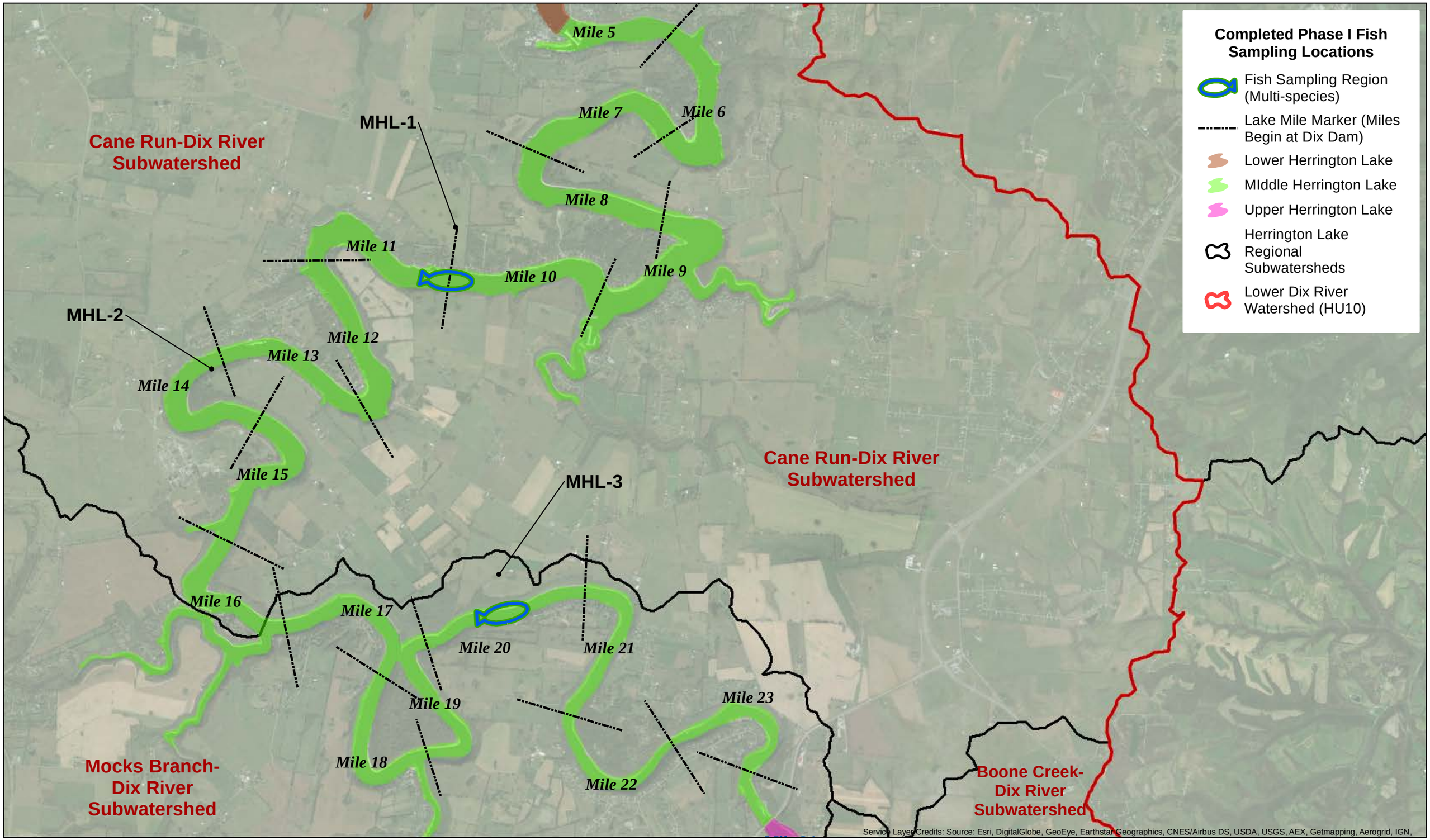
N

Notes:
Initial Curds North Bank, Curds-1, and Curds-2 sampling was completed in February 2017.

Phase I Completed Sampling for Curds Inlet and HQ Inlet, Lower Herrington Lake, Herrington Lake Corrective Action Plan, Mercer County, Kentucky

FIGURE 2-1B

Project:



RAMBOLL

Map Design: AJS, Date: Mar 22, 2018

0 0.5 Miles

N

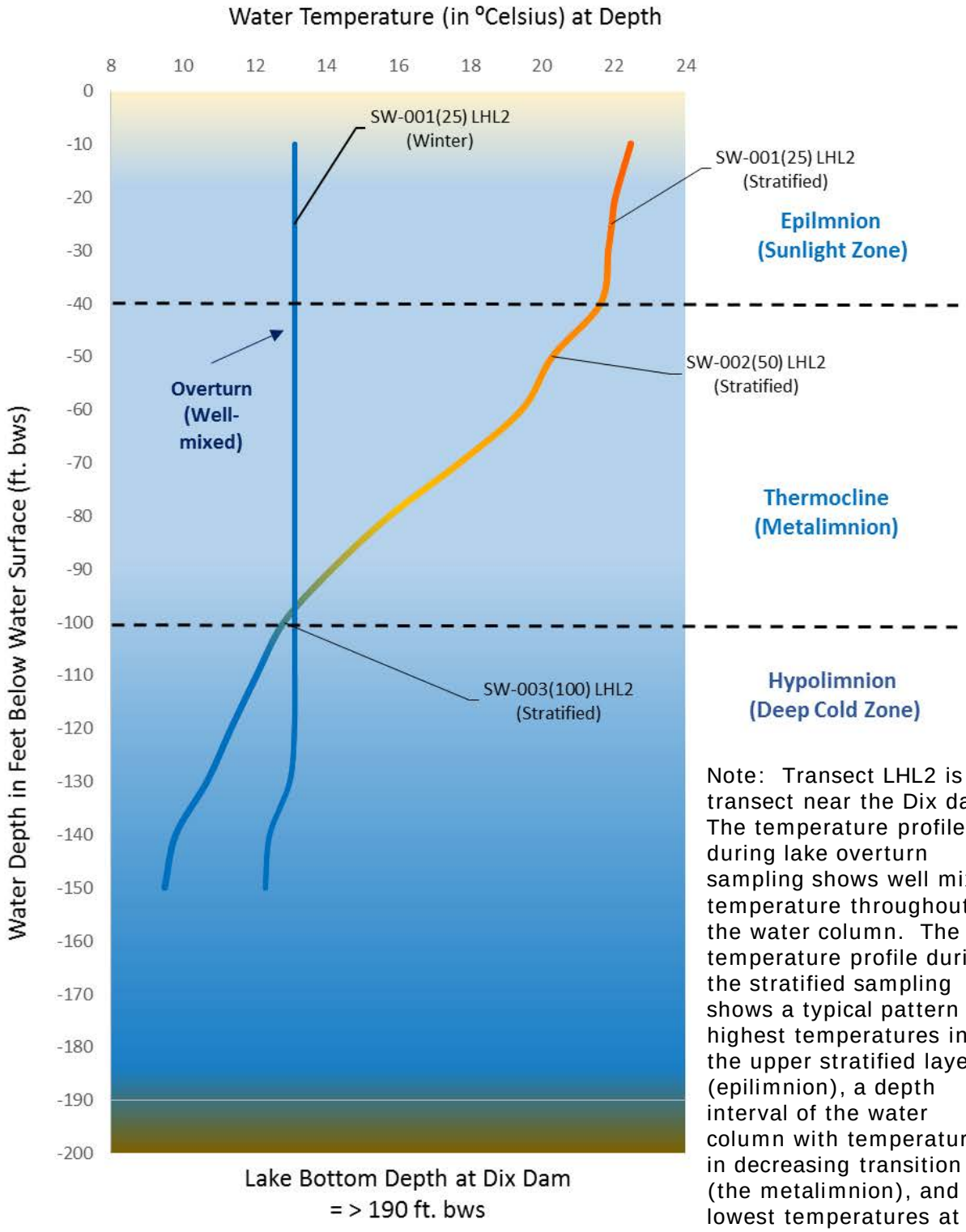
Notes:
Lake miles begin at Dix Dam and extend Southward to the Hwy 52 Upper Herrington Lake limit

Phase I Completed Fish Sampling Locations for Middle Herrington Lake
Herrington Lake Corrective Action Plan Phase 1 Technical Memorandum
Mercer County, Kentucky

FIGURE
2-1C

Project:

Water depth greater than 190 feet below water surface (bws)



Note: Transect LHL2 is the transect near the Dix dam. The temperature profile during lake overturn sampling shows well mixed temperature throughout the water column. The temperature profile during the stratified sampling shows a typical pattern of highest temperatures in the upper stratified layer (epilimnion), a depth interval of the water column with temperatures in decreasing transition (the metalimnion), and the lowest temperatures at depth.

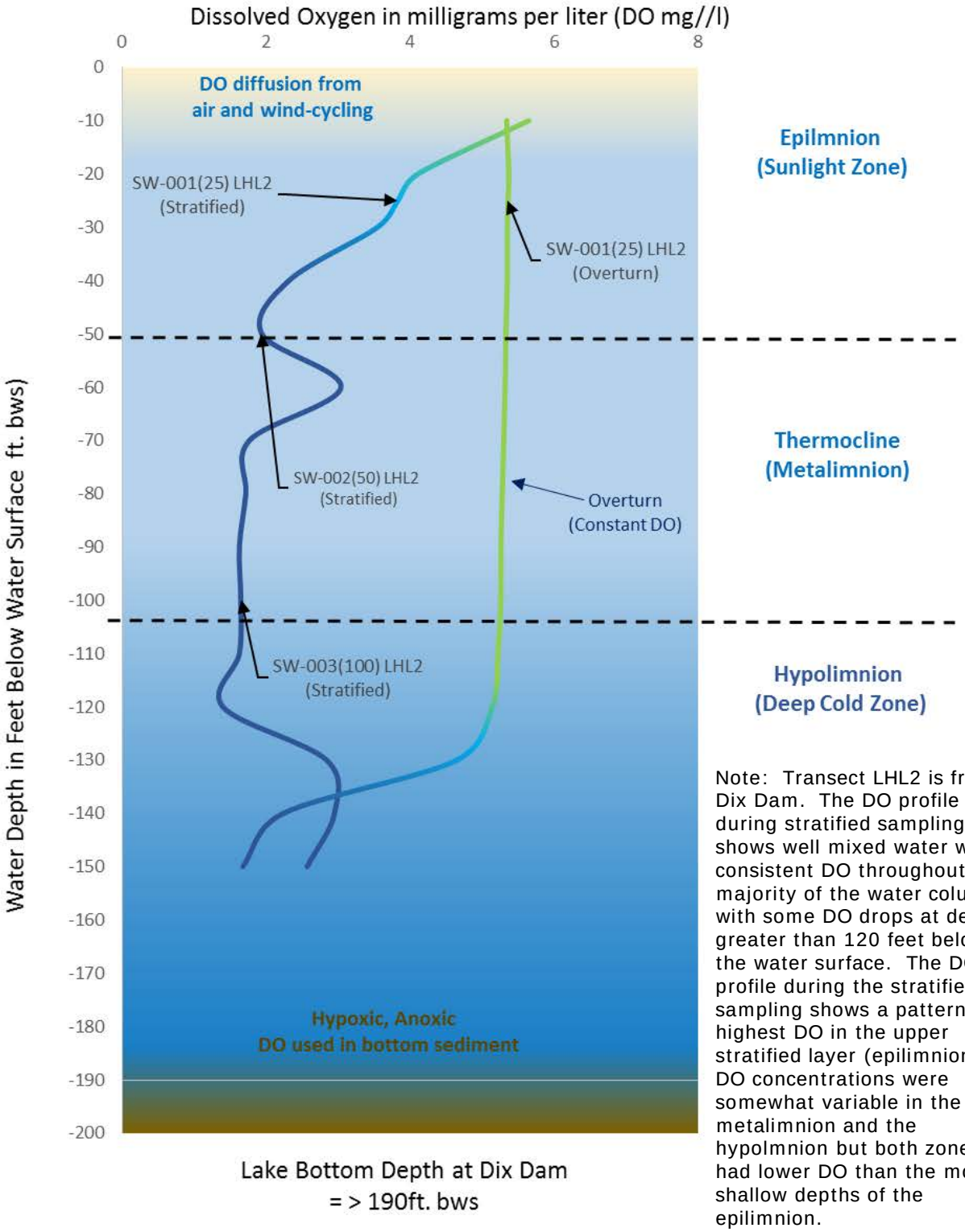
RAMBOLL

DRAFTED BY: AJS | DATE: 4/12/2018

STRATIFICATION VS. OVERTURN THERMAL STRATIFICATION (IN CELSIUS DEGREES) PROFILES RECORDED AT DIX DAM (LHL-2)
Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
3-1A

Water depth greater than 190 feet below water surface (bws)



Note: Transect LHL2 is from Dix Dam. The DO profile during stratified sampling shows well mixed water with consistent DO throughout the majority of the water column, with some DO drops at depths greater than 120 feet below the water surface. The DO profile during the stratified sampling shows a pattern of highest DO in the upper stratified layer (epilimnion), DO concentrations were somewhat variable in the metalimnion and the hypolmnion but both zones had lower DO than the most shallow depths of the epilimnion.

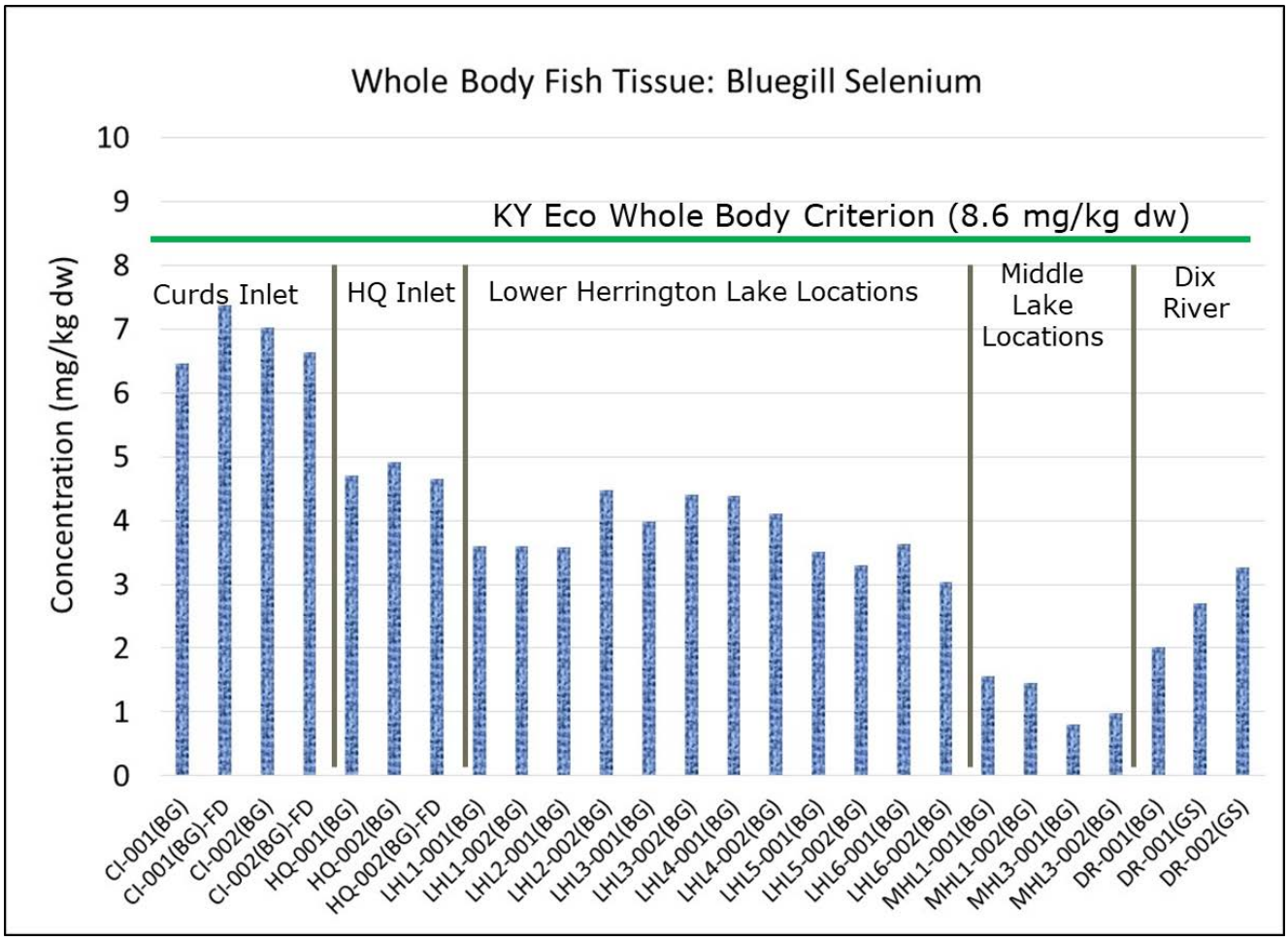
RAMBOLL

DRAFTED BY: AJS | DATE: 4/12/2018

STRATIFICATION VS. OVERTURN DISSOLVED OXYGEN (DO) PROFILES RECORDED AT DIX DAM (LHL-2)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
3-1B

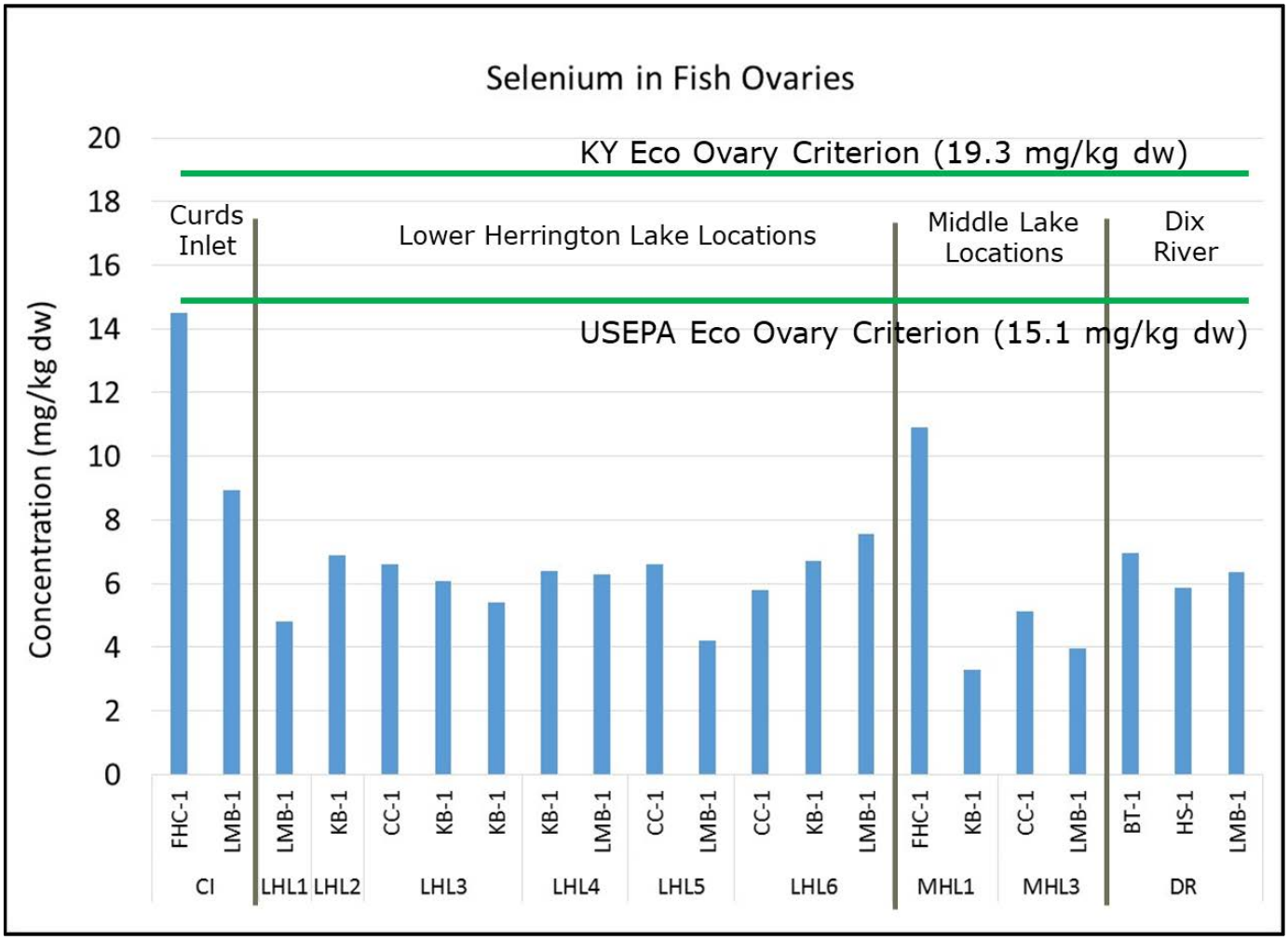


Bluegill (BG), Green Sunfish (GS), Dry Weight (DW), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), milligrams per kilogram (mg/kg), dry weight (DW)

Dry weight, consistent with Kentucky standard
Observations

- Below standard
- Highest in Curds Inlet, with gradient away from Curds Inlet
- Field duplicates show similar results (Curds Inlet)
- Lowest in MHL locations

RAMBOLL DRAFTED BY: PAL DATE: 4/12/2018	SELENIUM IN WHOLE-BODY FISH-TISSUE BLUEGILL AND GREEN SUNFISH (DRY WEIGHT) Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	FIGURE 5-1A



Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Curds Inlet (CI), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), milligrams per kilogram (mg/kg), dry weight (DW)

Dry weight, consistent with Kentucky ecological standard

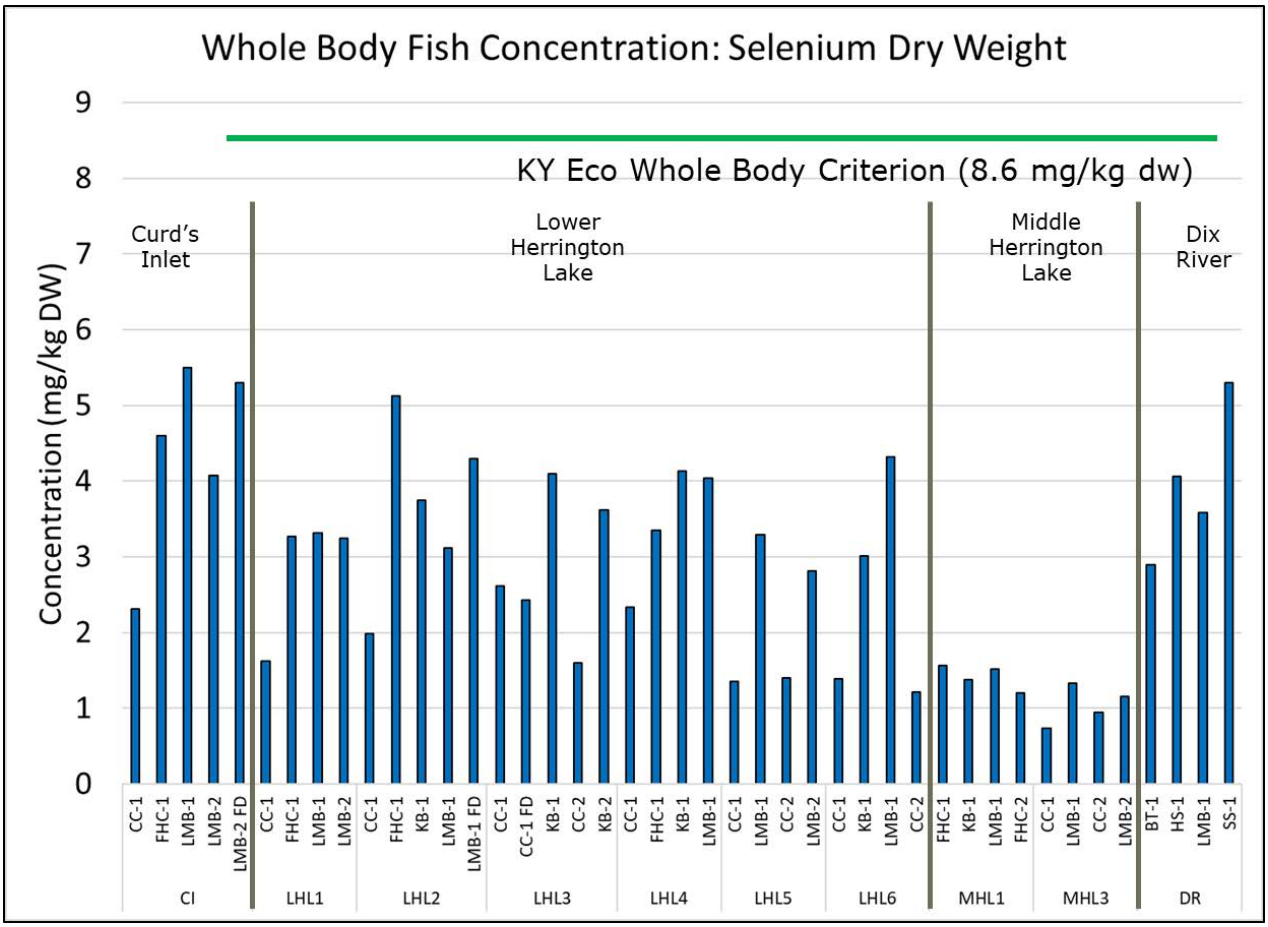
RAMBOLL

DRAFTED BY: PAL | DATE: 4/12/2018

SELENIUM IN LARGER FISH OVARIES, LARGER FISH (DRY WEIGHT)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-1B



Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Dry Weight (DW), Curds Inlet (CI), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), milligrams per kilogram (mg/kg), dry weight (DW)

Dry weight, consistent with Kentucky ecological standard

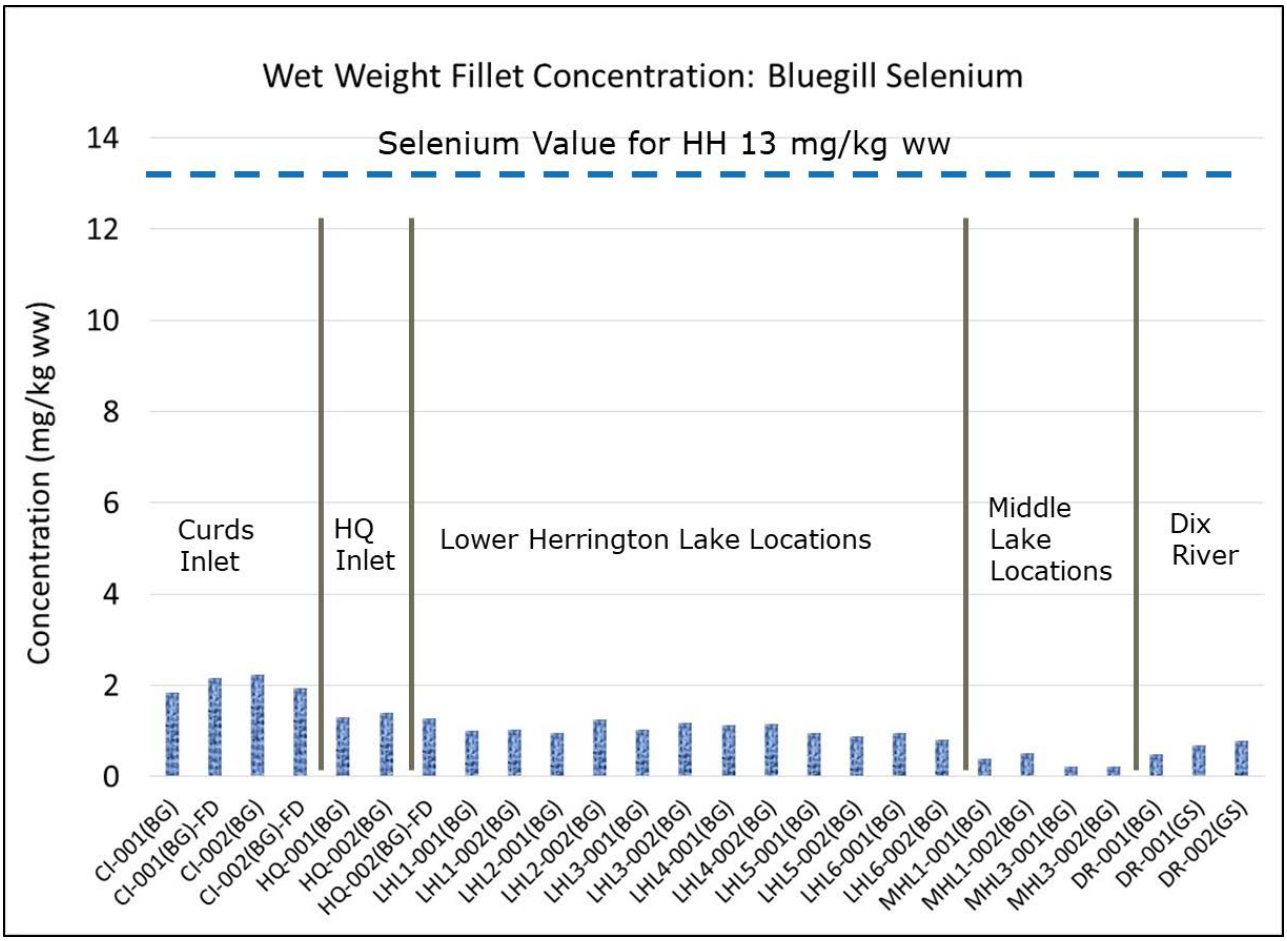
RAMBOLL

DRAFTED BY: PAL | DATE: 4/12/2018

SELENIUM IN WHOLE-BODY FISH-TISSUE LARGER FISH (DRY WEIGHT)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-1C

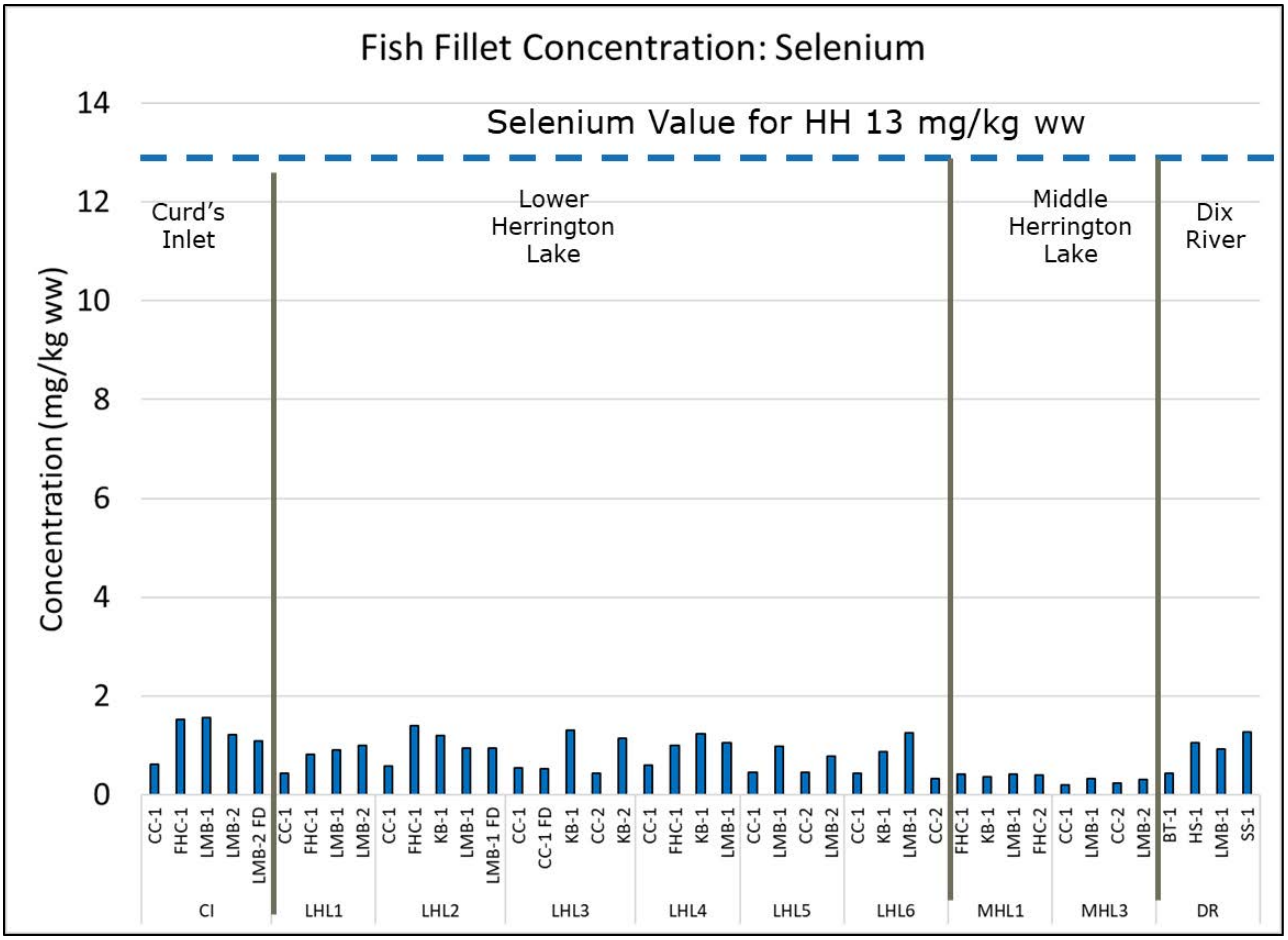


Bluegill (BG), Green Sunfish (GS), Wet Weight (WW), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), milligram per kilogram (mg/kg), wet weight (WW), Human Health (HH)

Wet weight for human health considerations
Risk based concentration (RBC) derived assuming 52 meals per year for an adult:

- 13 mg/kg
- Consumption rate consistent with state-wide mercury advisory for panfish

RAMBOLL	SELENIUM IN FILLET TISSUE BLUEGILL AND GREEN SUNFISH (WET WEIGHT) Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	FIGURE 5-1D
DRAFTED BY: PAL	DATE: 4/12/2018		

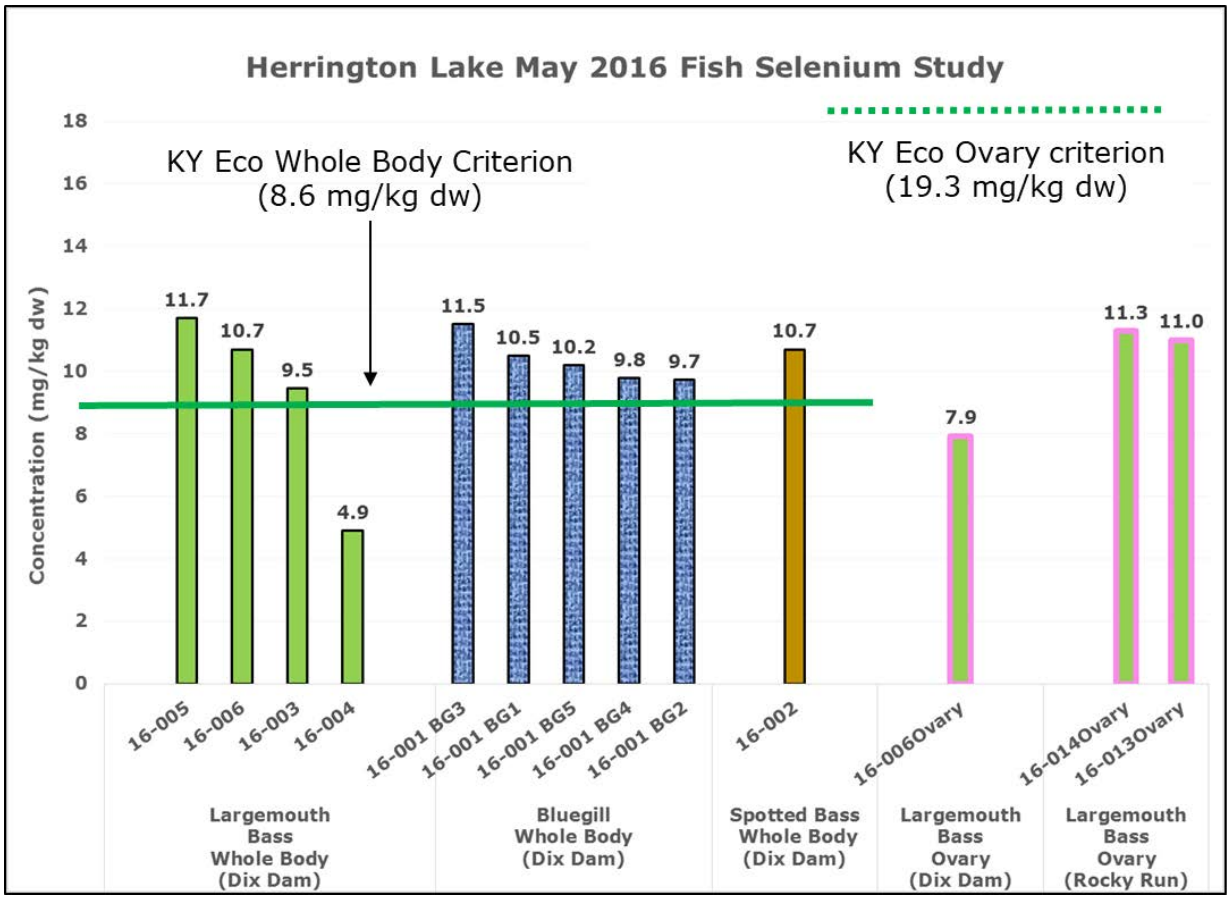


Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Dry Weight (DW), Curds Inlet (CI), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), milligrams per kilogram (mg/kg), wet weight (WW)

Wet weight for human health considerations
RBC derived assuming 52 meals per year for an adult:

- 13 mg/kg ww

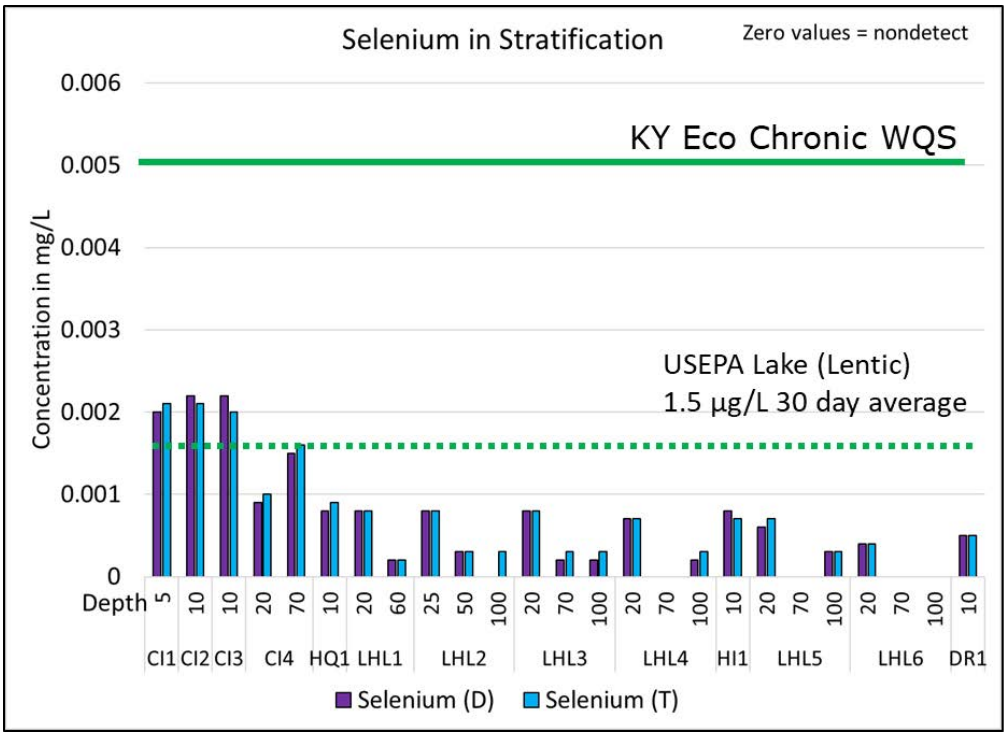
RAMBOLL	SELENIUM IN FILLET TISSUE, LARGER FISH (WET WEIGHT) Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	FIGURE 5-1E
DRAFTED BY: PAL	DATE: 4/12/2018	

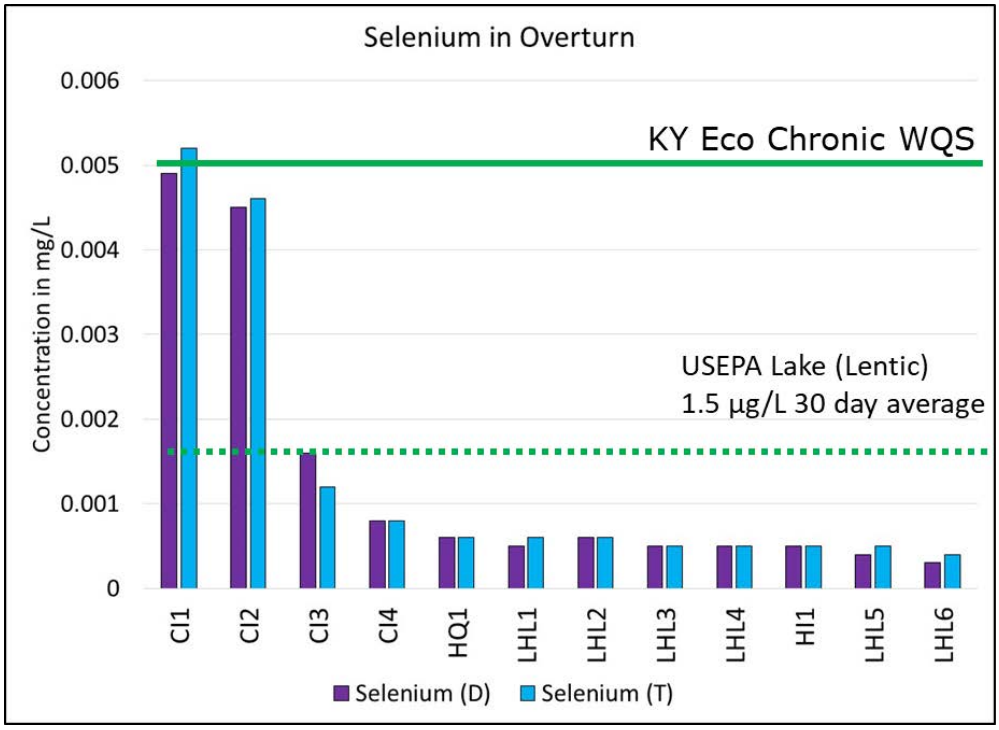


Bluegill (BG), milligram per kilogram (mg/kg), dry weight (DW)
KDOW fish sampling in May 2016

Sampling denoted at Dix Dam could be 1 to 2 miles upgradient from the dam, per KDOW staff involved with May 2016 sampling effort.

RAMBOLL	SELENIUM IN KDOW 2016 FISH STUDY FISH-TISSUE Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	FIGURE 5-1F
DRAFTED BY: PAL	DATE: 4/12/2018	



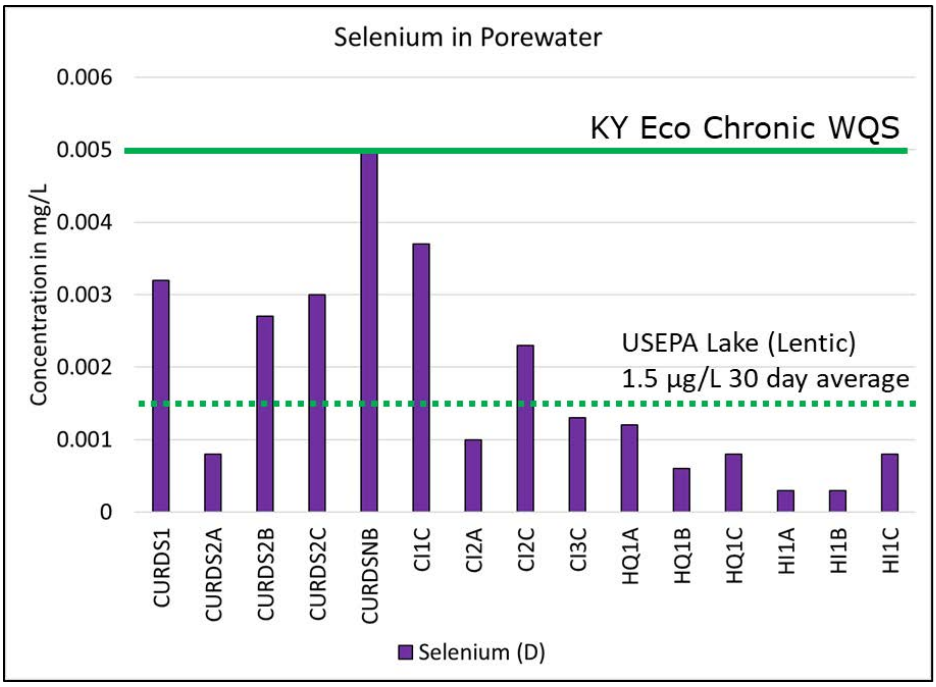


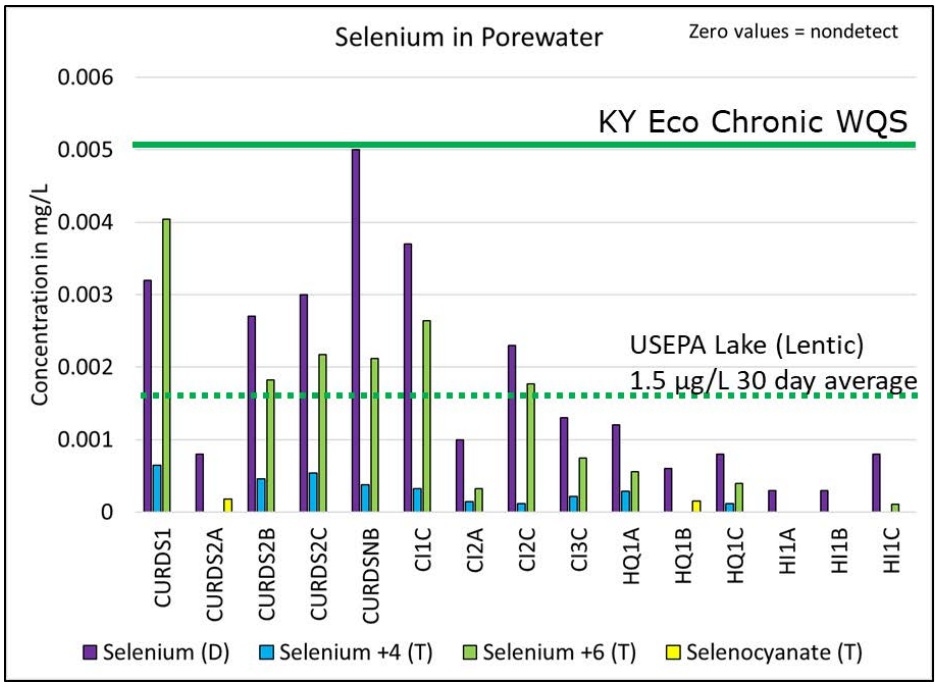
Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), Dissolved (D), Total Unfiltered (T) , milligram per liter (mg/L), Micrograms per liter (ug/L), Kentucky Water Chronic Ecological Quality Standard (Kentucky Eco Chronic WQS). Numbers above sample IDs in stratification chart indicate sample depth in feet.

Human health (HH) water quality standards (WQS) for Kentucky (KY) and USEPA are higher than scale would allow to graphically show

- Kentucky Human Health Water quality standard (Kentucky HH WQS) Se = 0.17 mg/L
- USEPA Maximum contaminant level (MCL) for Se = 0.05 mg/L

RAMBOLL DRAFTED BY: PAL DATE: 4/12/2018	SELENIUM IN SURFACE WATER (STRATIFIED AND OVERTURN) Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	FIGURE 5-1G



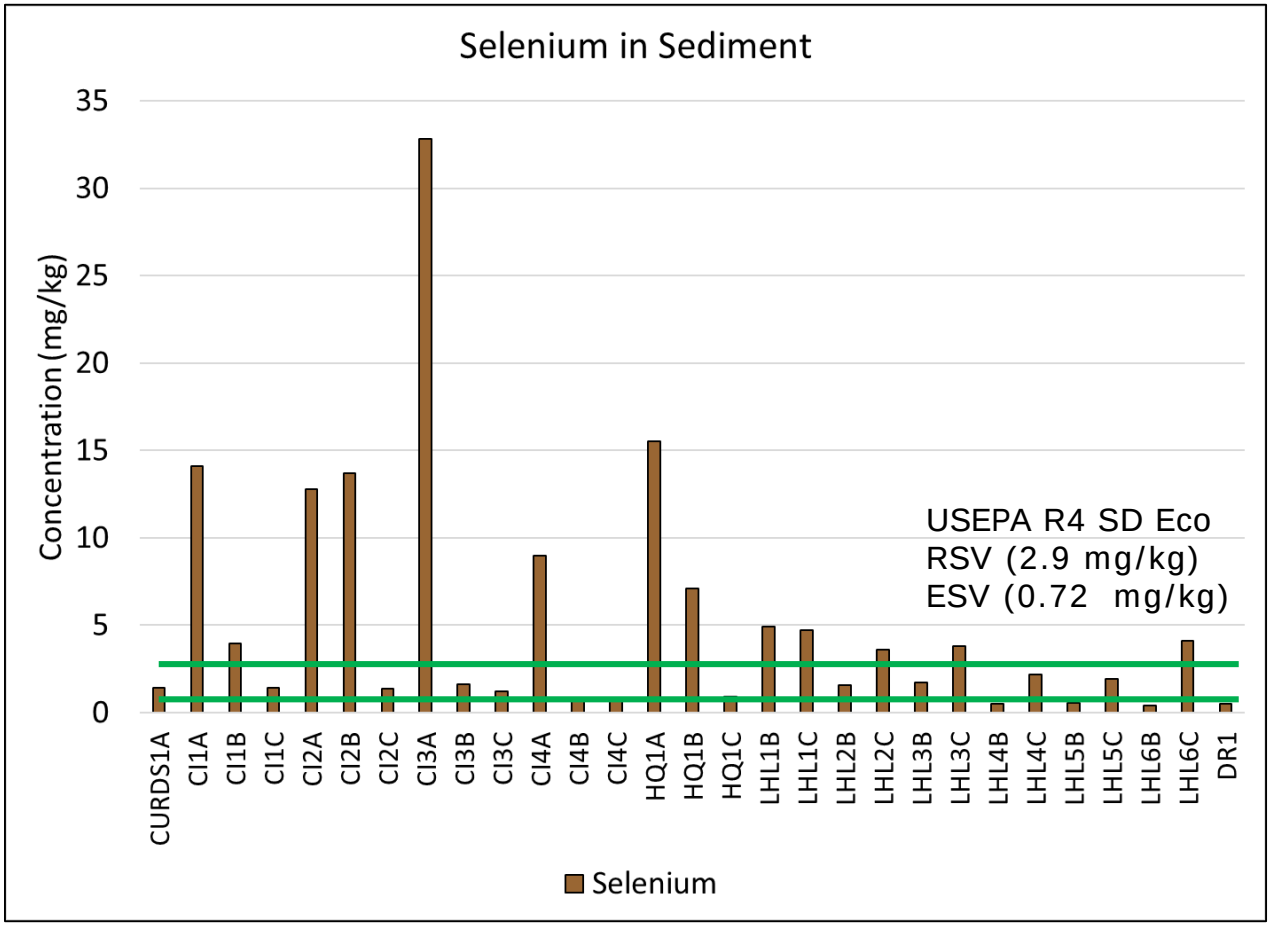


Curds Inlet (CI), HQ Inlet (HQ), Hardin's Inlet (HI), Dissolved (D), Total Unfiltered (T), milligrams per liter (mg/L), Kentucky Water Chronic Ecological Quality Standard (Kentucky Eco Chronic WQS), Micrograms per liter (ug/L)

Speciated selenium allows an understanding of the forms of selenium because not all forms are toxic screening values are often based on the assumption that selenium is present in the most toxic form

USEPA Region 4 Criteria for selenite (SeIV or Se4+) (0.028 mg/L chronic) and selenate (SeVI or Se6+) (0.009 mg/L chronic) are not shown because they are off the scale of this graph

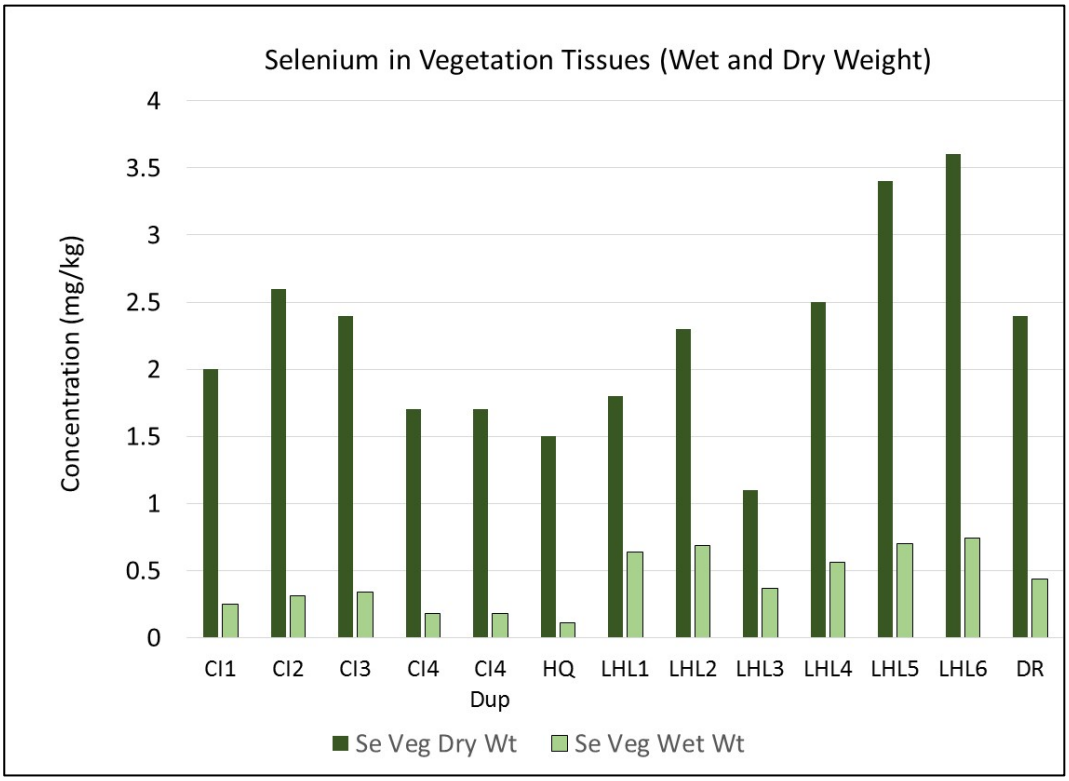
RAMBOLL	SELENIUM IN SEDIMENT PORE WATER Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	FIGURE 5-1H
DRAFTED BY: PAL	DATE: 4/12/2018	

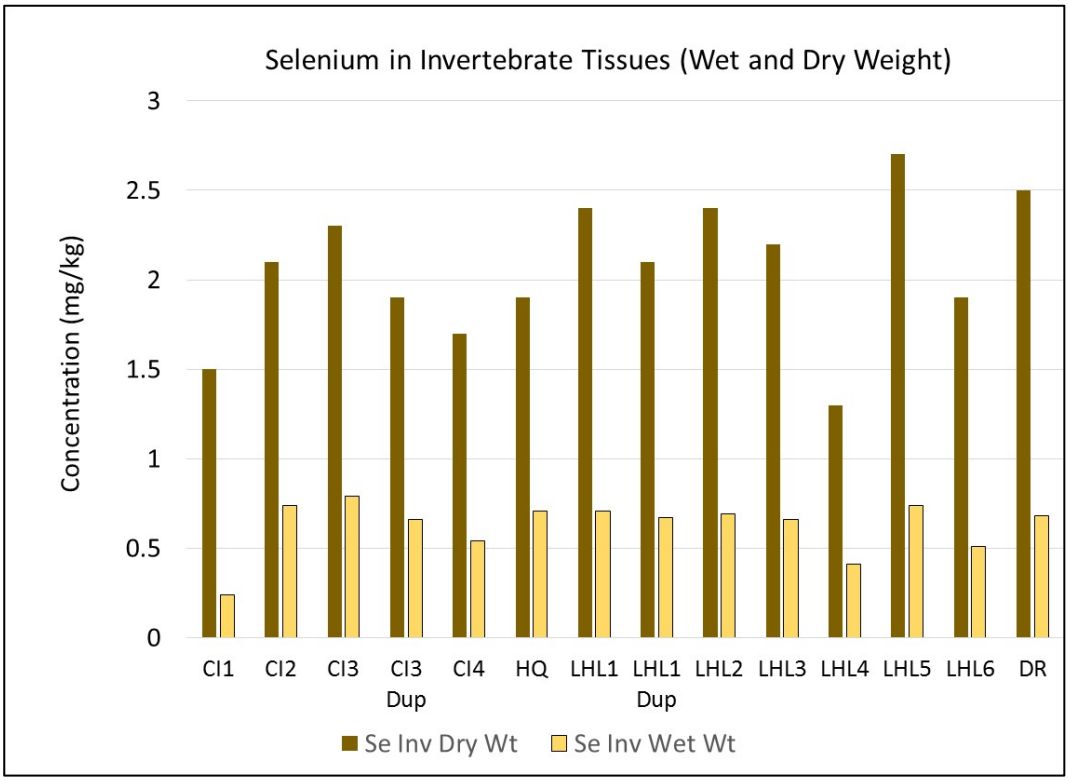


Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), USEPA Region 4 Sediment ecological screening value (USEPA R4 SD Eco), milligrams per kilogram (mg/kg)

- Selenium screening value for Human Health is 390 mg/kg for exposure to residential soil (value not shown on the figure because concentrations are below this screening value)

RAMBOLL	SELENIUM IN SEDIMENT (NEW) Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	FIGURE 5-1l
DRAFTED BY: PAL	DATE: 4/12/2018	





Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), milligrams per kilogram (mg/kg)

No pattern of high concentration contribution from Curds Inlet
LHL6 is ~2.5 miles upgradient from Curds Inlet

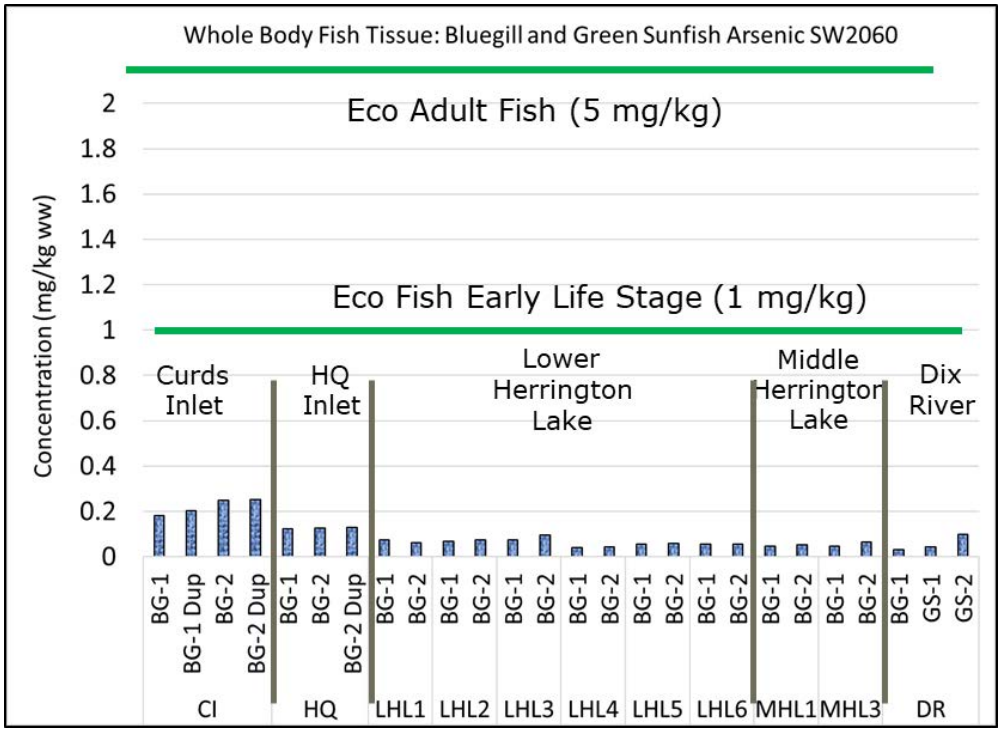
RAMBOLL

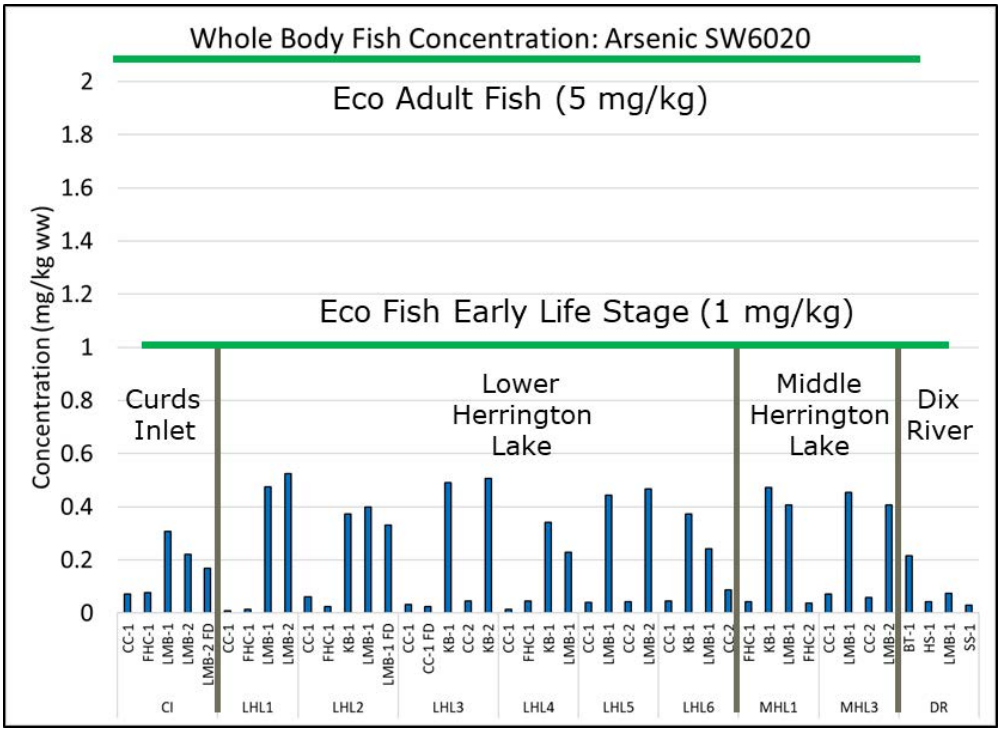
DRAFTED BY: PAL | DATE: 4/12/2018

SELENIUM IN VEGETATION AND INVERTEBRATES

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-1J





Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Dry Weight (DW), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), milligrams per kilogram (mg/kg), Wet Weight (WW),

Fish tissue screening levels for adult and early life stage from scientific literature, including Jarvinen and Ankley (1999)

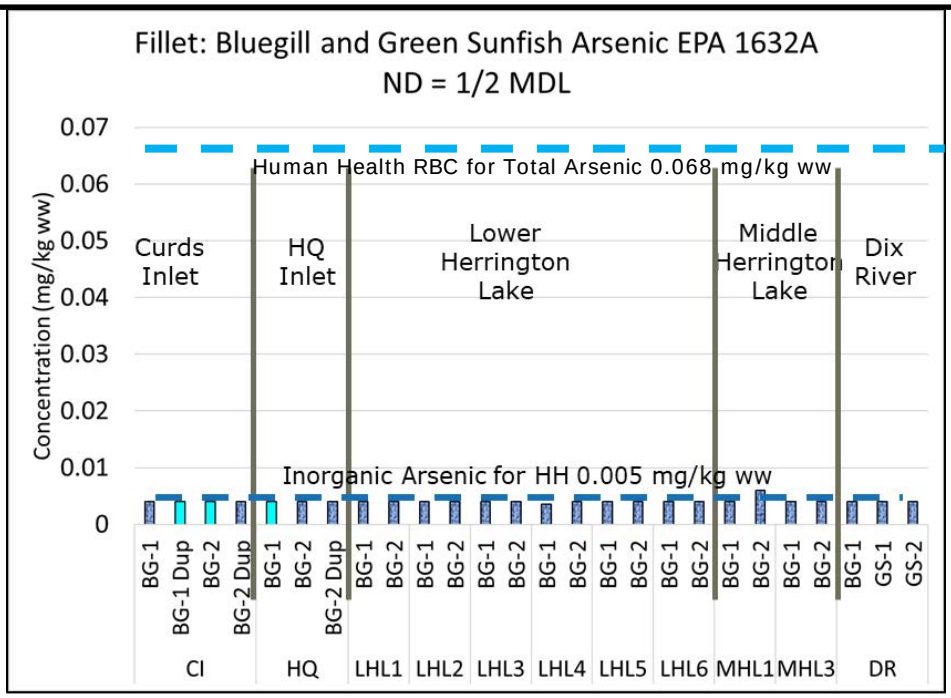
RAMBOLL

DRAFTED BY: PAL | DATE: 4/12/2018

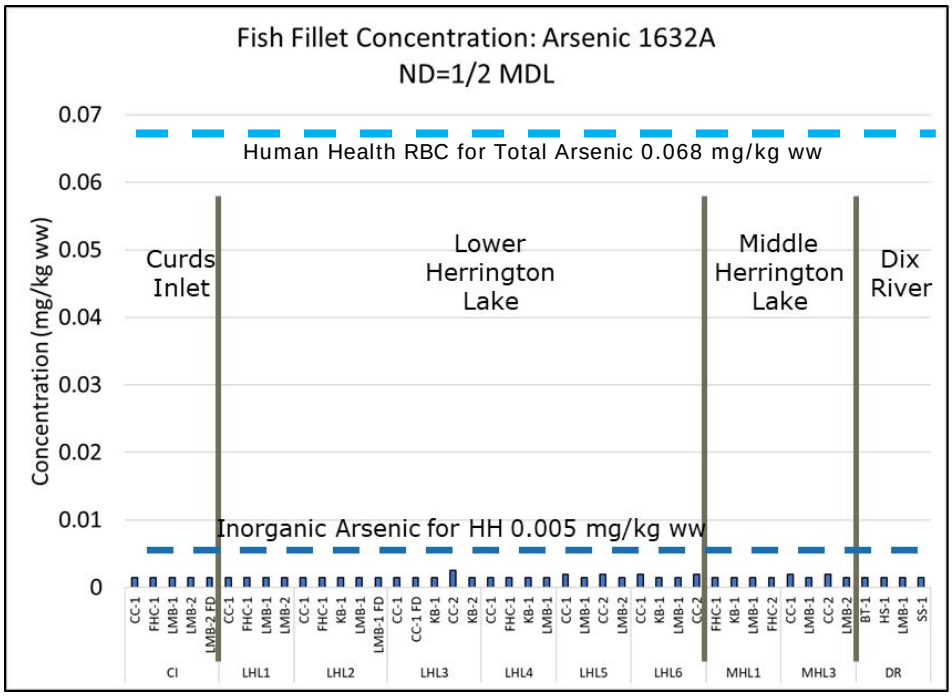
ARSENIC IN FISH-TISSUE WHOLE-BODY (WET WEIGHT)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-2A



Detected value Constituent not detected, ½ MDL shown



All bars shown reflect detection limits because inorganic arsenic was not detected in bass, catfish, or trout fillet tissues

Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Dry Weight (DW), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), milligrams per kilogram (mg/kg), Wet Weight (WW), Human Health (HH)

Human health RBC for total arsenic value assuming 52 meals /year for an adult is 0.068 mg/kg ww based on 10^{-6} risk level. Total arsenic RBC adjusted to reflect 6.8% inorganic arsenic.

Human health RBC for inorganic arsenic is 0.005 mg/kg ww based on 10^{-6} risk level and 52 meals per year.

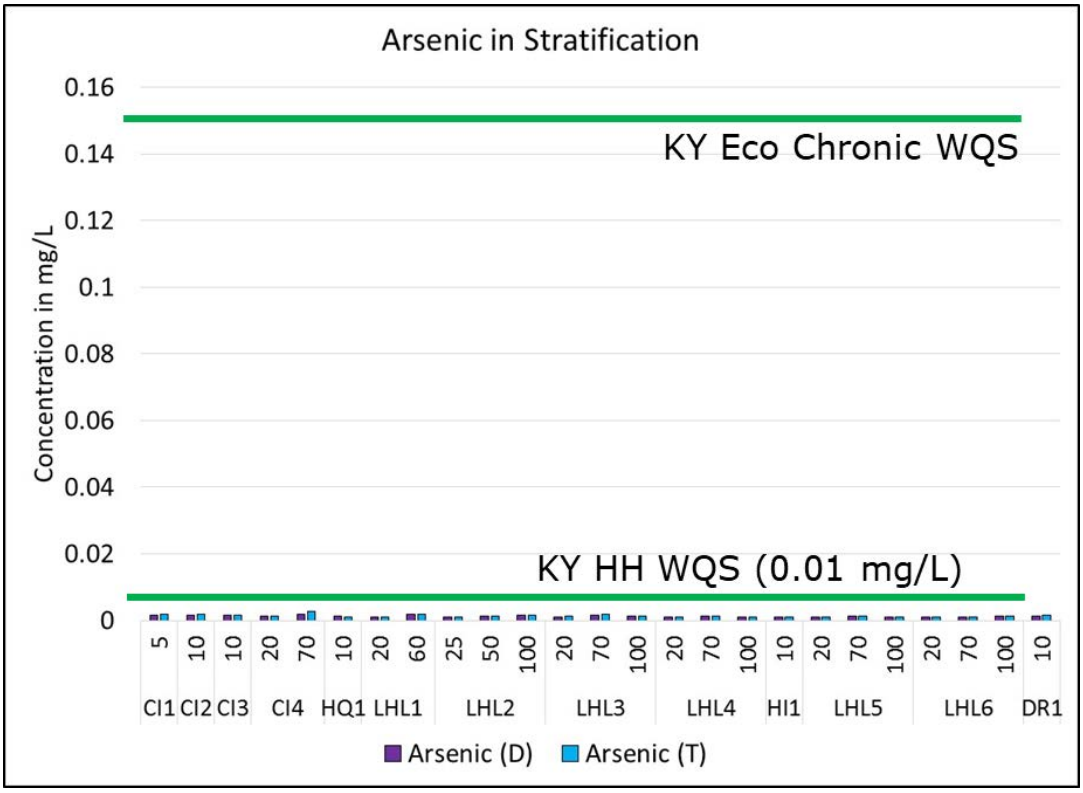
RAMBOLL

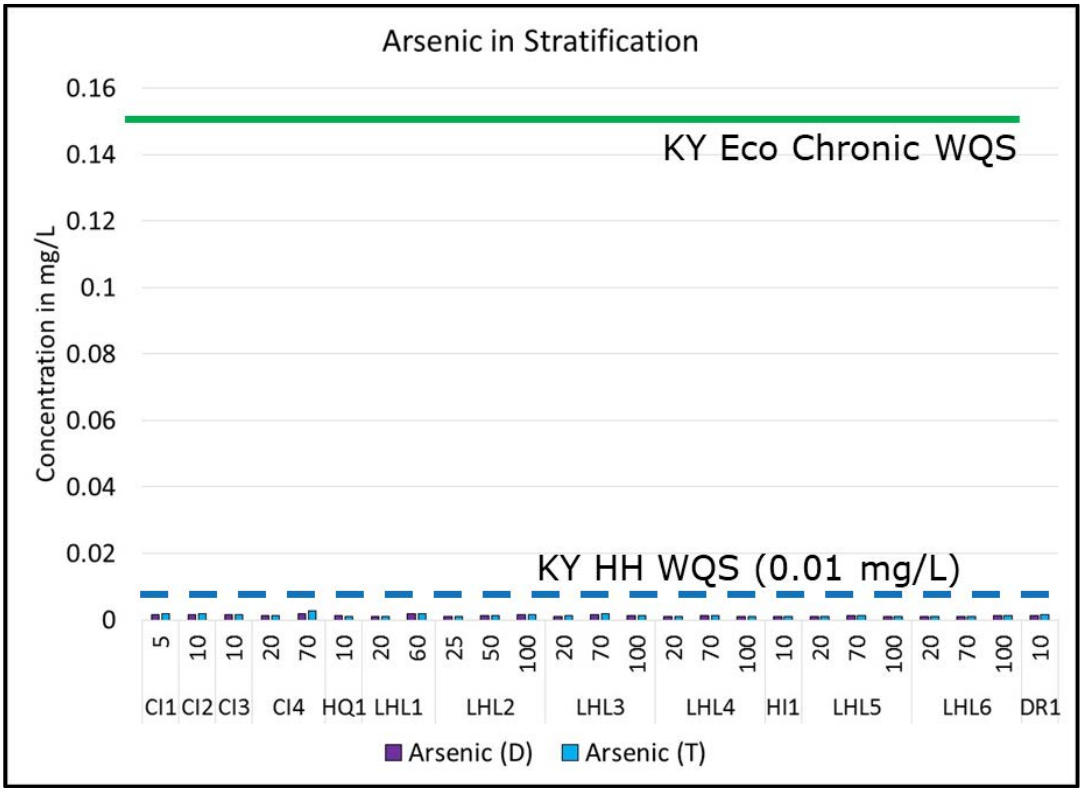
DRAFTED BY: PAL | DATE: 4/12/2018

ARSENIC IN FISH-TISSUE FILLET INORGANIC ARSENIC

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-2B





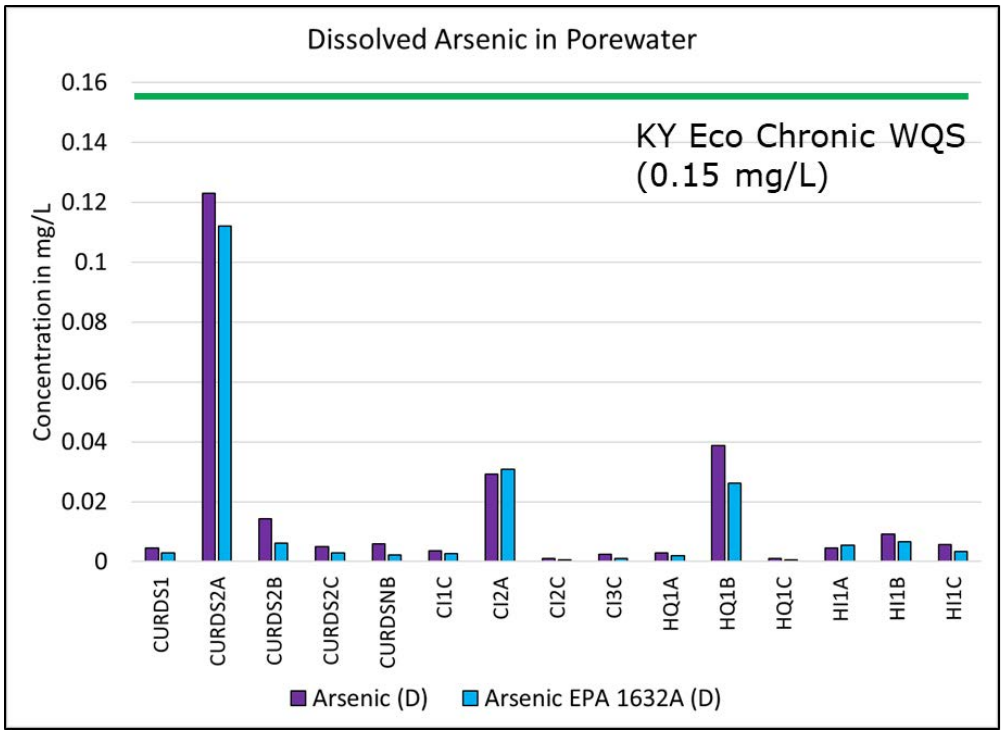
Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), Dissolved (D), Total Unfiltered (T), milligrams per liter (mg/L), Kentucky Water Chronic Ecological Quality Standard (Kentucky Eco Chronic WQS), Kentucky Human Health Water quality standard (Kentucky HH WQS). Numbers above sample IDs in stratification chart indicate sample depth in feet.

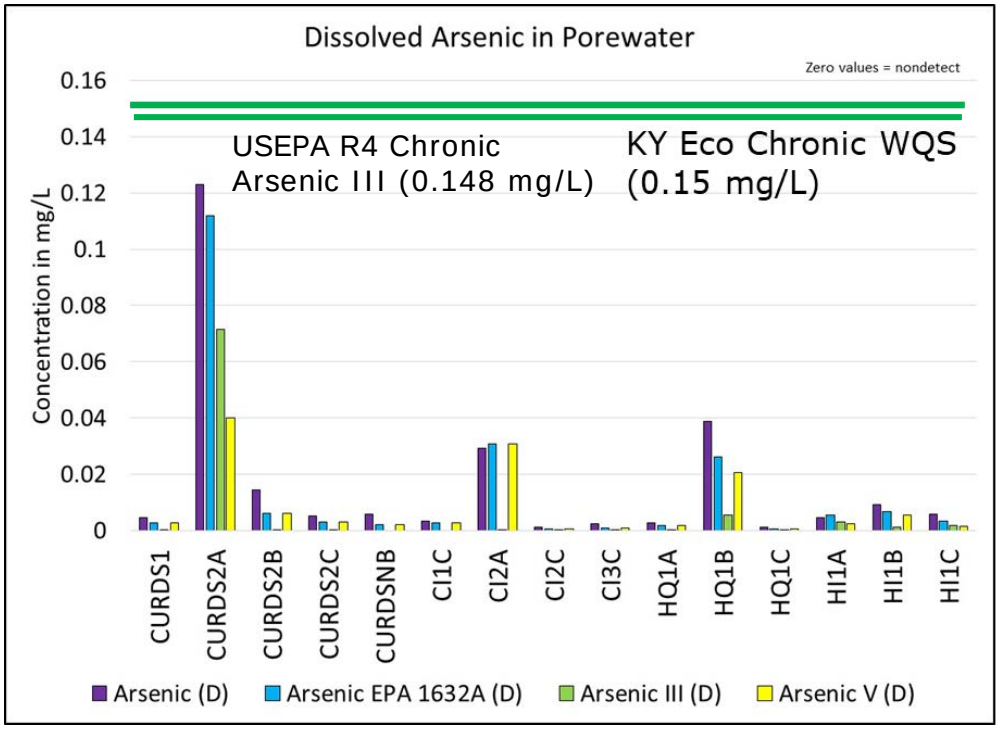
RAMBOLL

DRAFTED BY: PAL | DATE: 4/12/2018

ARSENIC IN SURFACE WATER
(STRATIFIED AND OVERTURN)
Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-2C





Curds Inlet (CI), HQ Inlet (HQ), Hardin's Inlet (HI), Dissolved (D), milligrams per liter (mg/L), Kentucky Water Chronic Ecological Quality Standard (Kentucky Eco Chronic WQS), milligrams per liter (mg/L), Kentucky Water Chronic Ecological Quality Standard (Kentucky Eco Chronic WQS)

Speciated arsenic
Where analyzed by two methods, good match of results (EPA 200.8 and speciation)
Results for As are lower than Kentucky criterion for ecological receptors
Human health criteria is inappropriate for pore water

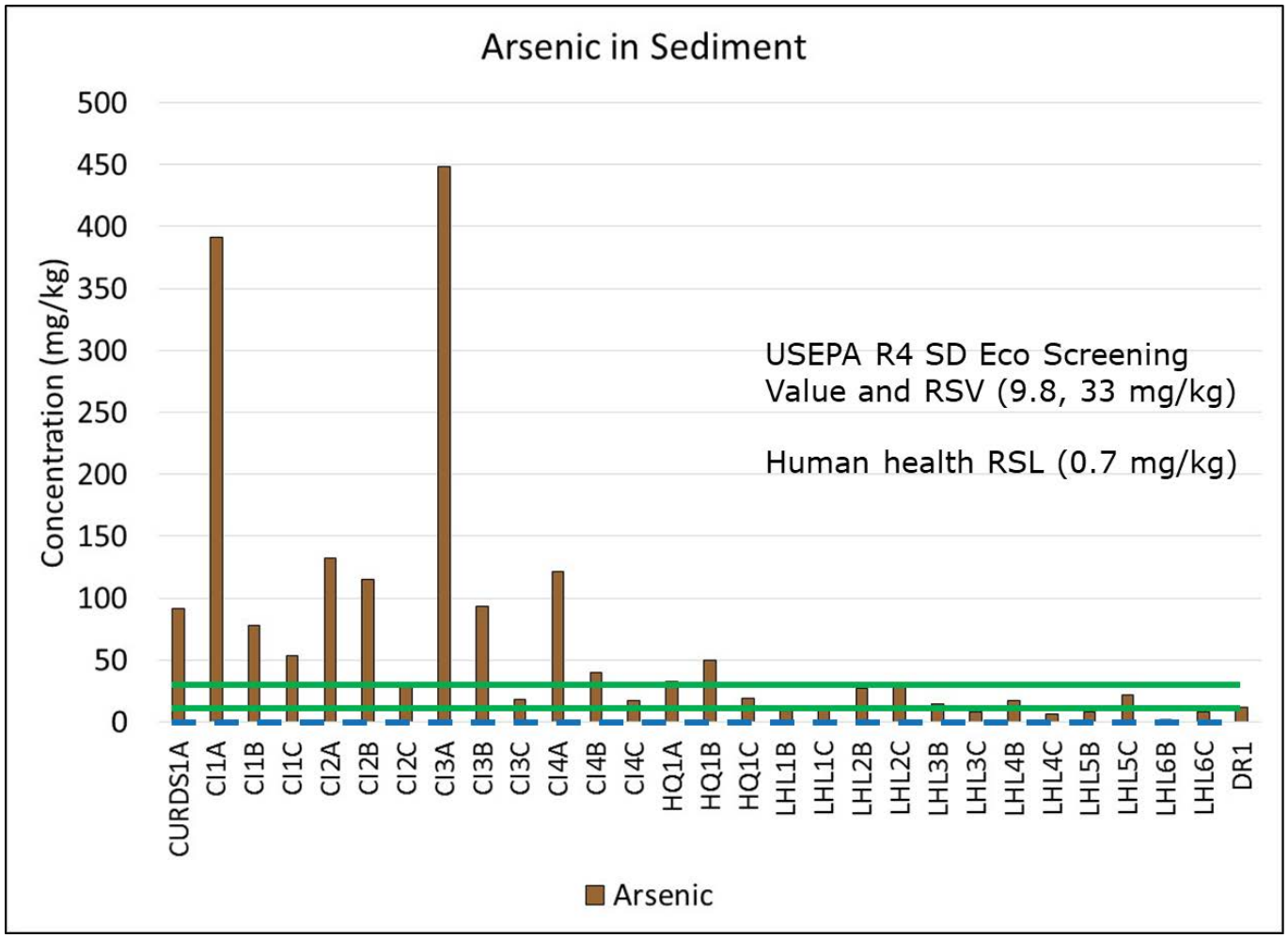
RAMBOLL

DRAFTED BY: PAL | DATE: 4/12/2018

ARSENIC IN SEDIMENT PORE WATER

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-2D

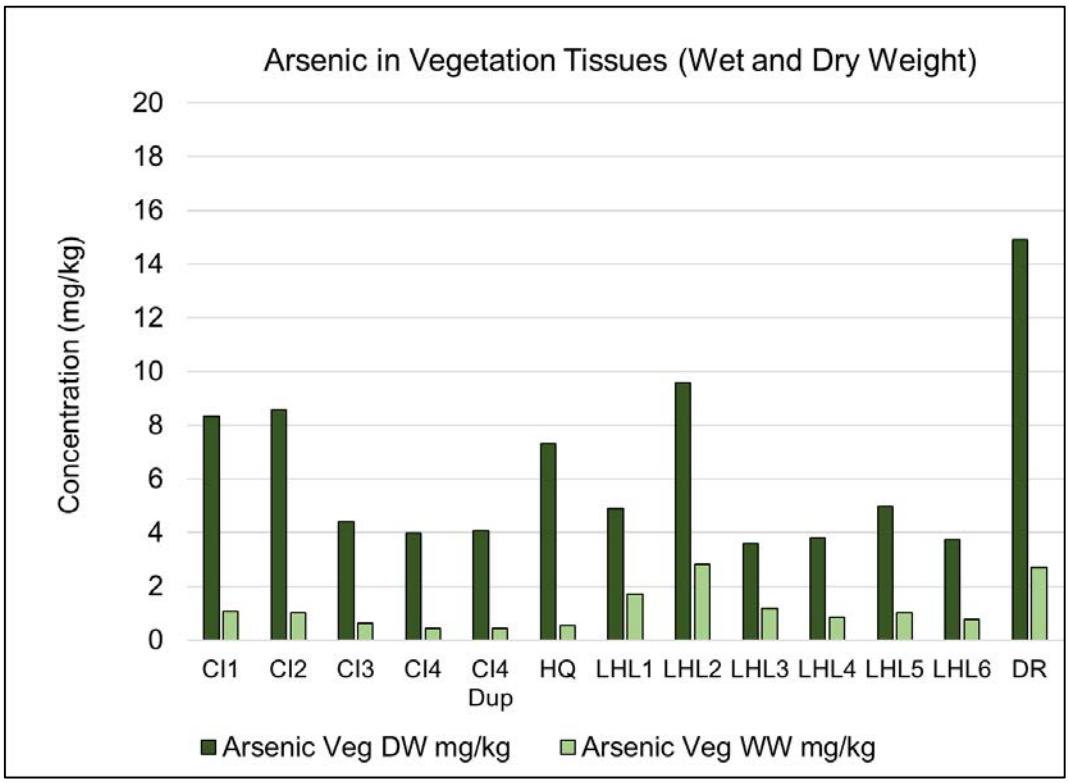


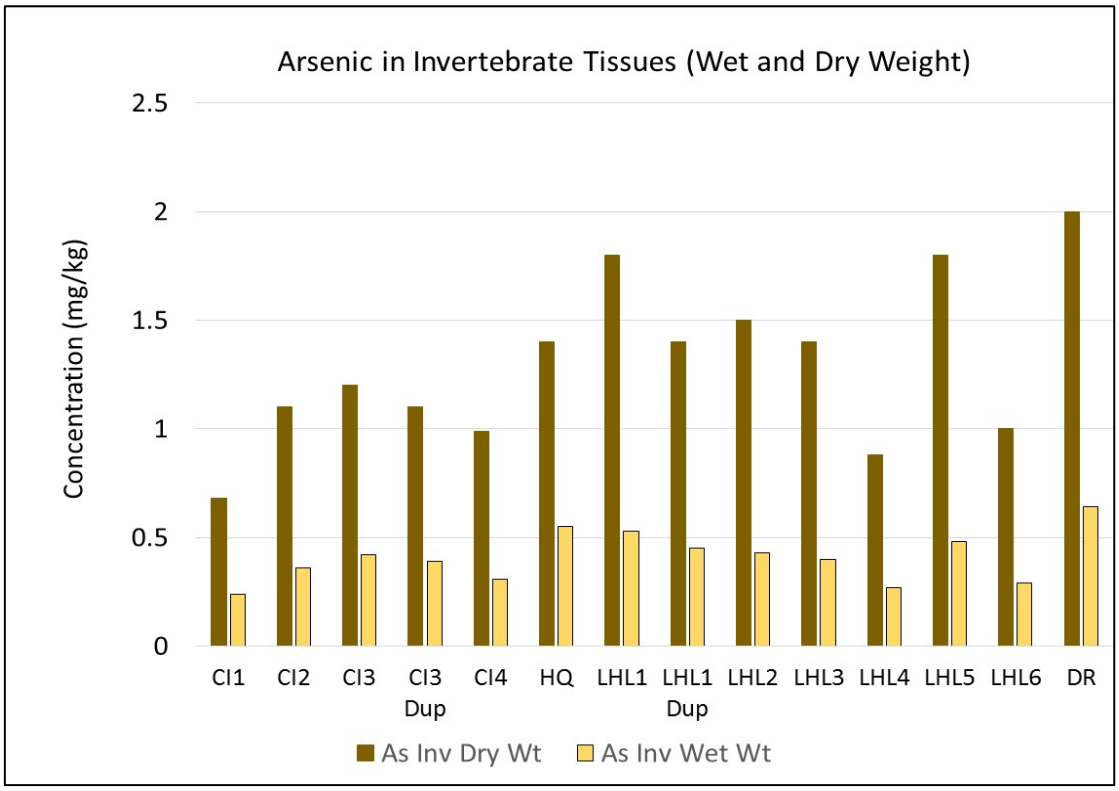
Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), milligrams per kilogram (mg/kg), USEPA Region 4 Sediment ecological screening value (USEPA R4 SD Eco), Refined Screening Value (RSV), USEPA Human Health Regional Screening Level (RSL).

Human health RSL 0.7 mg/kg is for residential soil, not sediment.

- Based on 10^{-6} cancer risk
- Lower than typical background soil concentrations

RAMBOLL	ARSENIC IN SEDIMENT Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	FIGURE 5-2E
DRAFTED BY: PAL	DATE: 4/12/2018	

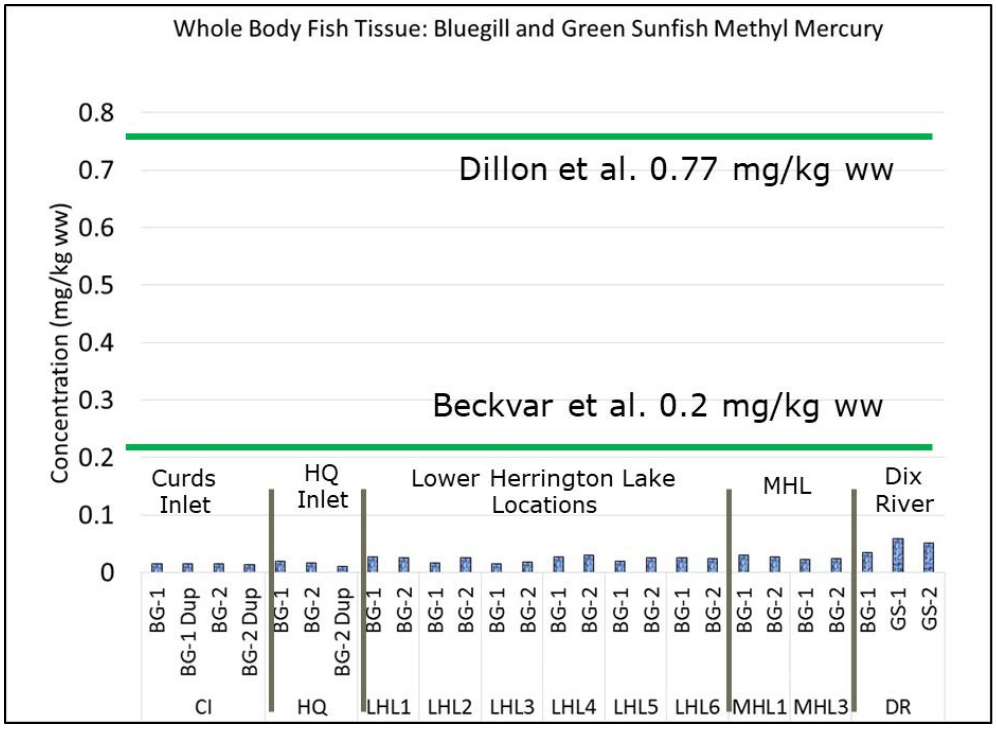


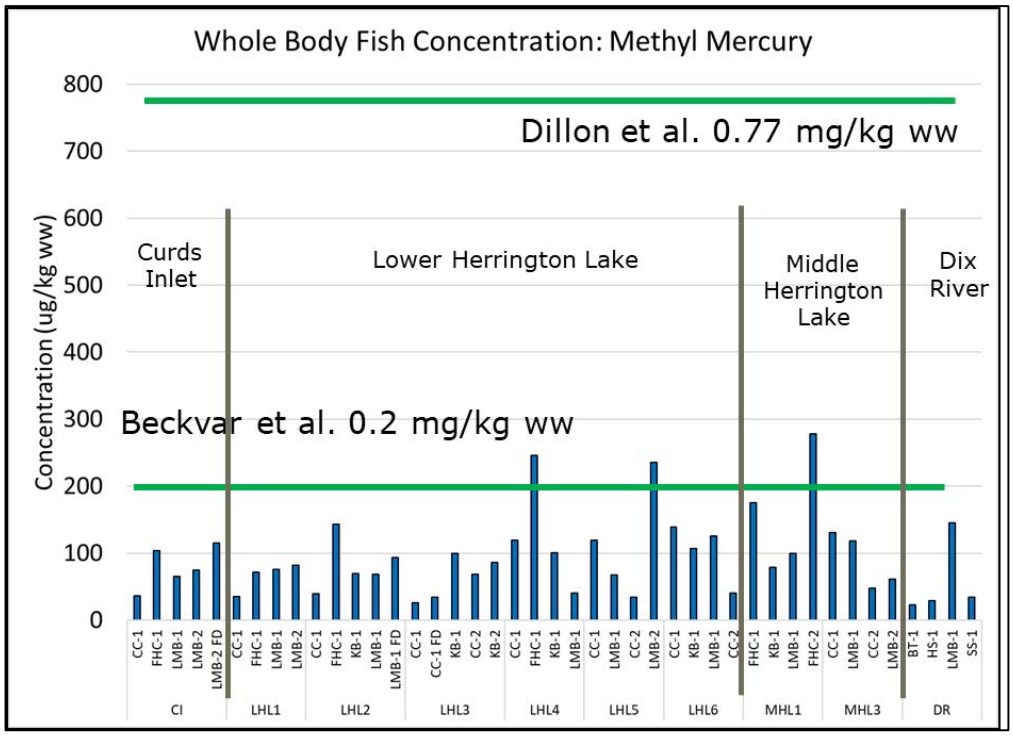


Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), milligrams per kilogram (mg/kg), Wet Weight (WW), Dry Weight (DW)

No pattern of high concentration in Curds Inlet

RAMBOLL	ARSENIC IN VEGETATION AND INVERTEBRATES Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	FIGURE 5-2F
DRAFTED BY: PAL	DATE: 4/12/2018	



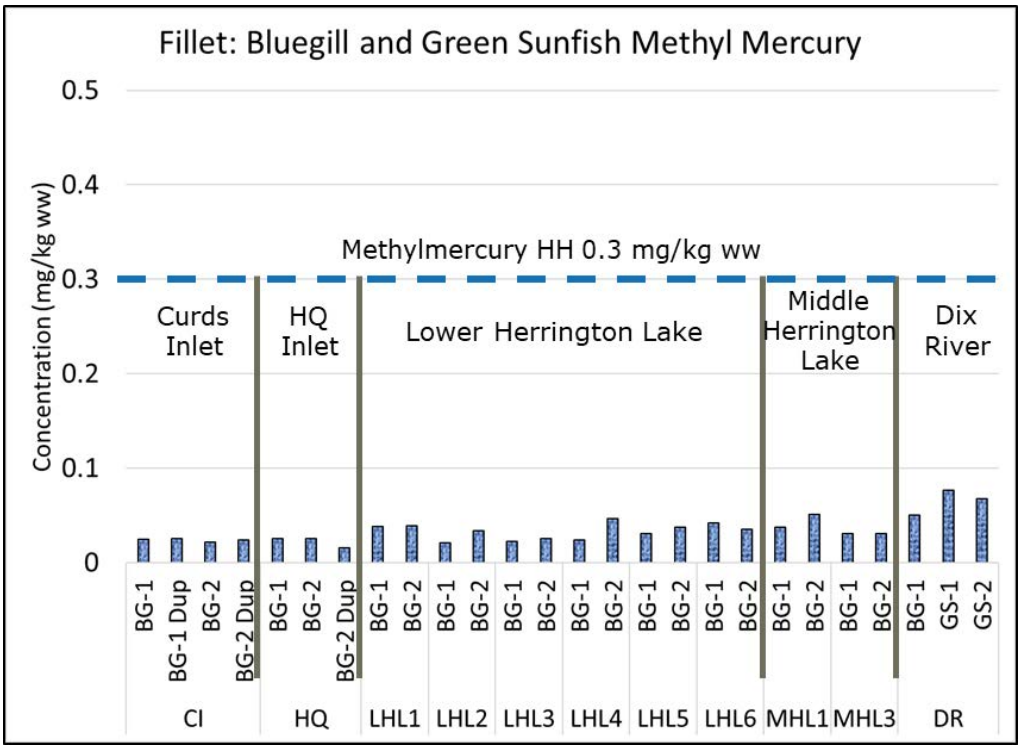


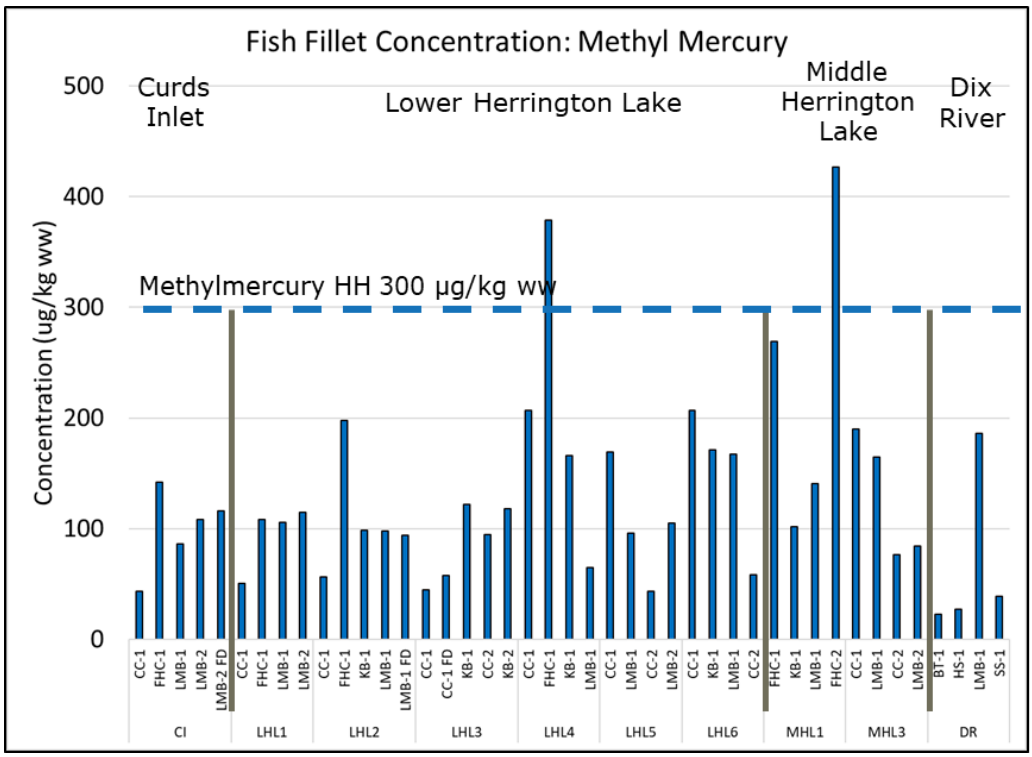
Bluegill (BG), Green Sunfish (GS), Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), milligrams per kilogram (mg/kg), Wet Weight (WW)

Wet weight whole body tissue residues

- Ecological screening values include Dillon et al. 2010 (0.77 mg/kg ww) and Beckvar et al. 2005 (0.2 mg/kg)

RAMBOLL	METHYLMERCURY IN FISH-TISSUE WHOLE-BODY (WET WEIGHT)	FIGURE 5-3A
DRAFTED BY: PAL / DATE: 4/12/2018	Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	





Bluegill (BG), Green Sunfish (GS), Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), milligrams per kilogram (mg/kg), Wet Weight (WW)

- USEPA and Kentucky HH criterion of 0.3 mg/kg (300 µg/kg) was exceeded by two fish.

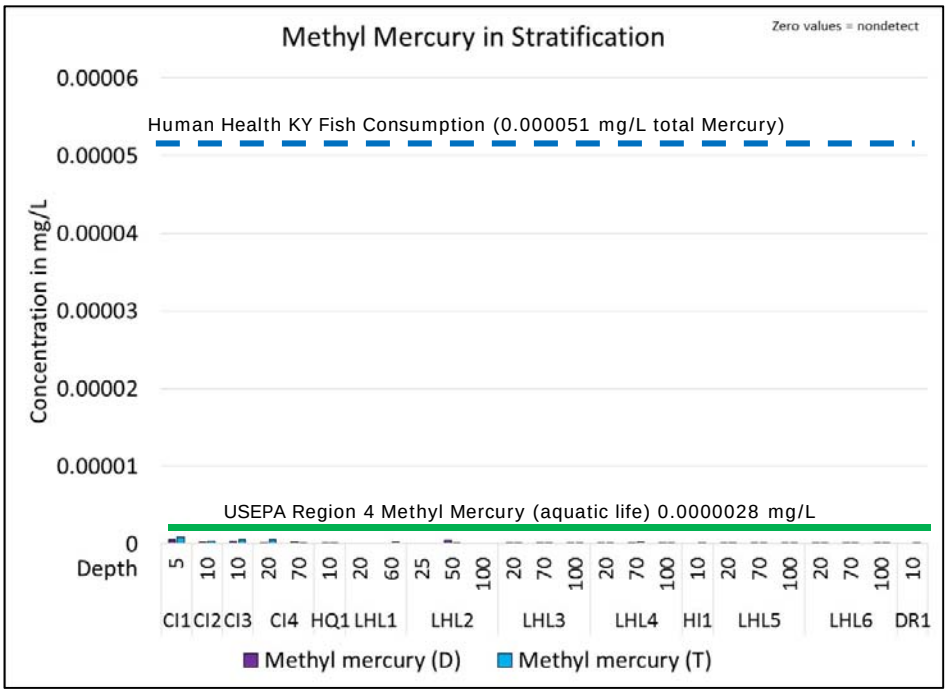
RAMBOLL

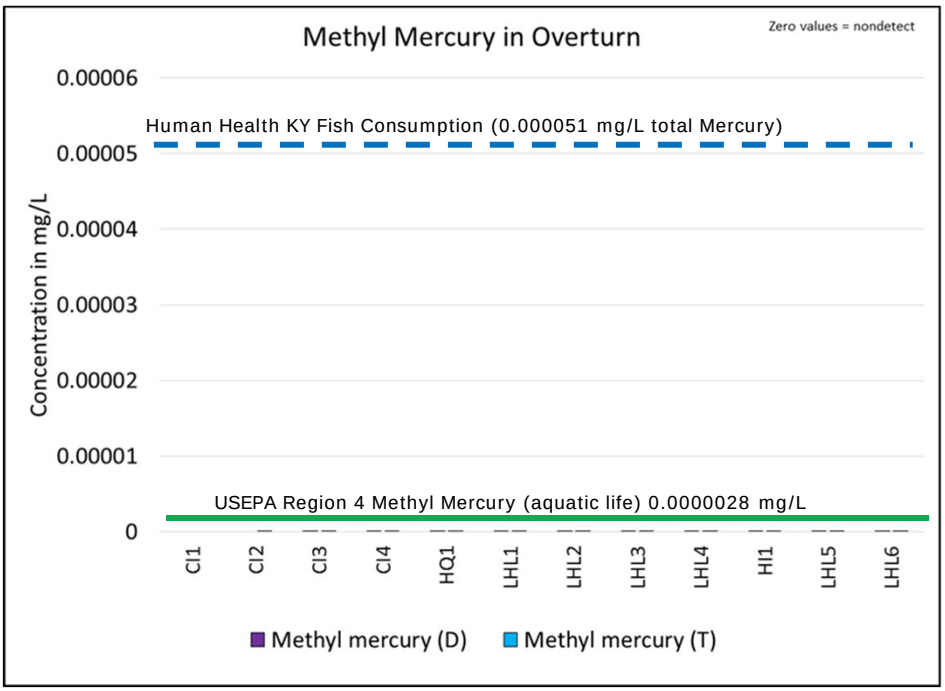
DRAFTED BY: PAL | DATE: 4/12/2018

METHYLMERCURY IN FISH-TISSUE FILLET (WET WEIGHT)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE 5-3B





Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Hardin Inlet (HI), Dix River (DR), Dissolved (D), Total Unfiltered (T). Numbers above sample IDs in stratification chart indicate sample depth in feet.

Detections of total and dissolved methyl mercury are below criteria
Showing lowest criteria on graphics
Not shown because higher values than can be shown on the graphic

- Eco Chronic Kentucky WQS (0.00077 mg/L total mercury)
- Eco Chronic USEPA Region 4 (0.00077 mg/L methyl mercury)
- Human health Kentucky WQS drinking water (0.002 mg/L total mercury)

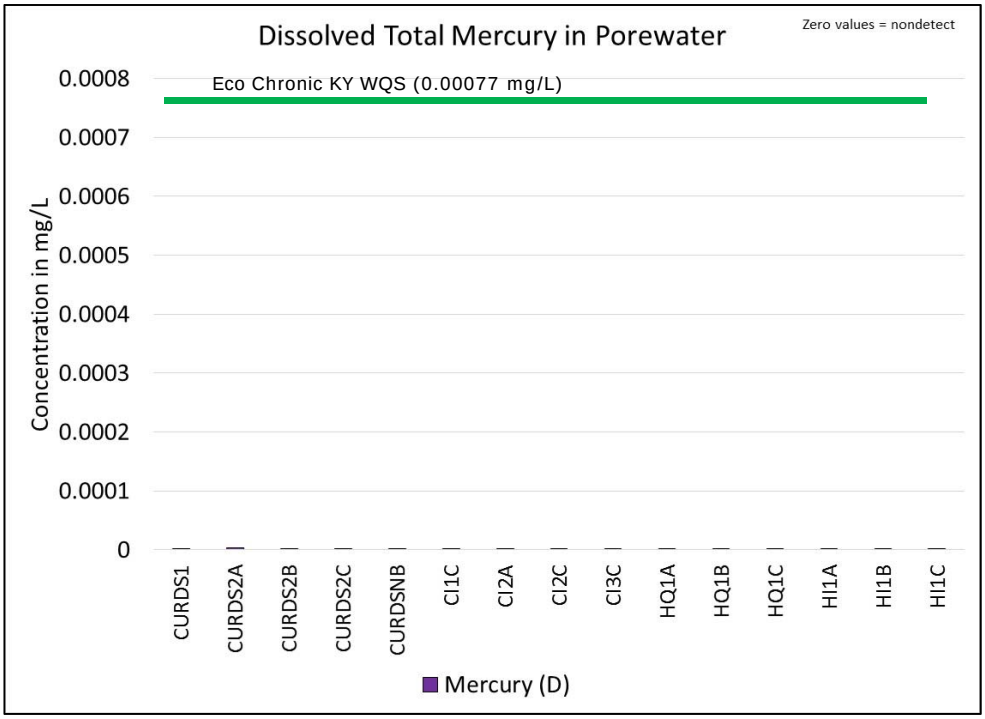
RAMBOLL

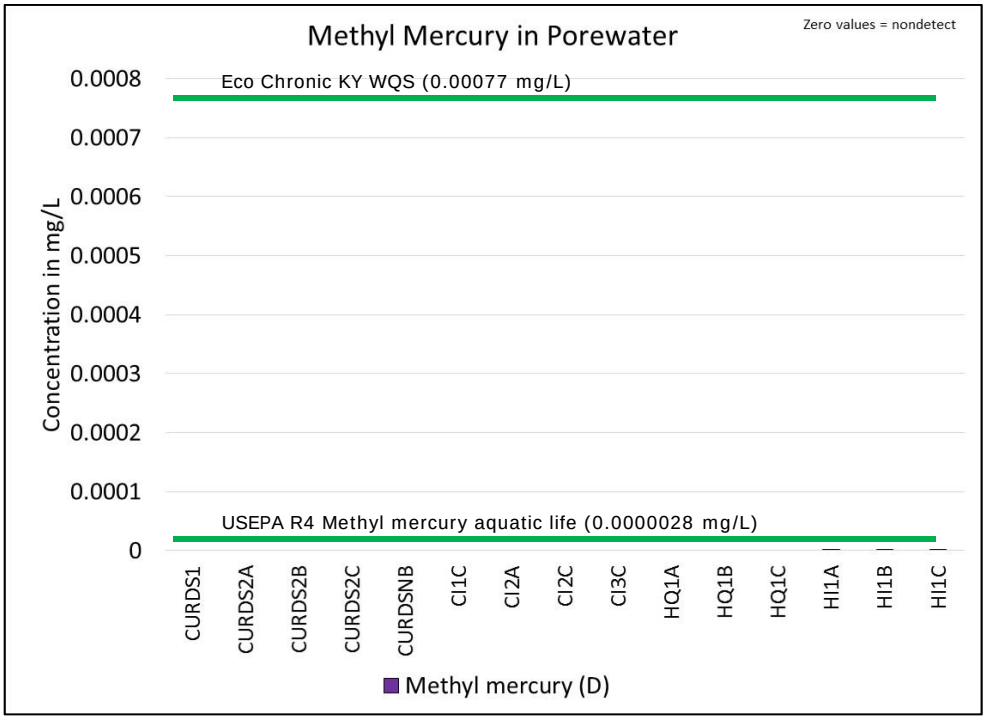
DRAFTED BY: PAL | DATE: 4/12/2018

METHYL MERCURY IN SURFACE WATER (STRATIFIED AND OVERTURN)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-3C





Curds Inlet (CI), HQ Inlet (HQ), Hardin's Inlet (HI), Dissolved (D), milligrams per liter (mg/L), Kentucky Water Chronic Ecological Quality Standard (Kentucky Eco Chronic WQS)

- Dissolved total mercury was not detected in 15 of the 18 pore water samples (including duplicates)
- Dissolved methyl mercury was not detected in Curds Inlet (HI Inlet only)
- The USEPA Region 4 methyl mercury wildlife value and human health WQS are not shown because it is not appropriate for pore water.

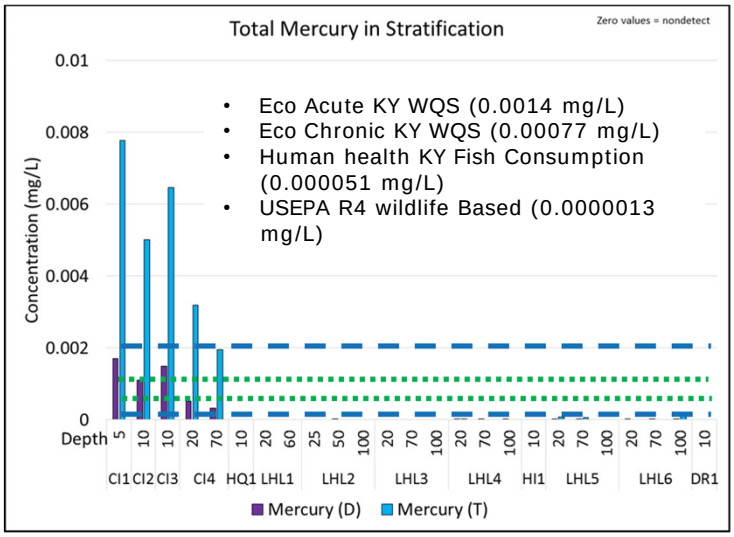
RAMBOLL

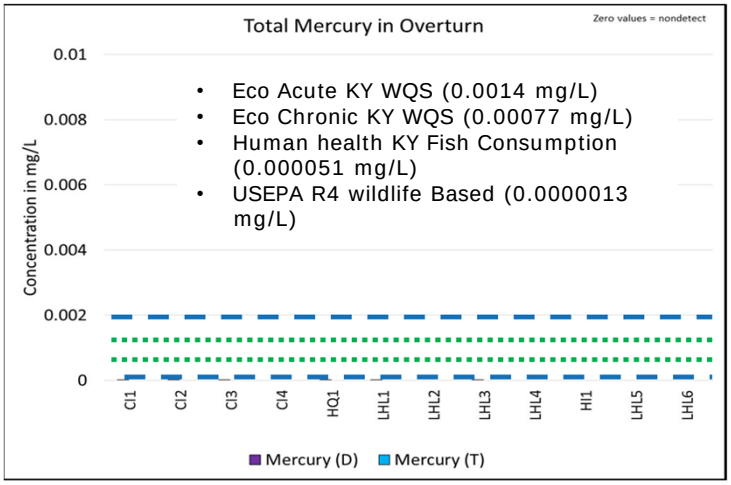
DRAFTED BY: PAL | DATE: 4/12/2018

DISSOLVED TOTAL MERCURY AND DISSOLVED METHYL MERCURY IN PORE WATER

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-3D





Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), Dissolved (D), Total Unfiltered (T), milligrams per liter (mg/L), Kentucky Human Health Water quality standard (Kentucky HH WQS), Kentucky Water Ecological Quality Standard (Kentucky Eco WQS). Numbers above sample IDs in stratification chart indicate sample depth in feet.

Elevated mercury seen during stratified sampling was not seen during overturn sampling, indicating a transient condition in Curds Inlet.

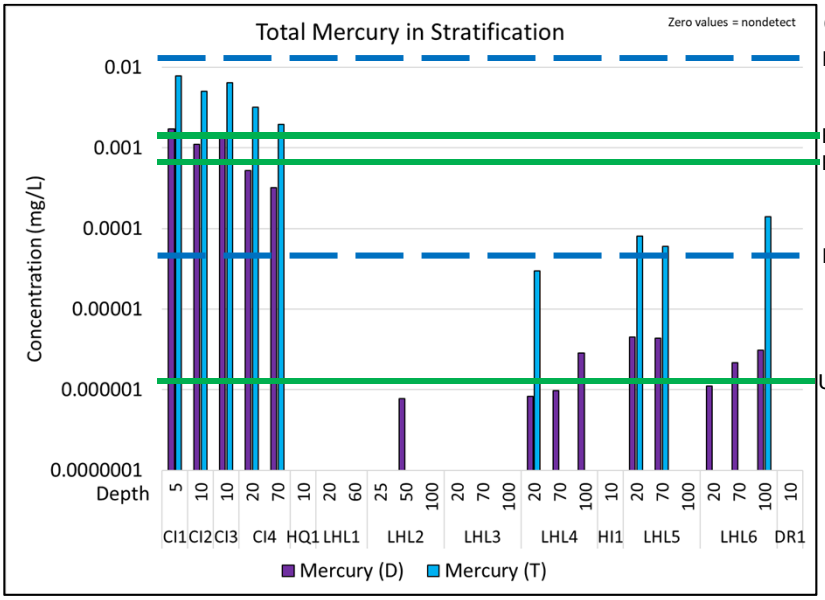
Ecological

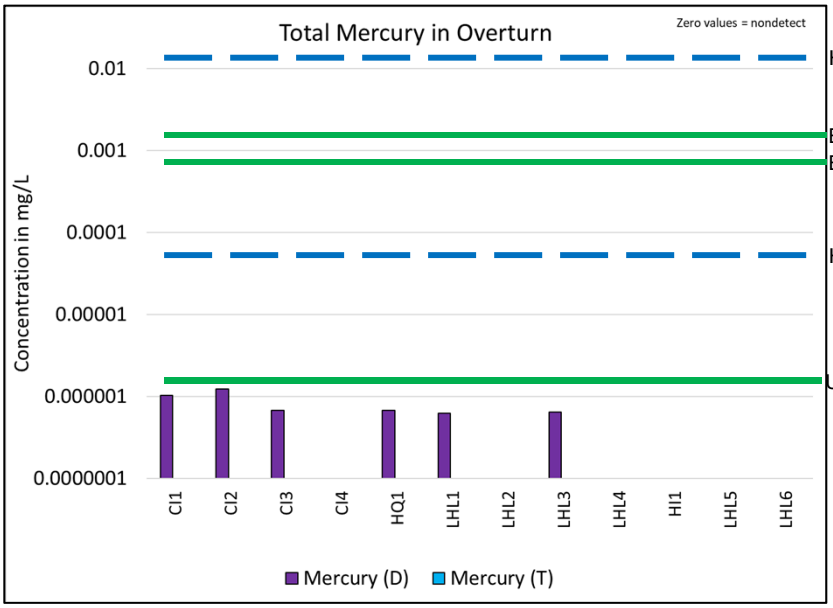
- Kentucky WQS states: “Total recoverable metals …unless it can be demonstrated that a more appropriate analytical technique is available that provides a measurement of that portion of the metal present which causes toxicity to aquatic life”
- USEPA Region 4 chronic value for wildlife is for fish eating wildlife

Human Health

- Kentucky HH WQS for mercury is for fish consumption (see data for mercury in fish)
- Kentucky HH WQS apply at point of surface water withdrawal for domestic drinking water use (so not appropriate to apply these values in Curds Inlet)

RAMBOLL	TOTAL MERCURY IN SURFACE WATER (STRATIFIED AND OVERTURN) Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	FIGURE 5-3E
DRAFTED BY: PAL	DATE: 4/12/2018	





Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), Dissolved (D), Total Unfiltered (T), milligrams per liter (mg/L), Kentucky Human Health Water quality standard (Kentucky HH WQS), Kentucky Water Ecological Quality Standard (Kentucky Eco WQS). Numbers above sample IDs in stratification chart indicate sample depth in feet.

This data reflects the same dataset as presented on Figure 5-3E, with a log scale. Elevated mercury seen during stratified sampling was not seen during overturn sampling, indicating a transient condition in Curds Inlet.

Ecological

- Kentucky WQS states: “Total recoverable metals …unless it can be demonstrated that a more appropriate analytical technique is available that provides a measurement of that portion of the metal present which causes toxicity to aquatic life”
- USEPA Region 4 chronic value for wildlife is for fish eating wildlife

Human Health

- Kentucky HH WQS for mercury is for fish consumption (see data for mercury in fish)
- Kentucky HH WQS apply at point of surface water withdrawal for domestic drinking water use (so not appropriate to apply these values in Curds Inlet)

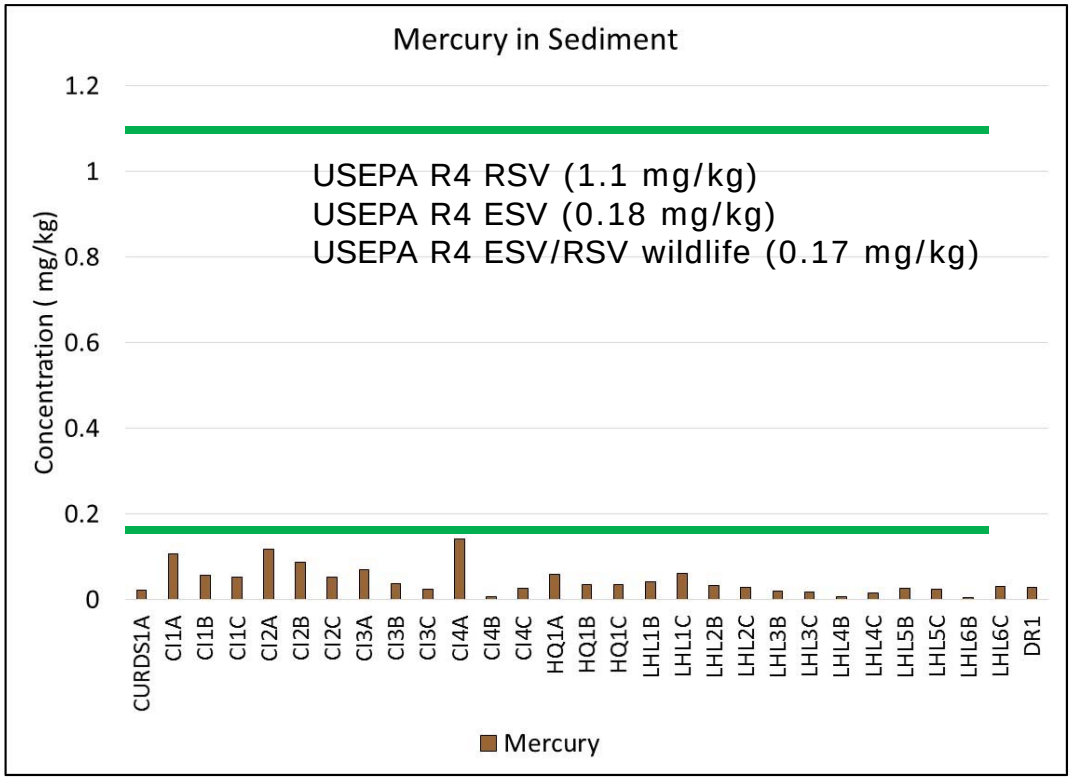
RAMBOLL

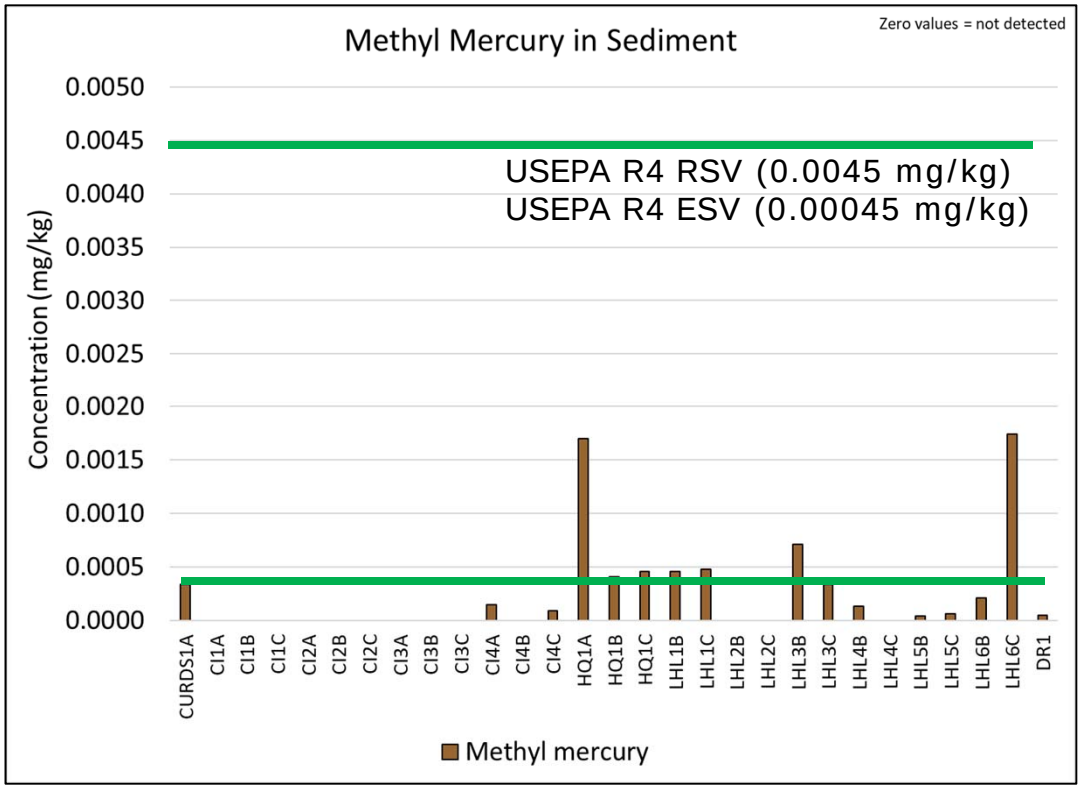
DRAFTED BY: PAL | DATE: 4/12/2018

TOTAL MERCURY IN SURFACE WATER (STRATIFIED AND OVERTURN)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-3F





Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), milligrams per kilogram (mg/kg), USEPA Human Health Regional Screening Level (RSL)

- Human health RSLs for residential soil include values for mercury (inorganic) of 23 mg/kg and methylmercury of 8 mg/kg

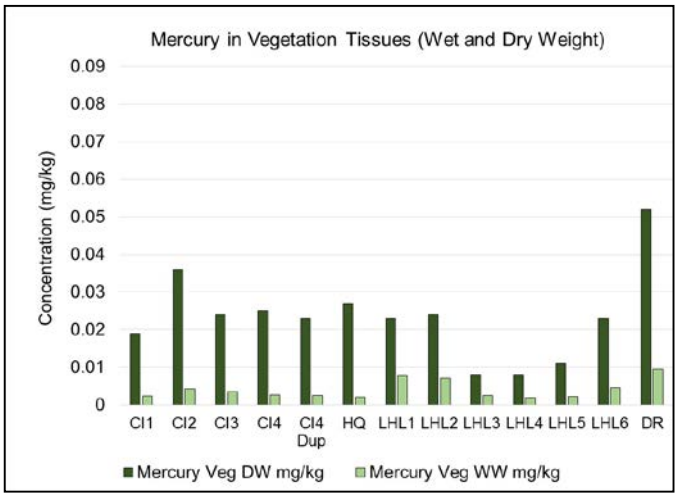
RAMBOLL

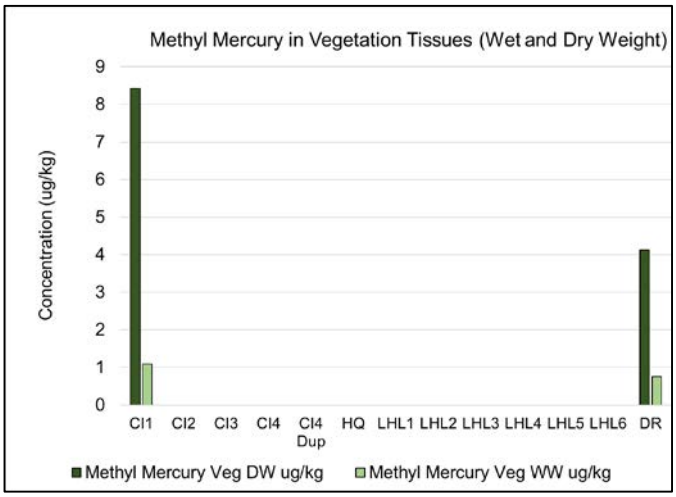
DRAFTED BY: PAL | DATE: 4/12/2018

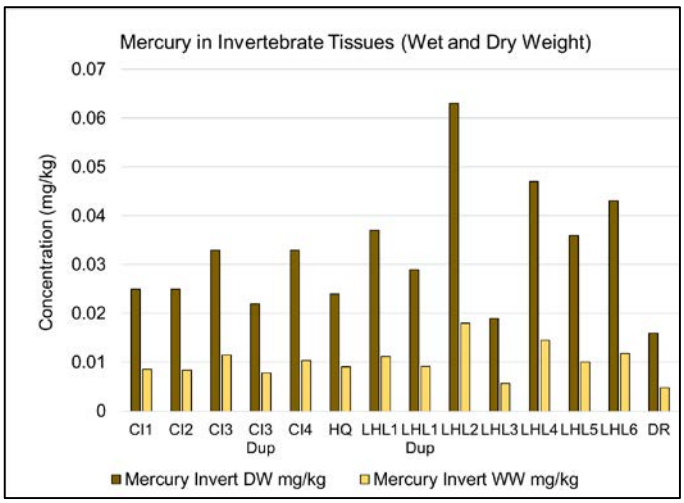
TOTAL MERCURY AND METHYLMERCURY IN SEDIMENT

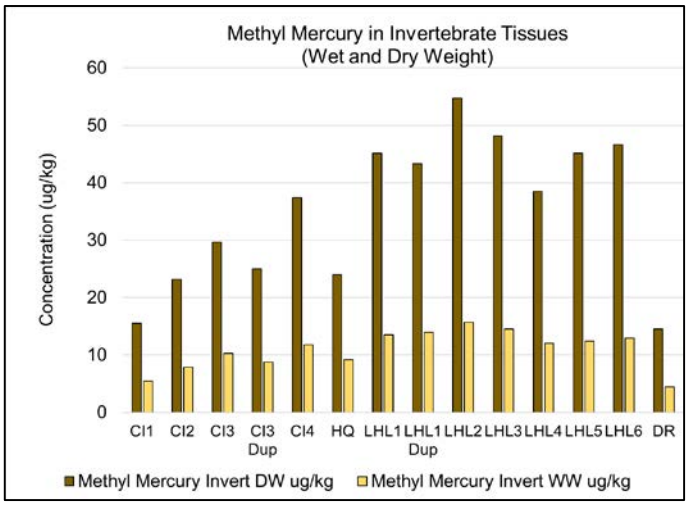
Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-3G









Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), milligrams per kilogram (mg/kg), Wet Weight (WW), Dry Weight (DW)

Blank values indicate the constituent was not detected

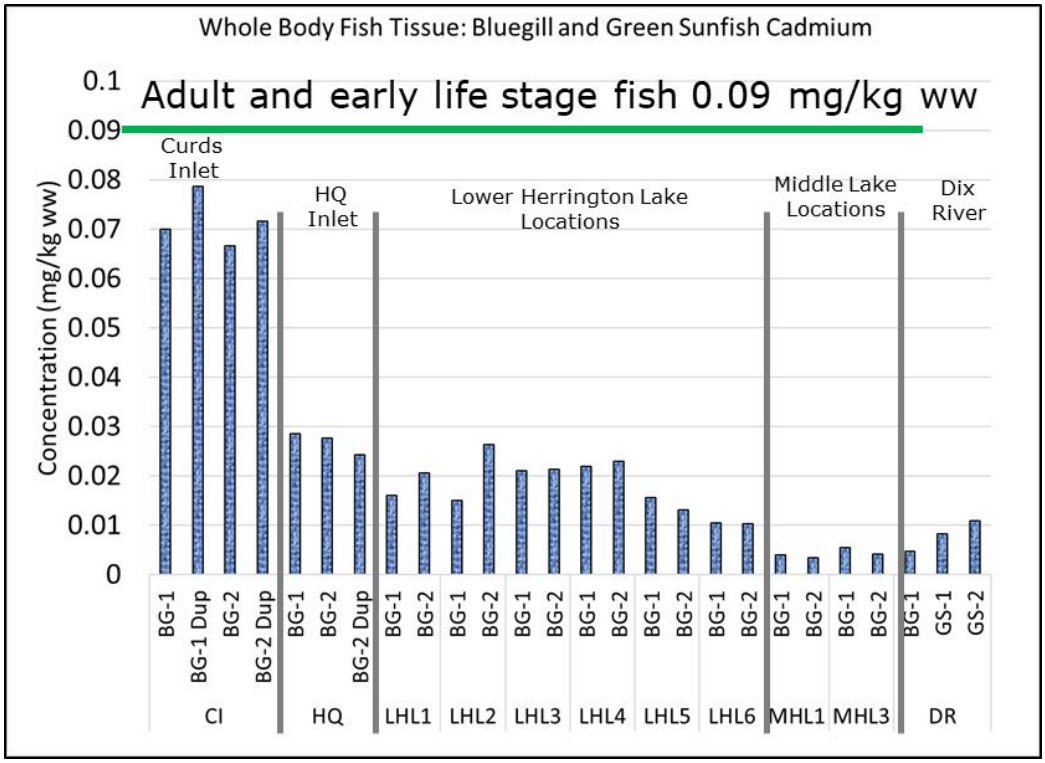
RAMBOLL

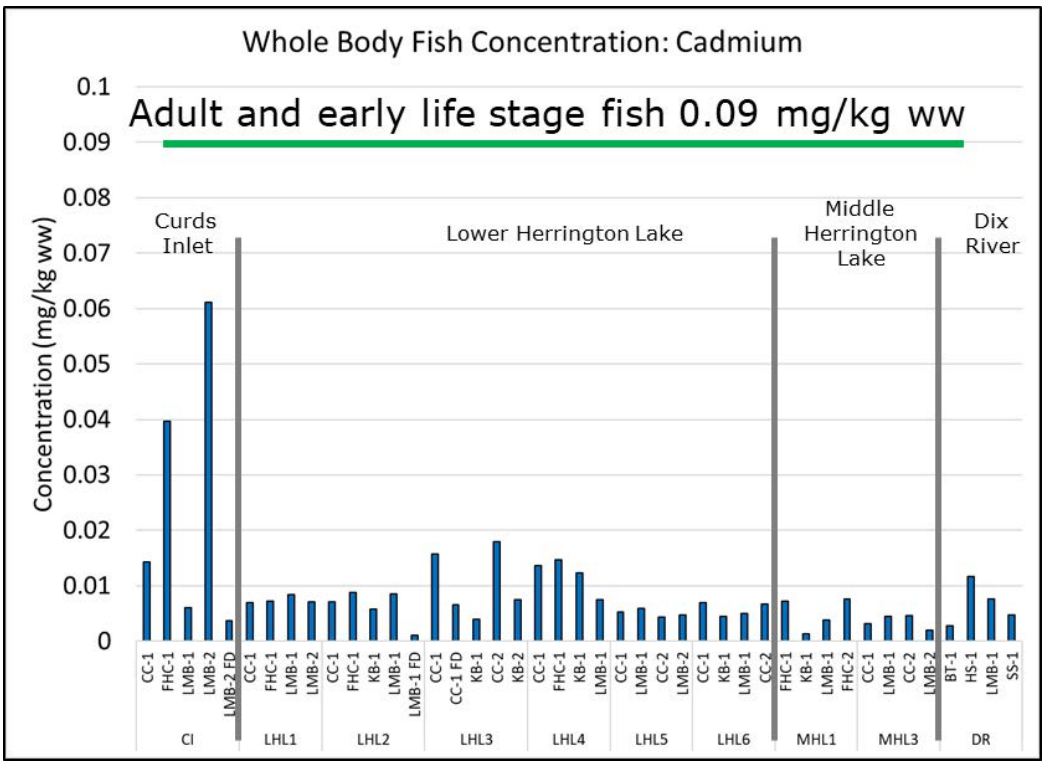
DRAFTED BY: PAL | DATE: 4/12/2018

TOTAL MERCURY AND METHYL MERCURY IN VEGETATION AND INVERTEBRATES

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-3H

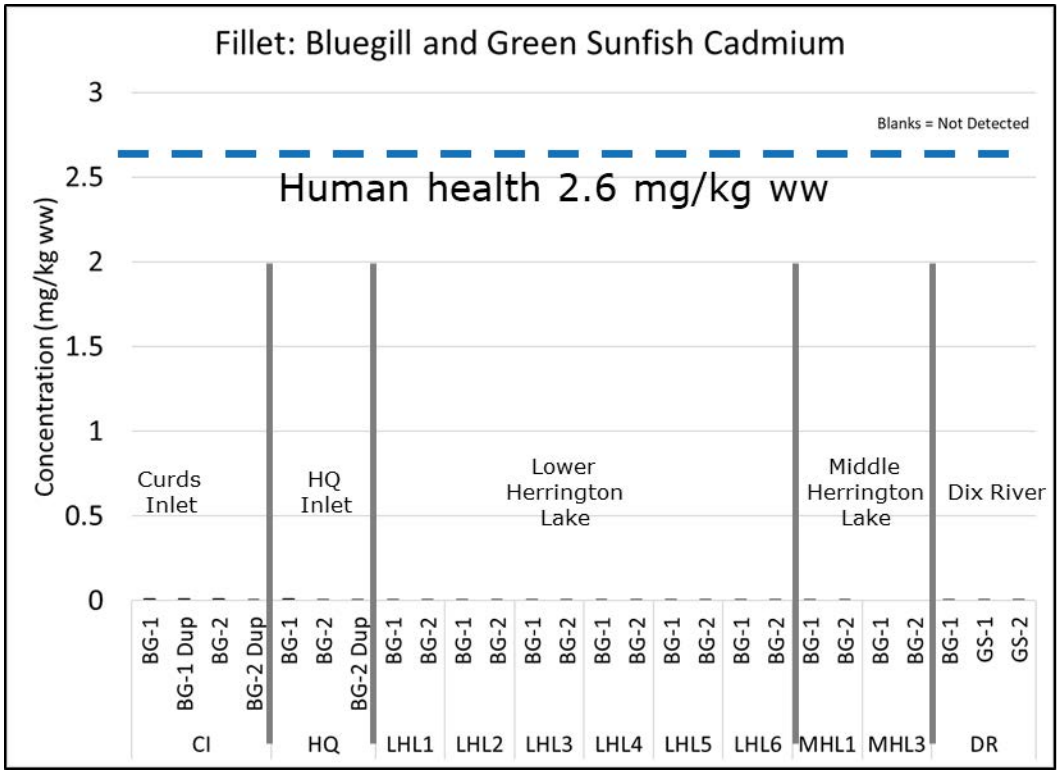


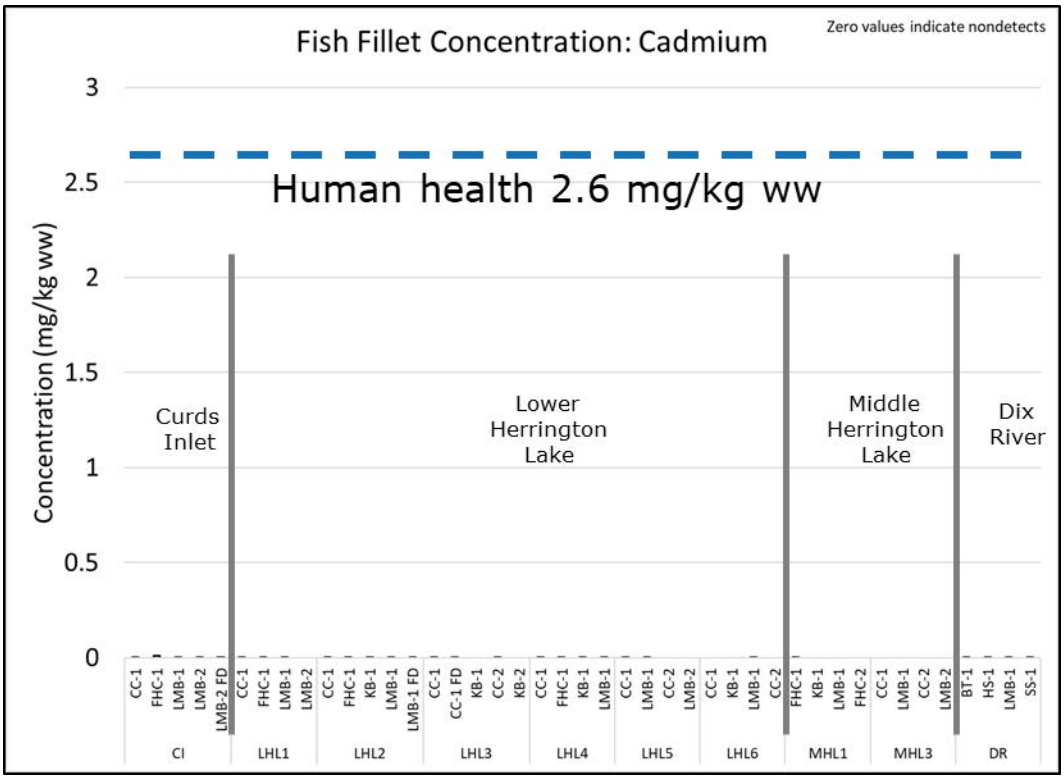


Bluegill (BG), Green Sunfish (GS), Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Dry Weight (DW), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), milligrams per kilogram (mg/kg), Wet Weight (WW)

- Ecological fish tissue screening levels for adult and early life stage from scientific literature, including Jarvinen and Ankley (1999)

RAMBOLL	CADMIUM IN FISH-TISSUE WHOLE-BODY (WET WEIGHT) Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	FIGURE 5-4A
DRAFTED BY: PAL	DATE: 4/12/2018	





Bluegill (BG), Green Sunfish (GS), Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Dry Weight (DW), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), milligrams per kilogram (mg/kg), Wet Weight (WW)

- Human health risk based concentration derived assuming 52 meals per year by an adult

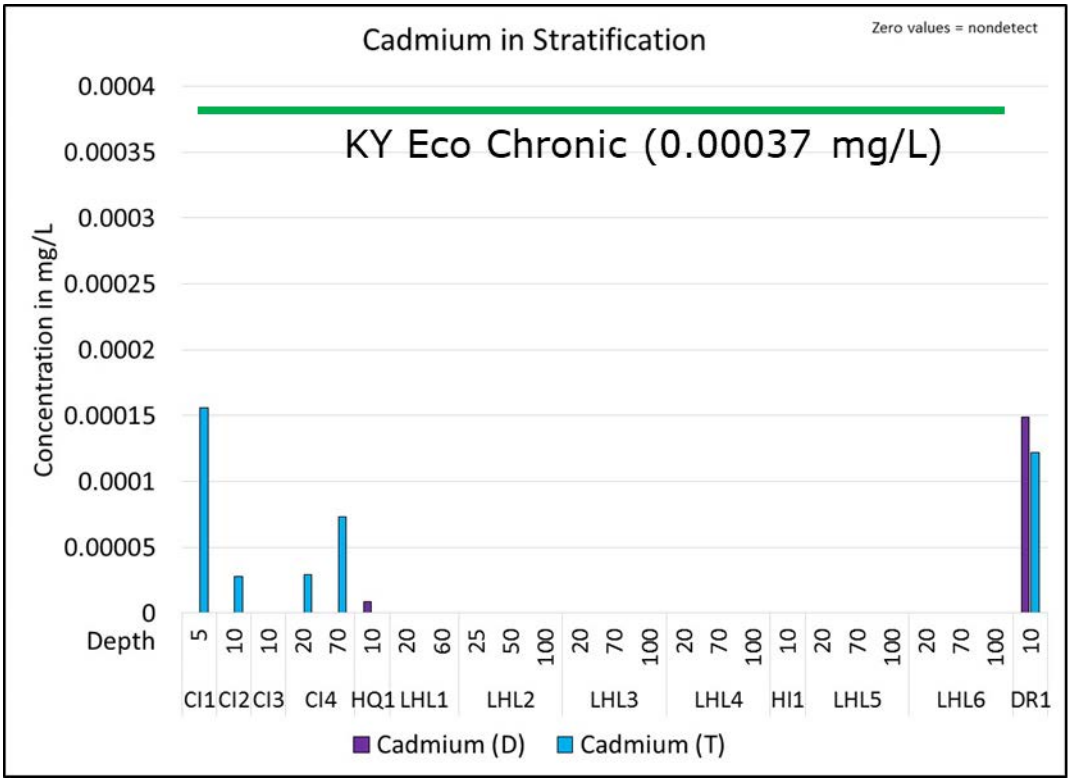
RAMBOLL

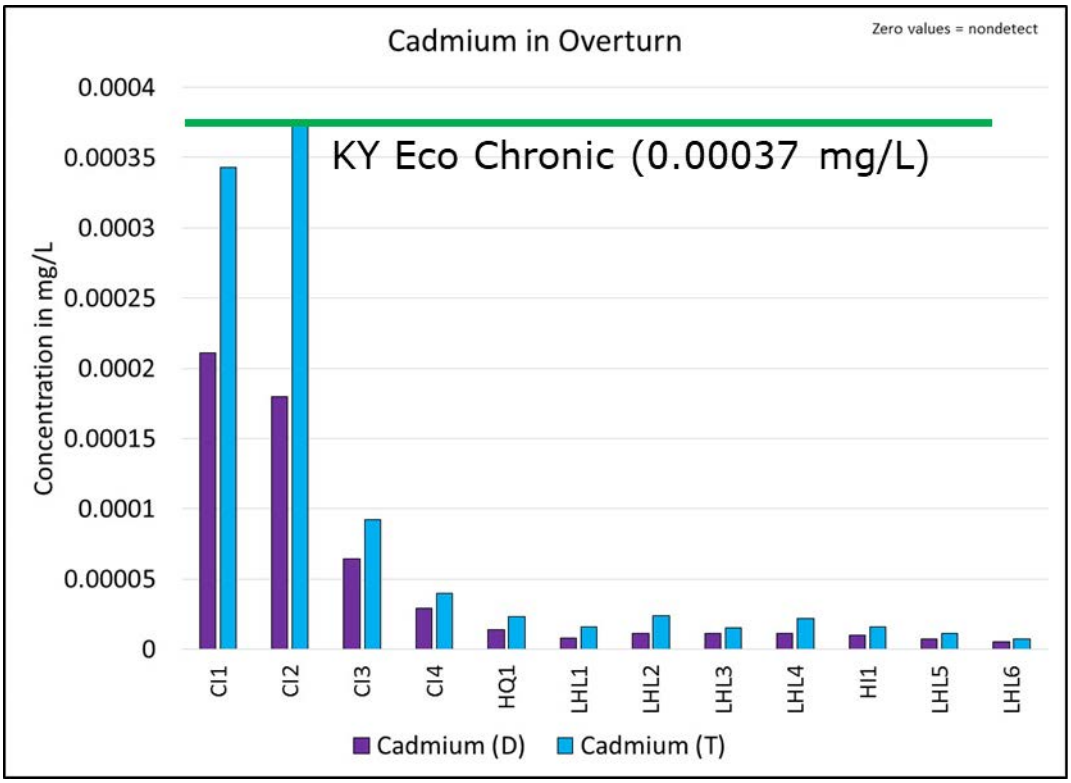
DRAFTED BY: PAL | DATE: 4/12/2018

CADMIUM IN FISH-TISSUE FILLET (WET WEIGHT)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE 5-4B





Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), Dissolved (D), Total Unfiltered (T), Kentucky Water Ecological Quality Standard (Kentucky Eco WQS), milligrams per liter (mg/L). Numbers above sample IDs in stratification chart indicate sample depth in feet.

- Human health Kentucky WQS and USEPA MCL is 0.005 mg/L (not shown on graphic as it is an order of magnitude higher than the y-axis scale)

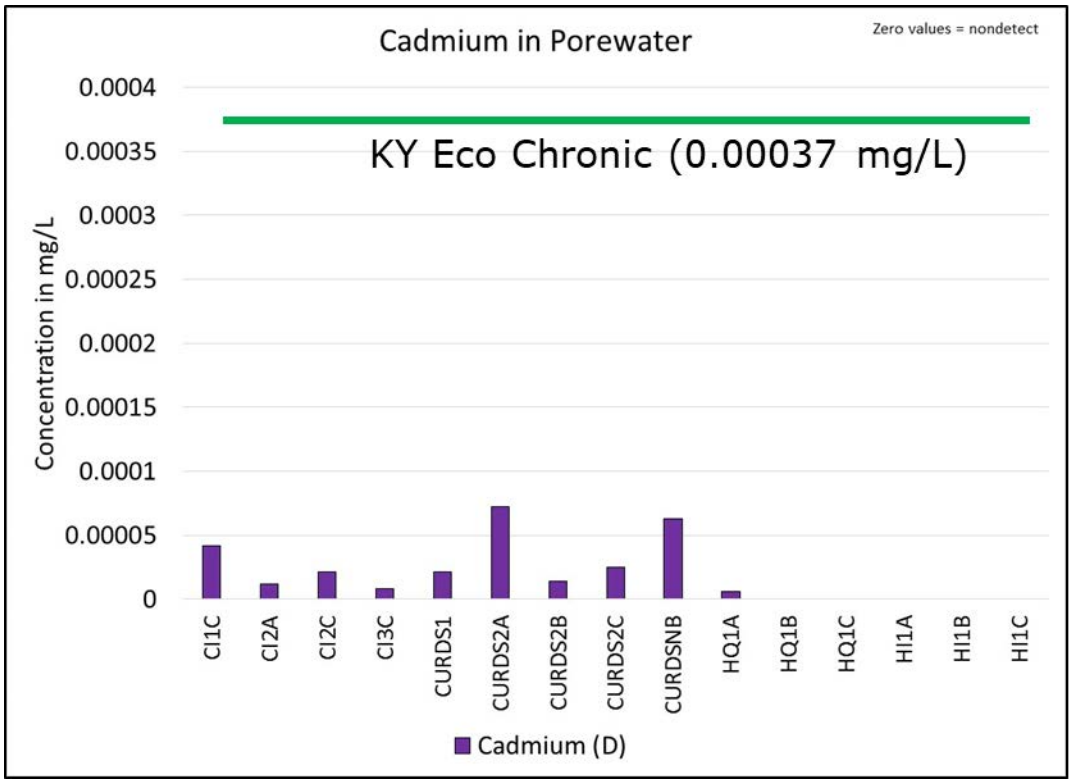
RAMBOLL

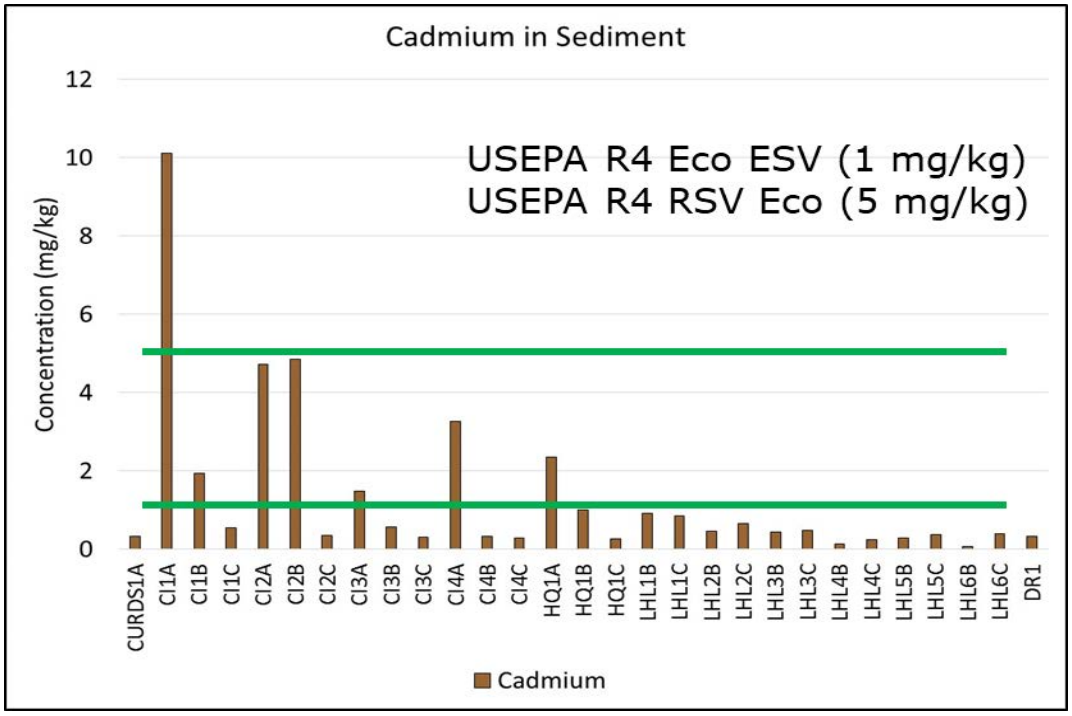
DRAFTED BY: PAL | DATE: 4/12/2018

CADMIUM IN SURFACE WATER (STRATIFIED AND OVERTURN)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-4C

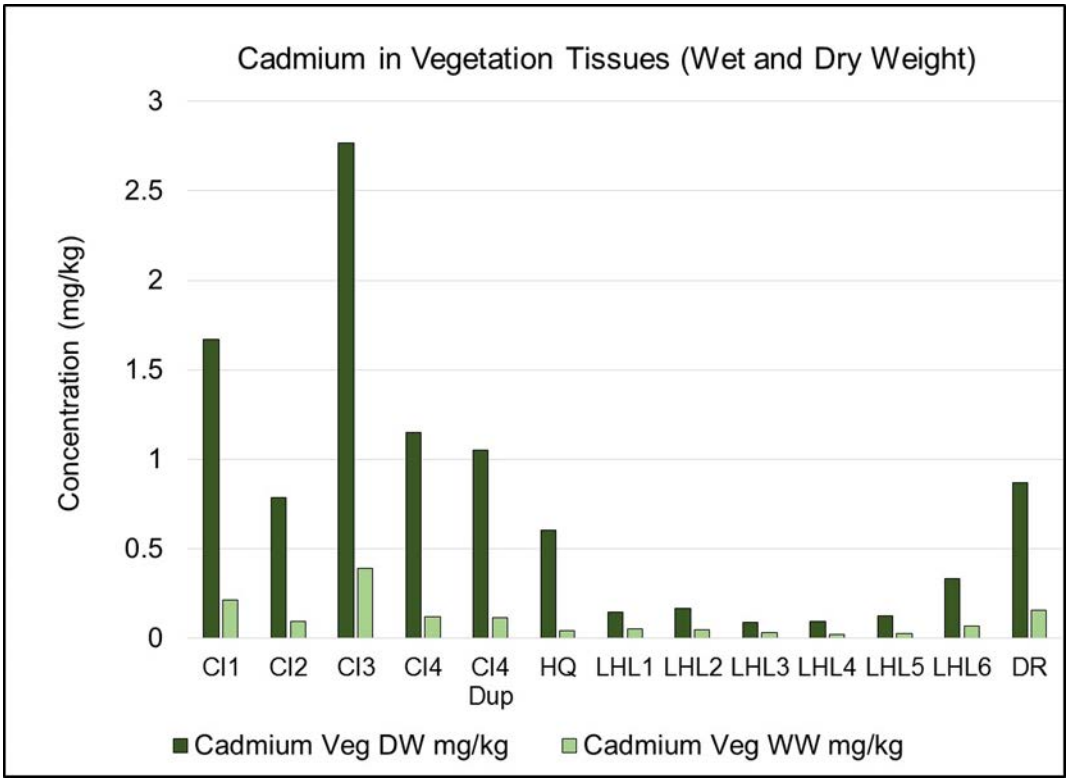


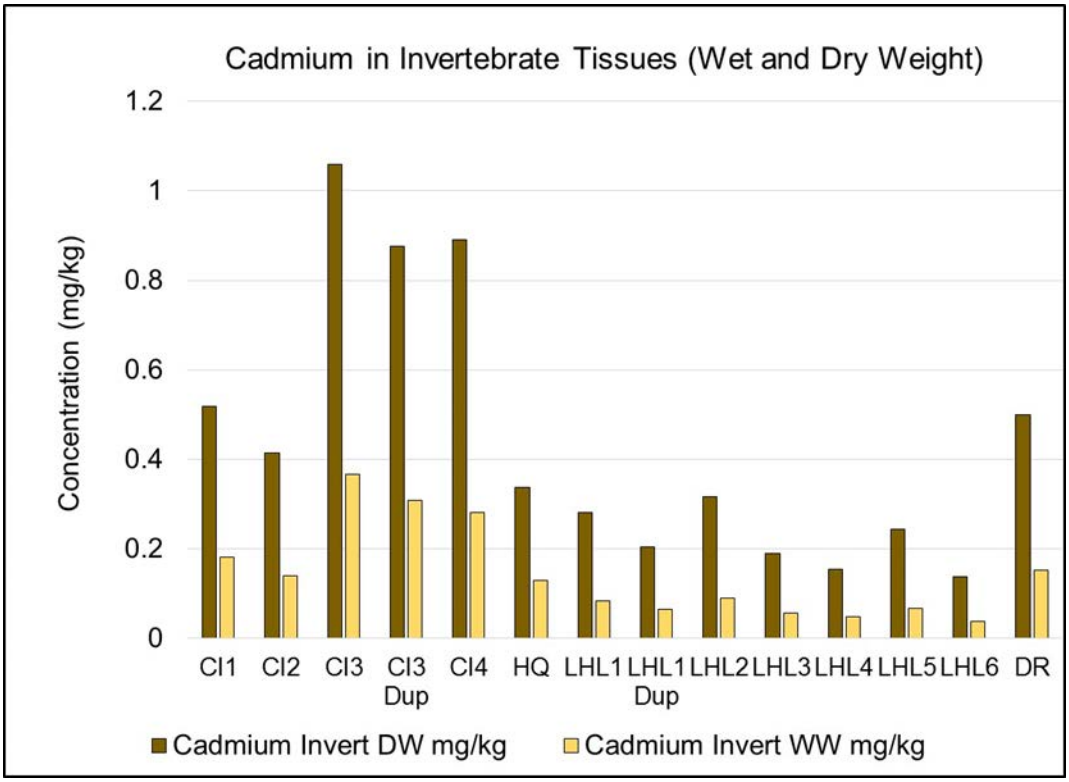


Curds Inlet (CI), HQ Inlet (HQ), Hardin's Inlet (HI), Lower Herrington Lake (LHL), Dix River (DR), Dissolved (D), milligrams per liter (mg/L), milligrams per kilogram (mg/kg), USEPA Region 4 Sediment ecological screening value (USEPA R4 SD Eco), Refined Screening Value (RSV).

- Higher than scale will allow shown for sediment: HH USEPA RSL screening level of 71 mg/kg based on residential soil.
- Cadmium is not elevated at CI3 like selenium and arsenic in sediment

RAMBOLL	CADMIUM IN SEDIMENT PORE WATER AND SEDIMENT Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	FIGURE 5-4D
DRAFTED BY: PAL	DATE: 4/12/2018	





Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), milligrams per kilogram (mg/kg), Wet Weight (WW), Dry Weight (DW)

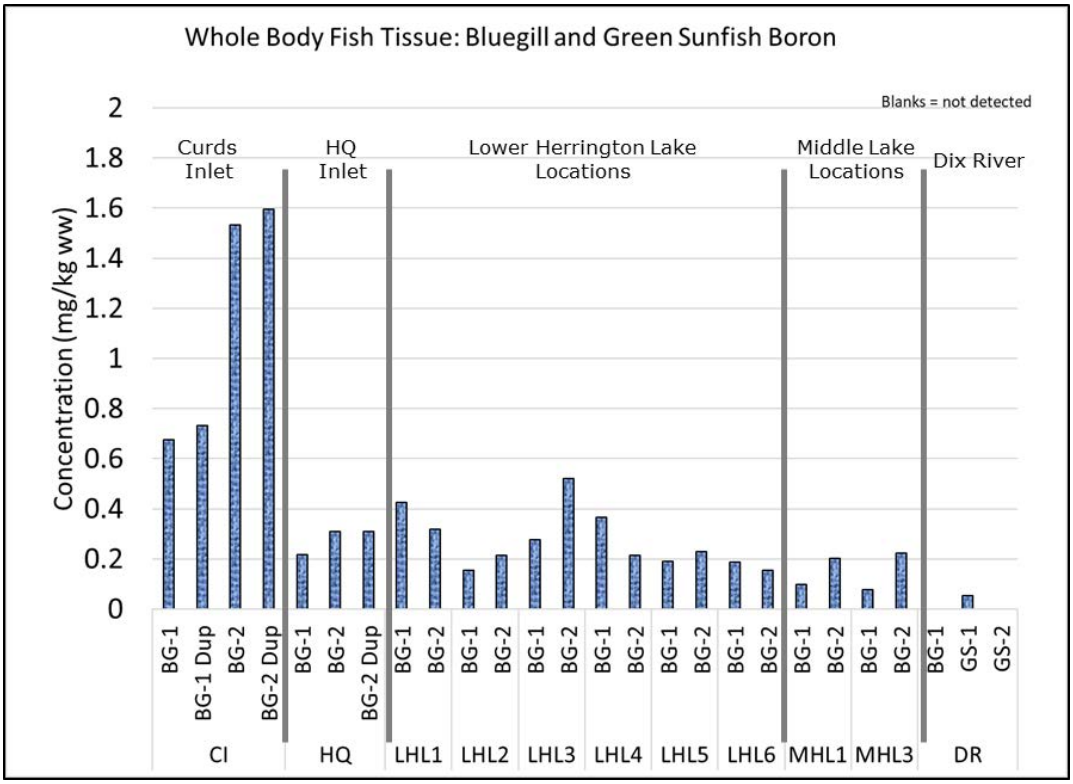
RAMBOLL

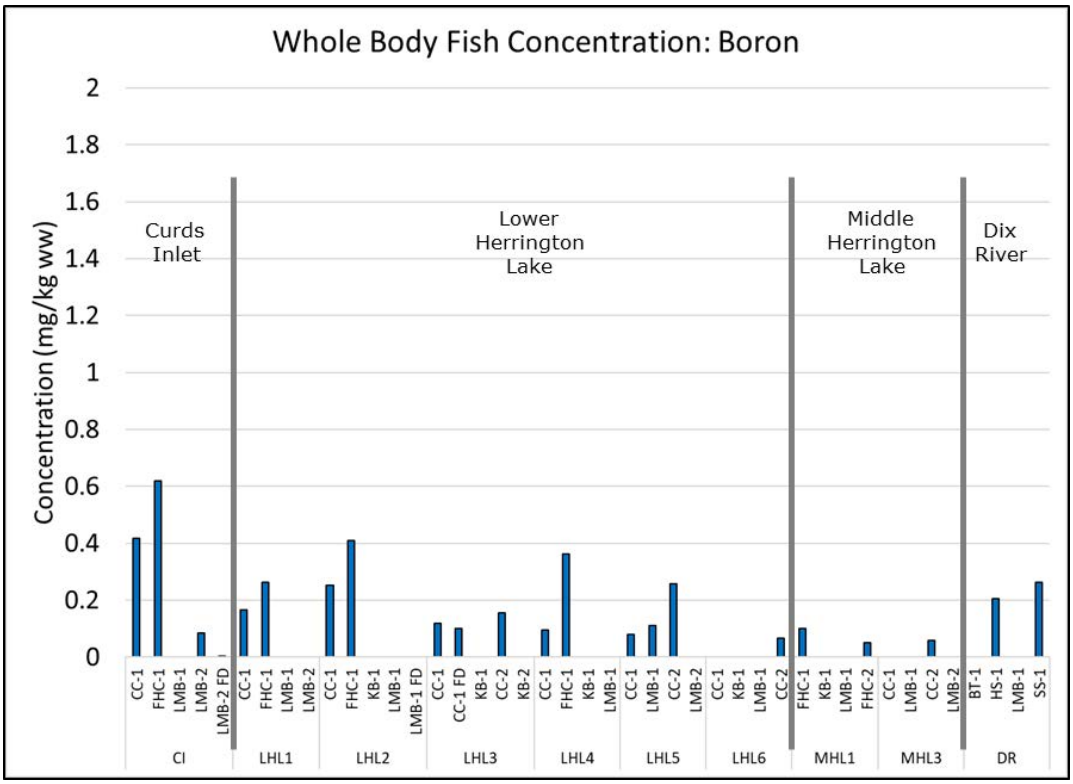
DRAFTED BY: PAL | DATE: 4/12/2018

CADMIUM IN VEGETATION AND INVERTEBRATES

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-4E





Bluegill (BG), Green Sunfish (GS), Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Dry Weight (DW), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), Wet Weight (WW)

Boron ecological risk-based screening levels for fish tissue were not found

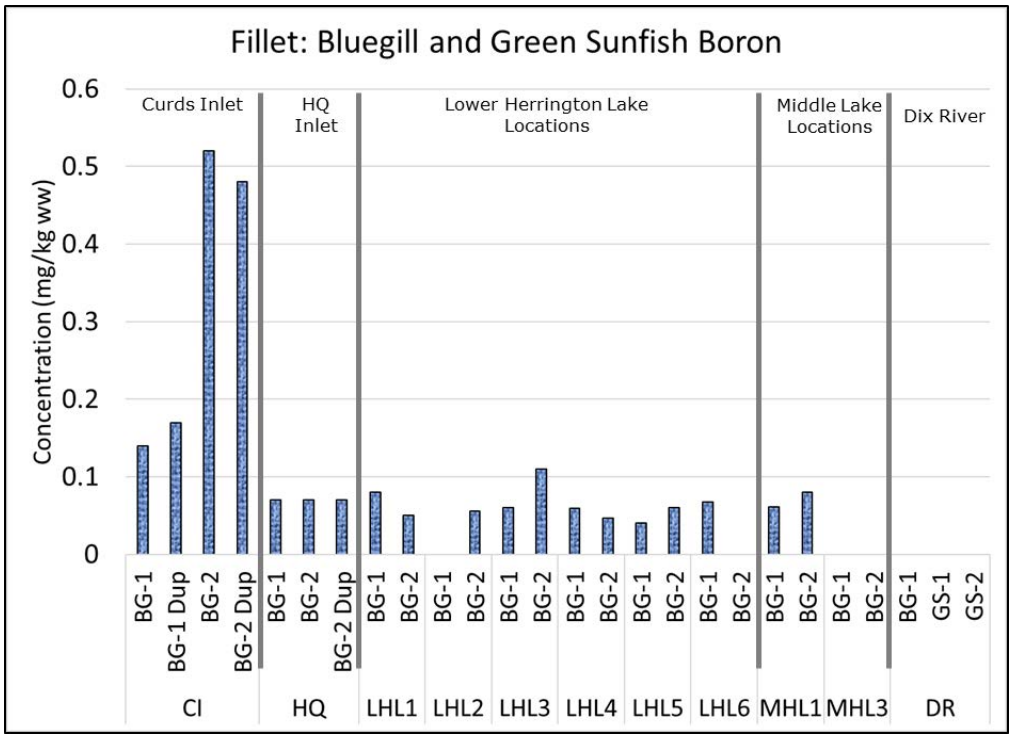
RAMBOLL

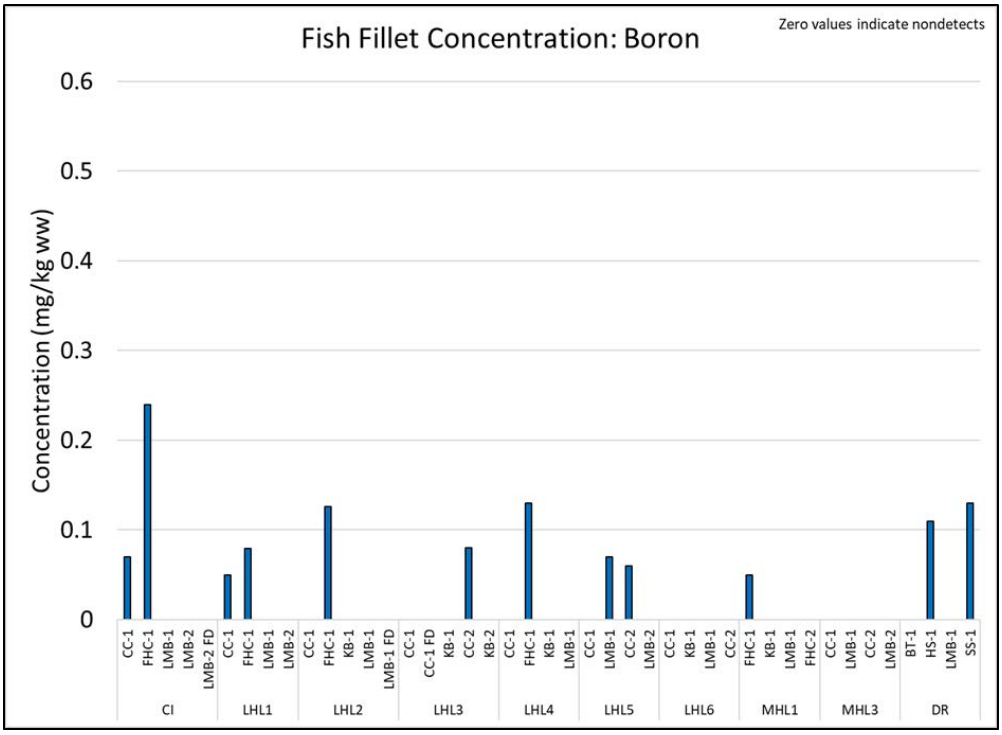
DRAFTED BY: PAL | DATE: 4/12/2018

BORON IN FISH-TISSUE WHOLE-BODY (WET WEIGHT)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-5A





Bluegill (BG), Green Sunfish (GS), Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Dry Weight (DW), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), milligrams per kilogram (mg/kg), Wet Weight (WW)

- Off scale – human health screening level: HH screening level for fish tissue is 516 mg/kg based on 52 meals per year

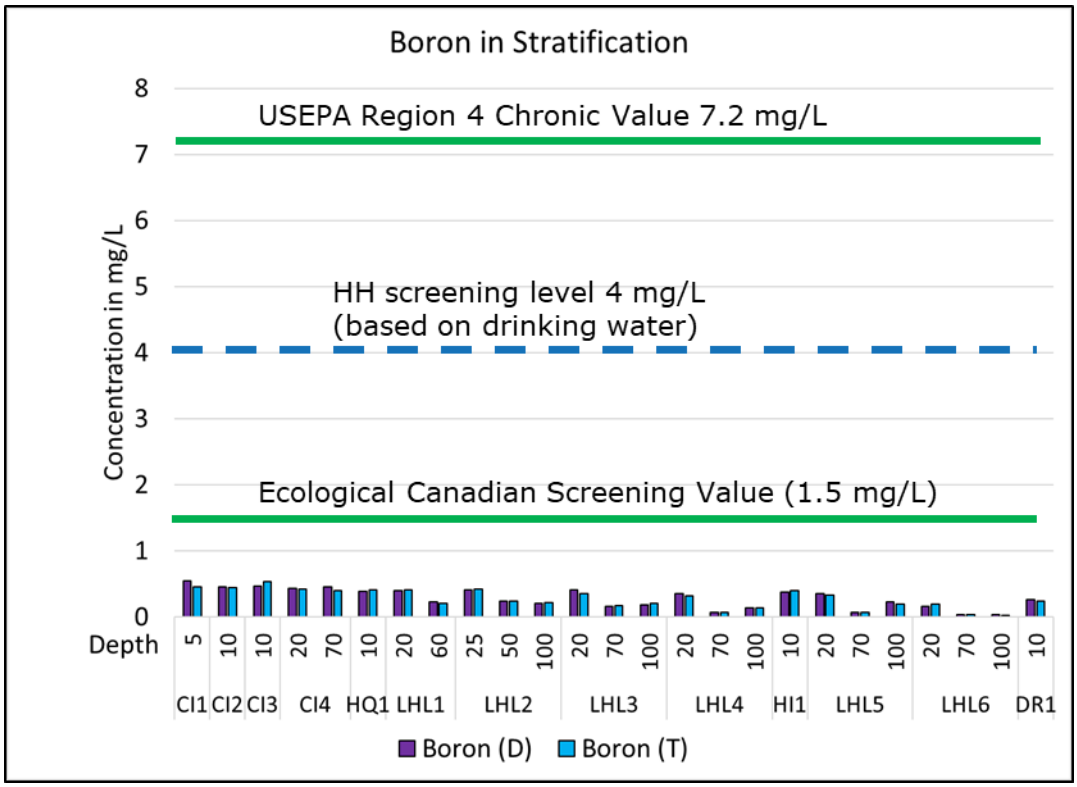
RAMBOLL

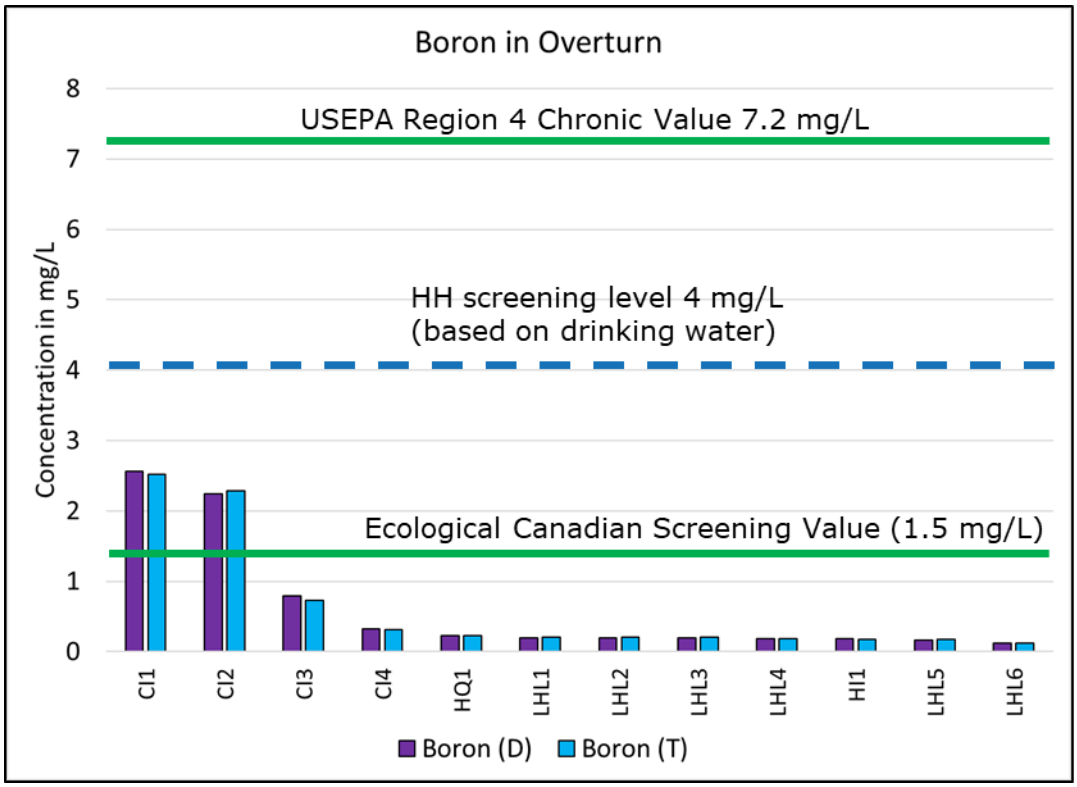
DRAFTED BY: PAL | DATE: 4/12/2018

BORON IN FISH FILLET TISSUE (WET WEIGHT)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-5B





Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), Dissolved (D), Total Unfiltered (T), milligrams per liter (mg/L). Numbers above sample IDs in stratification chart indicate sample depth in feet.

- Human health screening level USEPA risk screening level for drinking water

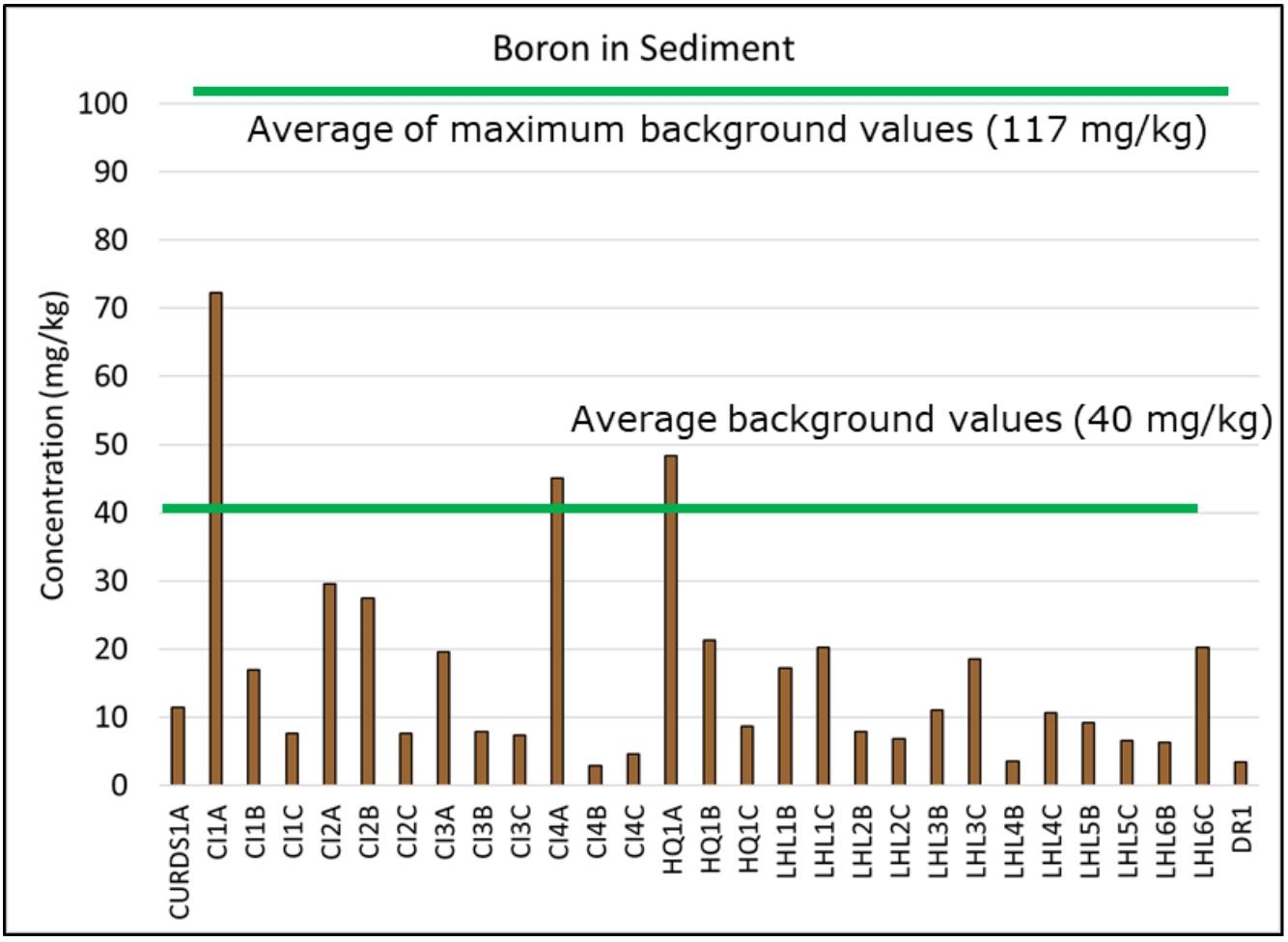
RAMBOLL

DRAFTED BY: PAL | DATE: 4/12/2018

BORON IN SURFACE WATER
(STRATIFIED AND OVERTURN)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-5C



Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), milligrams per kilogram (mg/kg)

HH USEPA RSL for residential soil of 16,000 mg/kg is not shown because the value is much higher than scale allows

Mason and Dragun (1996) provide typical background ranges for boron in sediment for a basis of context

- Information is not available for Kentucky
- Background for Georgia, Washington, Illinois, Kansas, Nebraska, Michigan, Utah, and New Mexico shows that naturally occurring background ranges are 10 mg/kg to 700 mg/kg (average of approximately 40 mg/kg)

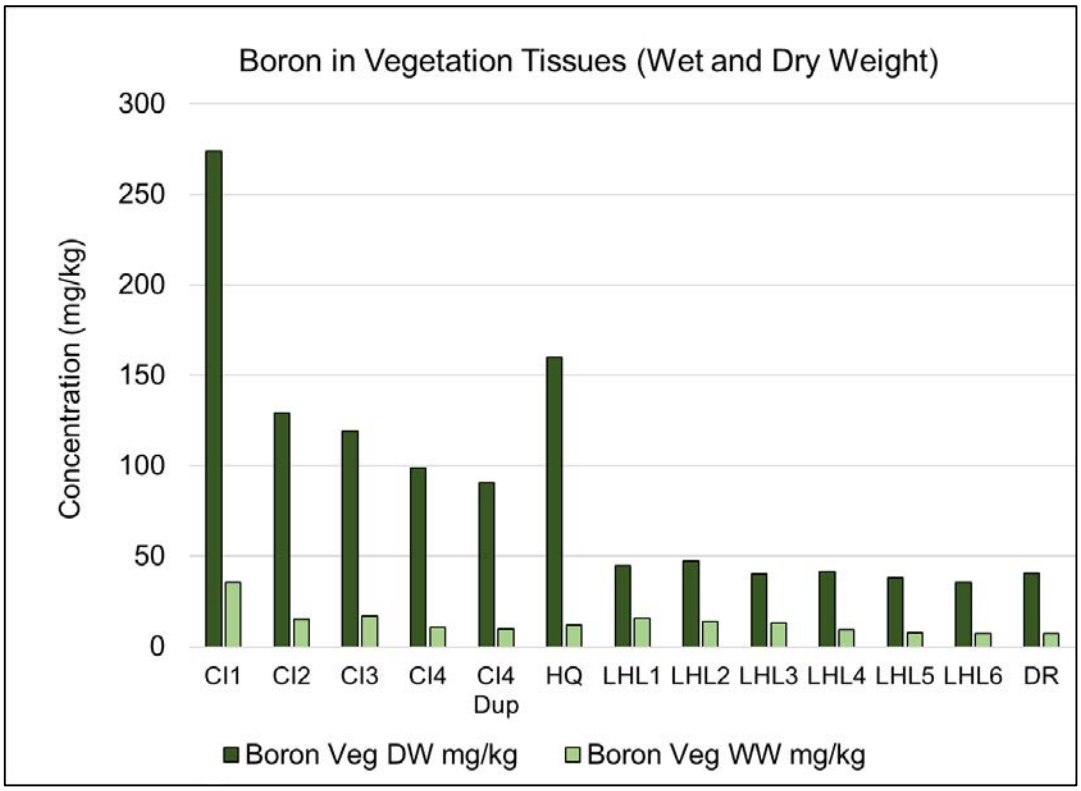
RAMBOLL

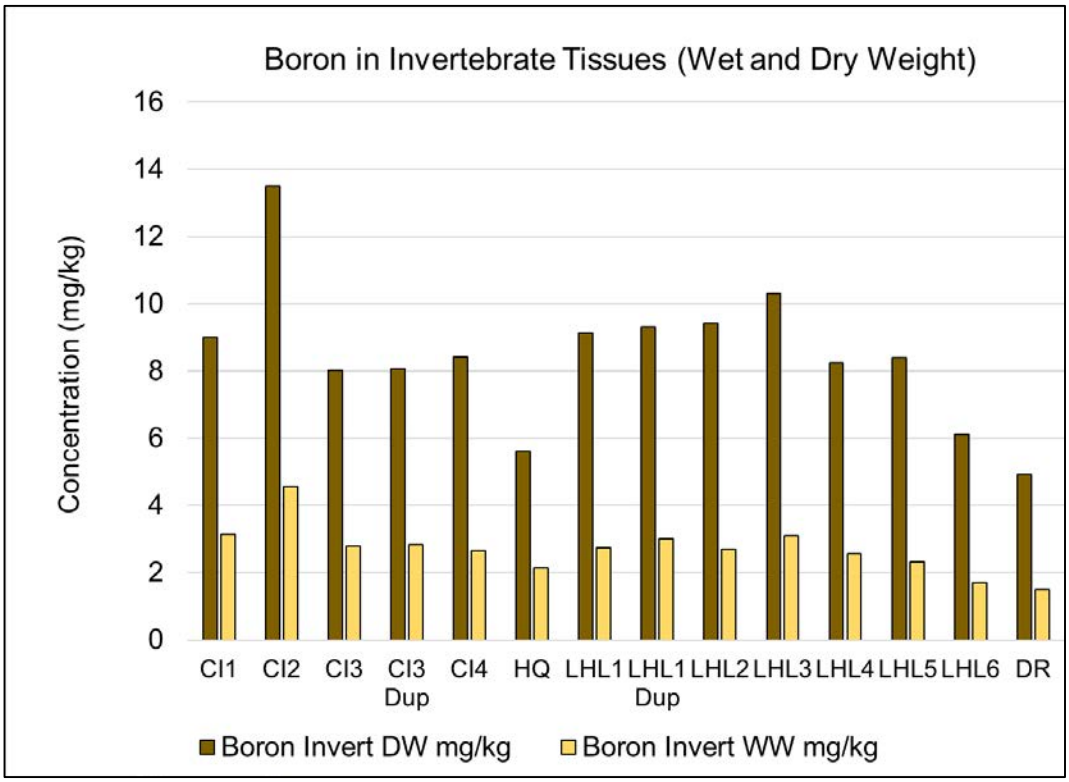
DRAFTED BY: PAL | DATE: 4/12/2018

BORON IN SEDIMENT

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-5D





Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), milligrams per kilogram (mg/kg), Wet Weight (WW), Dry Weight (DW)

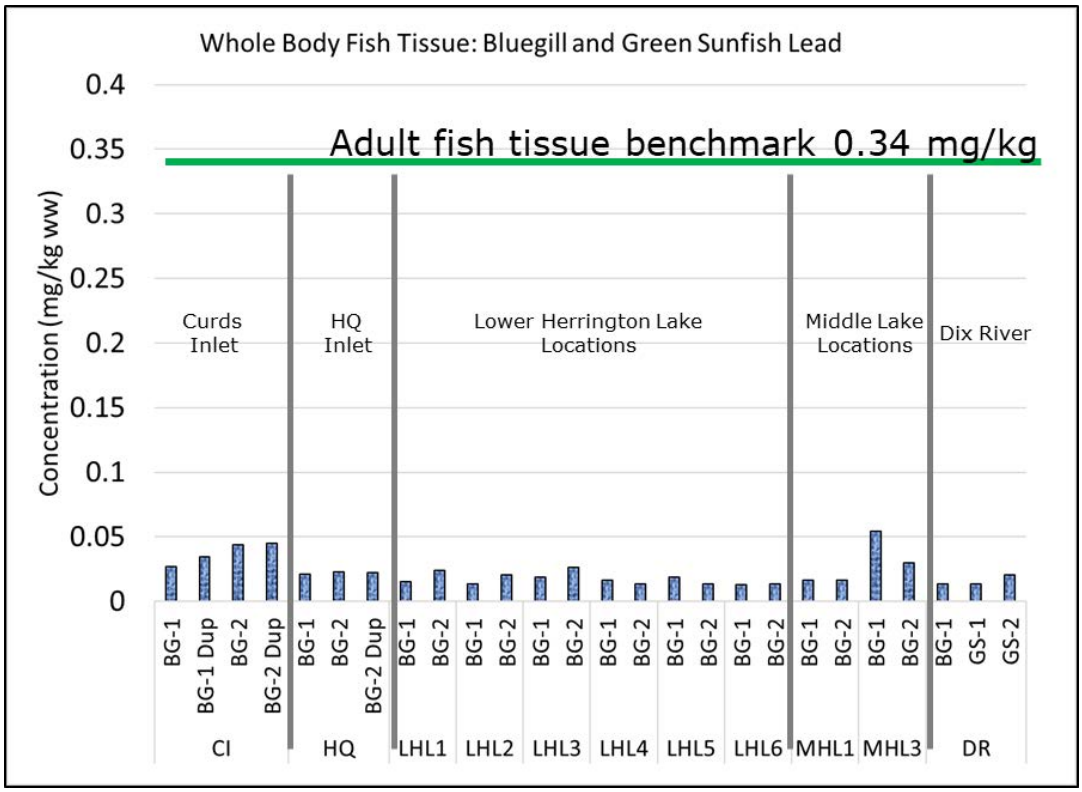
RAMBOLL

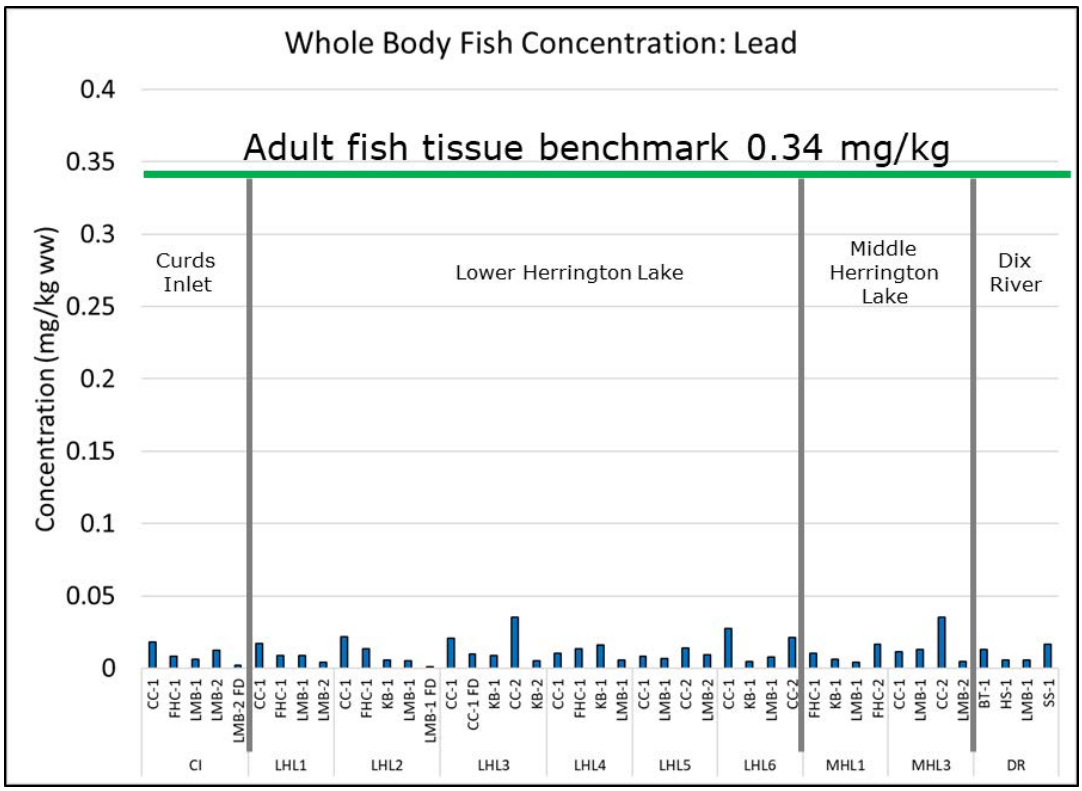
DRAFTED BY: PAL | DATE: 4/12/2018

BORON IN VEGETATION AND INVERTEBRATES

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-5E





Bluegill (BG), Green Sunfish (GS), Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Dry Weight (DW), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), Wet Weight (WW)

Early life stage whole body fish tissue residue benchmark of 2.6 mg/kg is not shown because it is much higher than the scale allows

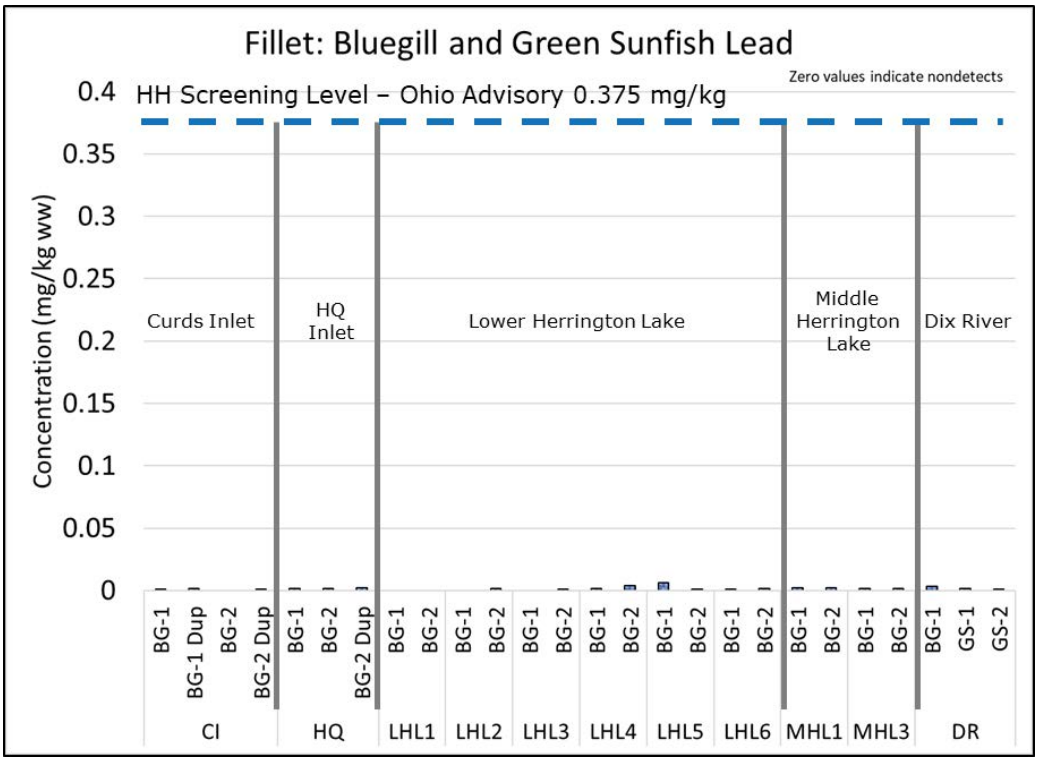
RAMBOLL

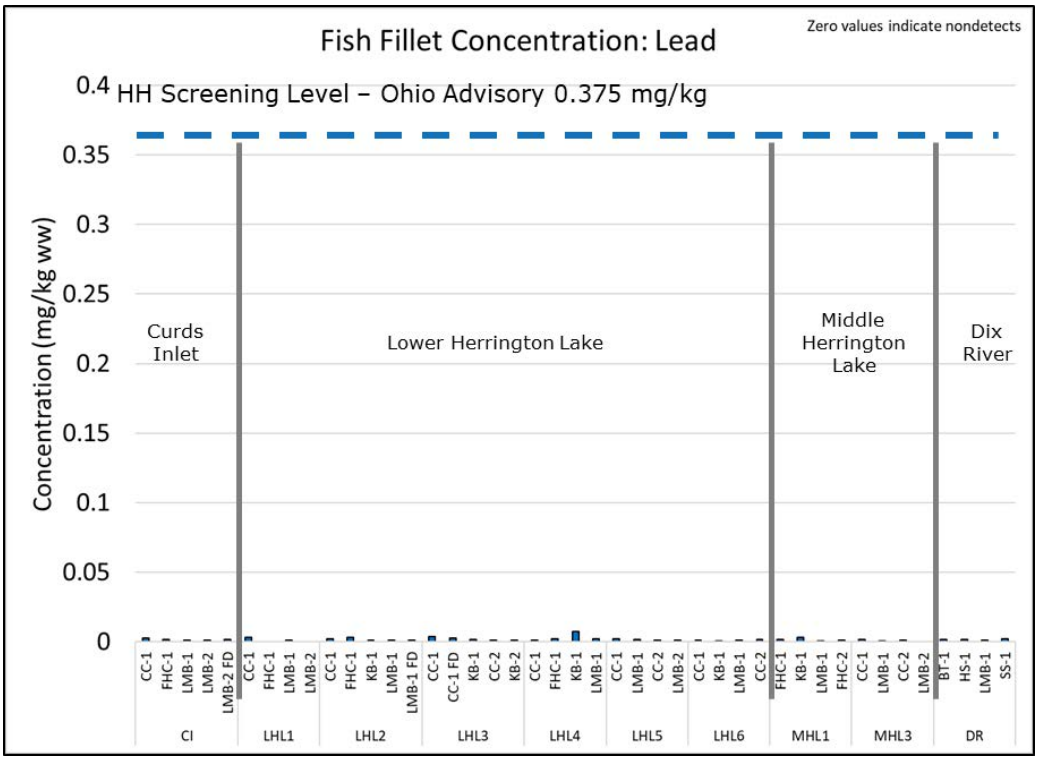
DRAFTED BY: PAL | DATE: 4/12/2018

LEAD IN FISH-TISSUE WHOLE-BODY (WET WEIGHT)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-6A





Bluegill (BG), Green Sunfish (GS), Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Dry Weight (DW), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), Wet Weight (WW)

- HH screening level from Ohio advisory level of 0.375 mg/kg in fish tissue based on a meal a week

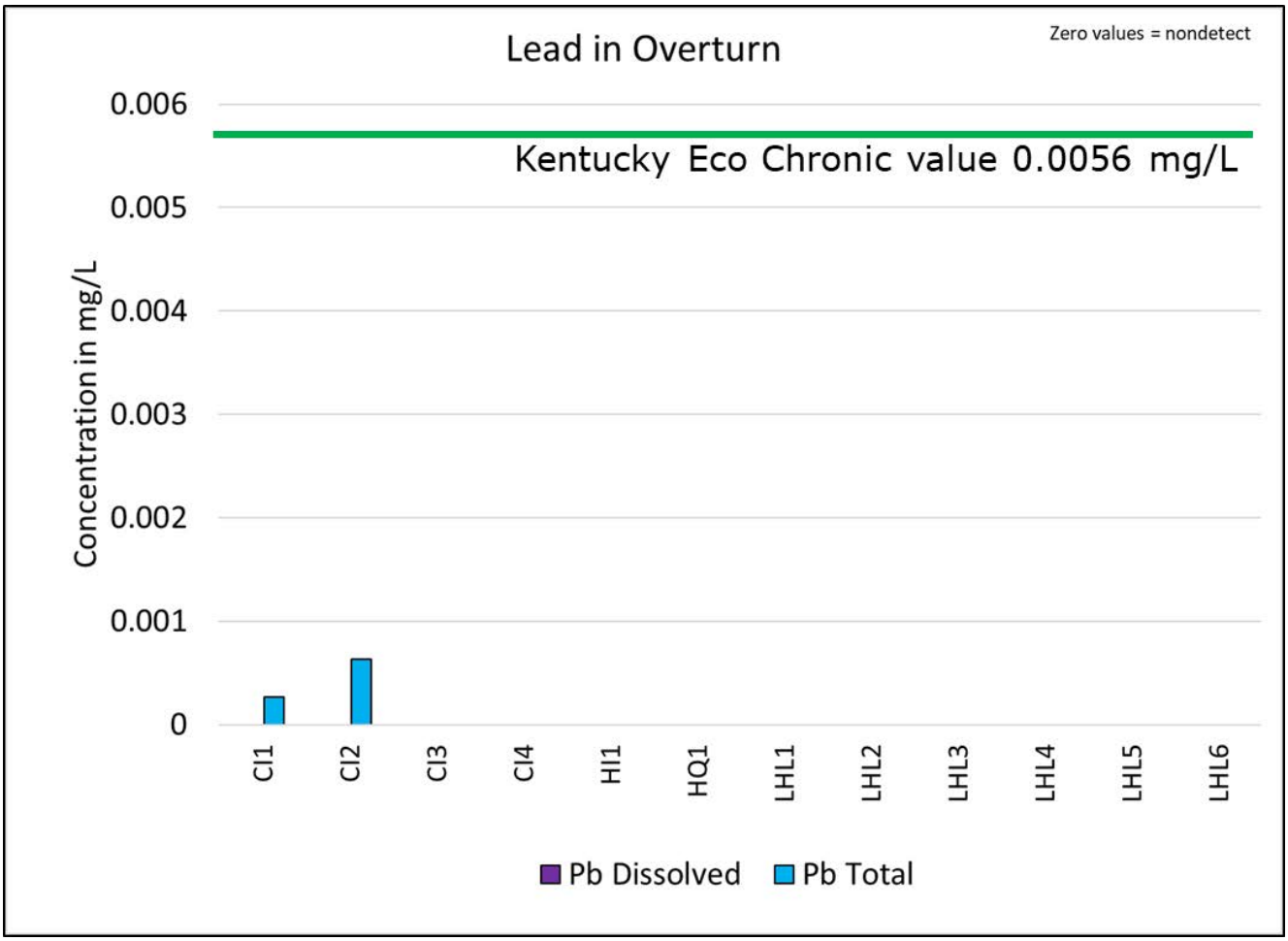
RAMBOLL

DRAFTED BY: PAL | DATE: 4/12/2018

LEAD IN FISH FILLET TISSUE (WET WEIGHT)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-6B



Curds Inlet (CI), Hardin's Inlet (HI), HQ Inlet (HQ), Lower Herrington Lake (LHL), milligrams per liter (mg/L)

Kentucky Eco Acute value of 0.144 mg/L and the human health ingestion of water standard is 0.015 mg/L are not shown because they are higher than the scale allows

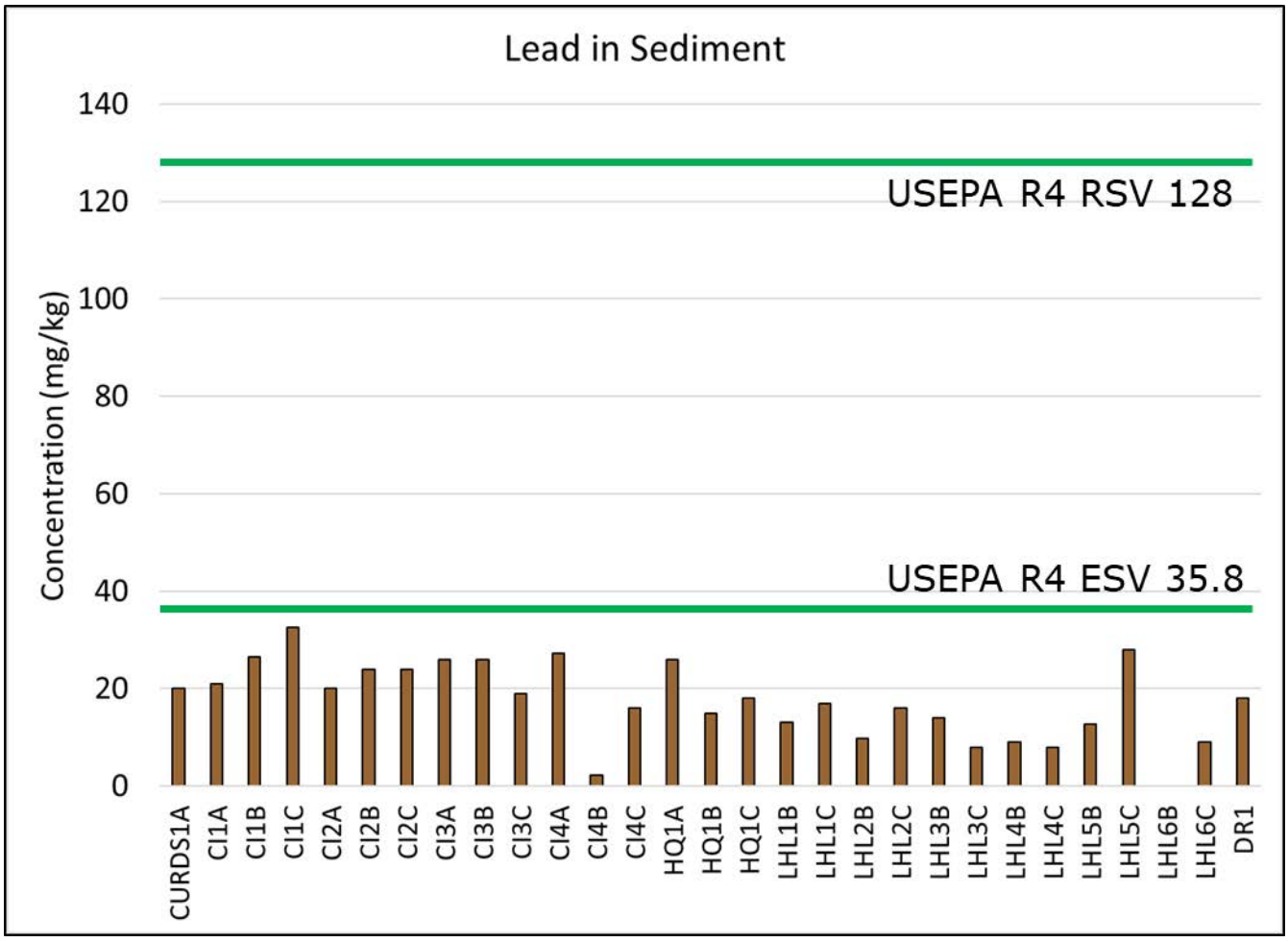
RAMBOLL

DRAFTED BY: PAL | DATE: 4/12/2018

LEAD IN SURFACE WATER (OVERTURN)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-6C



Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), milligrams per kilogram (mg/kg)

- USEPA Region 4 Sediment Refined Screening Value (USEPA R4 RSV). USEPA Region 4 Sediment Ecological Screening Value (USEPA R4 ESV)
- HH lead screening value is 400 mg/kg for residential soil; not shown on graphic because screening value is higher than scale allows

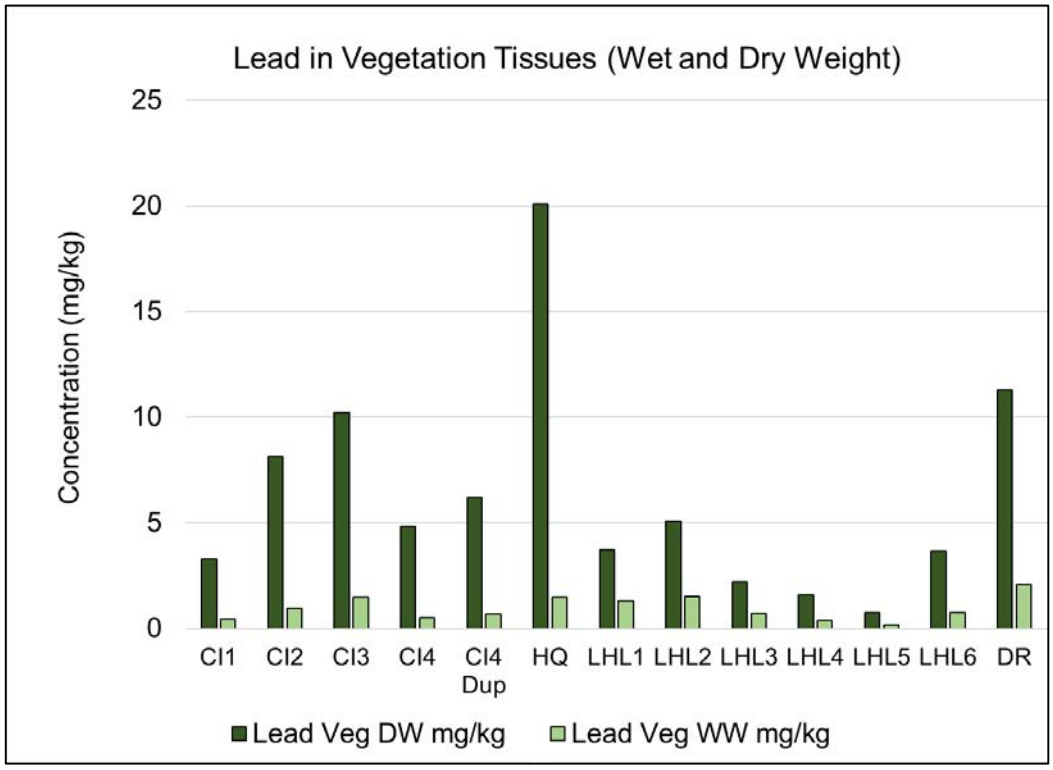
RAMBOLL

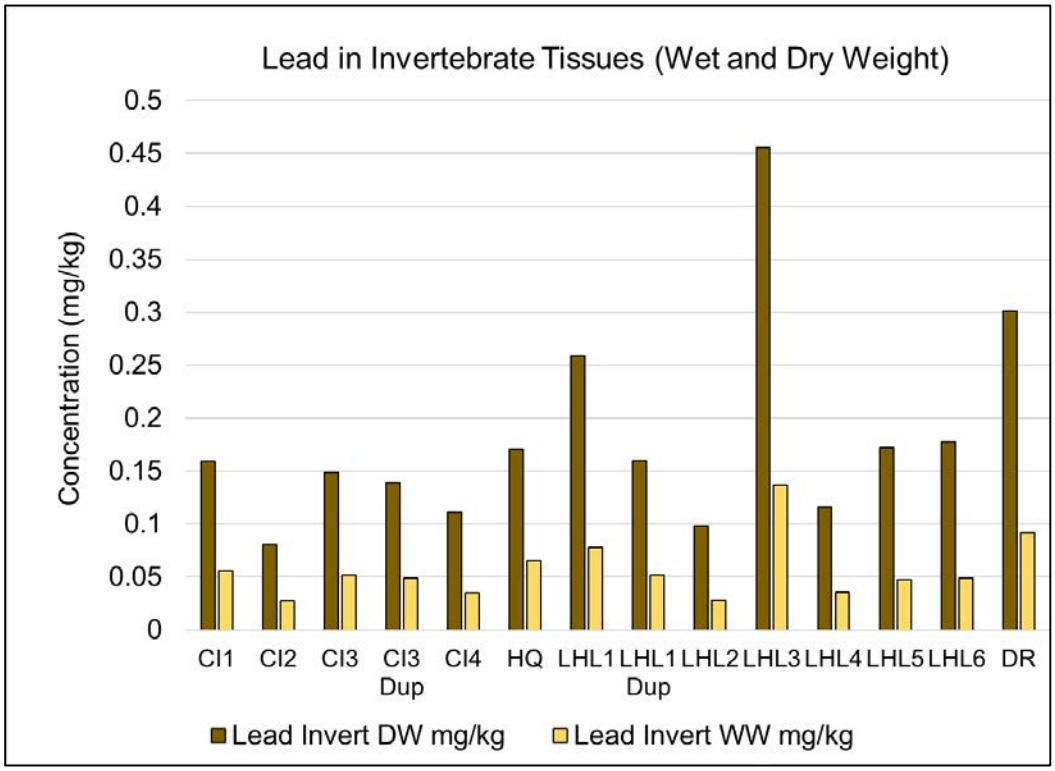
DRAFTED BY: PAL | DATE: 4/12/2018

LEAD IN SEDIMENT

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-6D





Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), Wet Weight (WW), Dry Weight (DW), milligrams per kilogram (mg/kg)

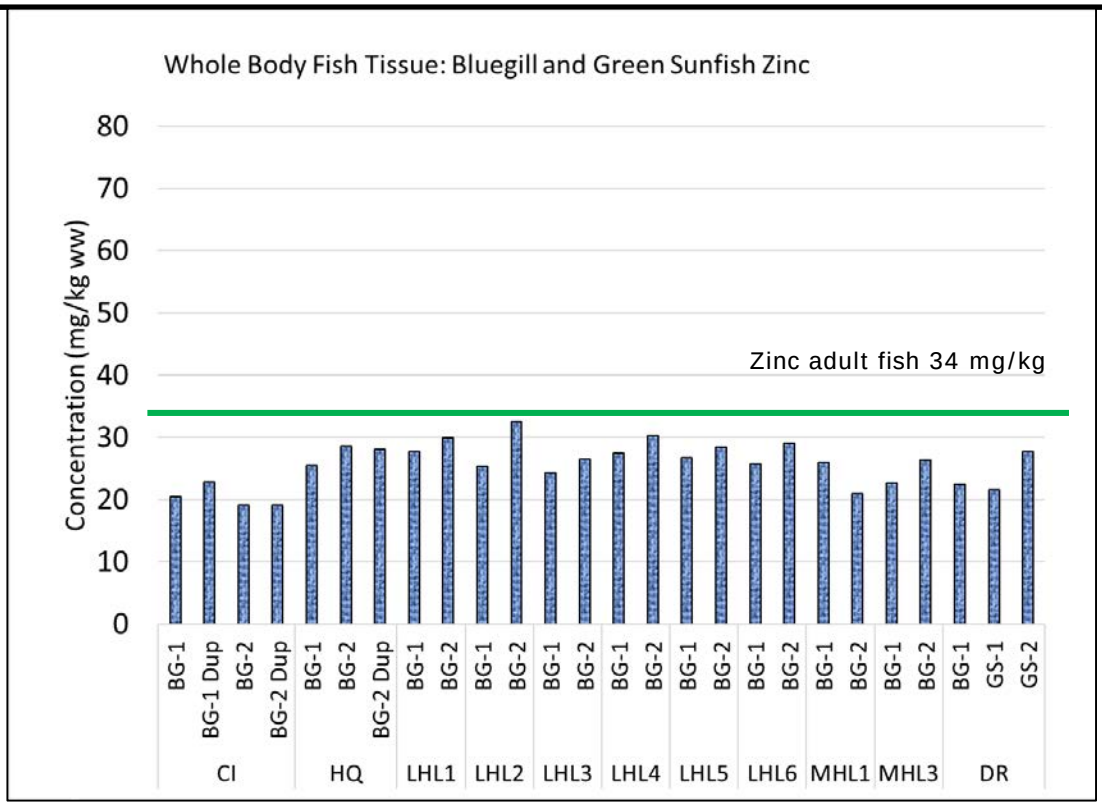
RAMBOLL

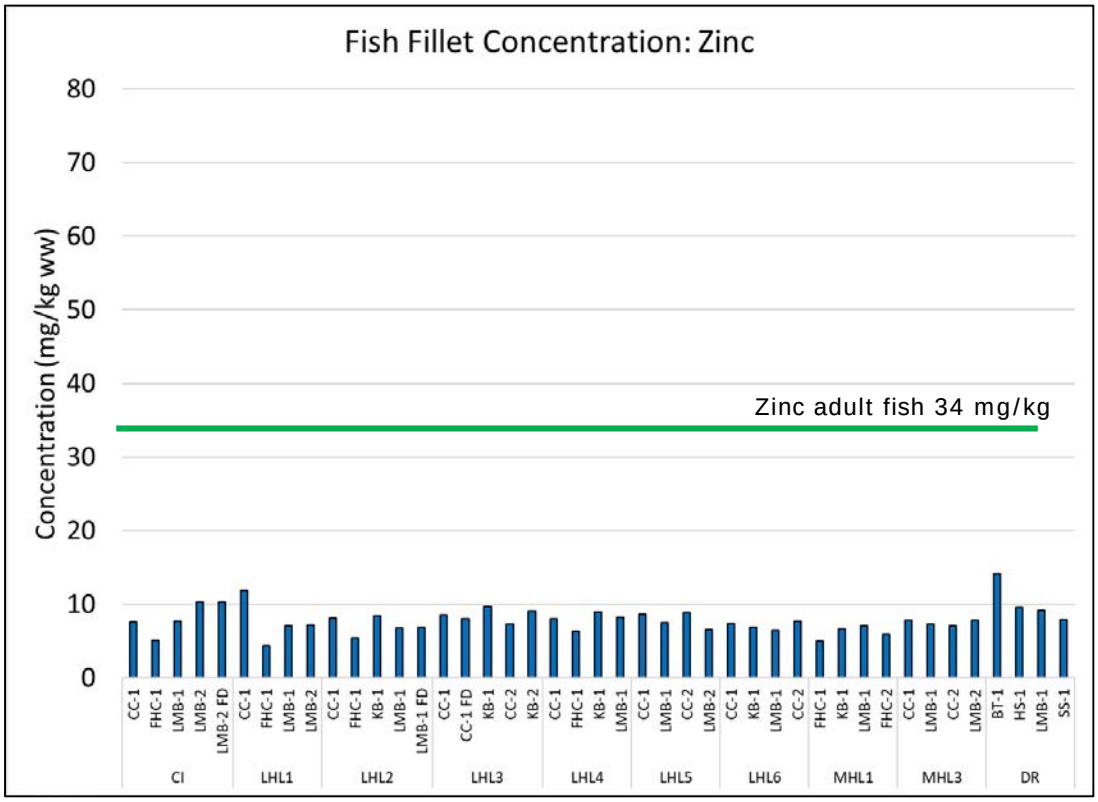
DRAFTED BY: PAL | DATE: 4/12/2018

LEAD IN VEGETATION AND INVERTEBRATES

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-6E





Bluegill (BG), Green Sunfish (GS), Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Dry Weight (DW), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), Wet Weight (WW)

Fish tissue screening level from scientific literature, including Jarvinen and Ankley (1999)

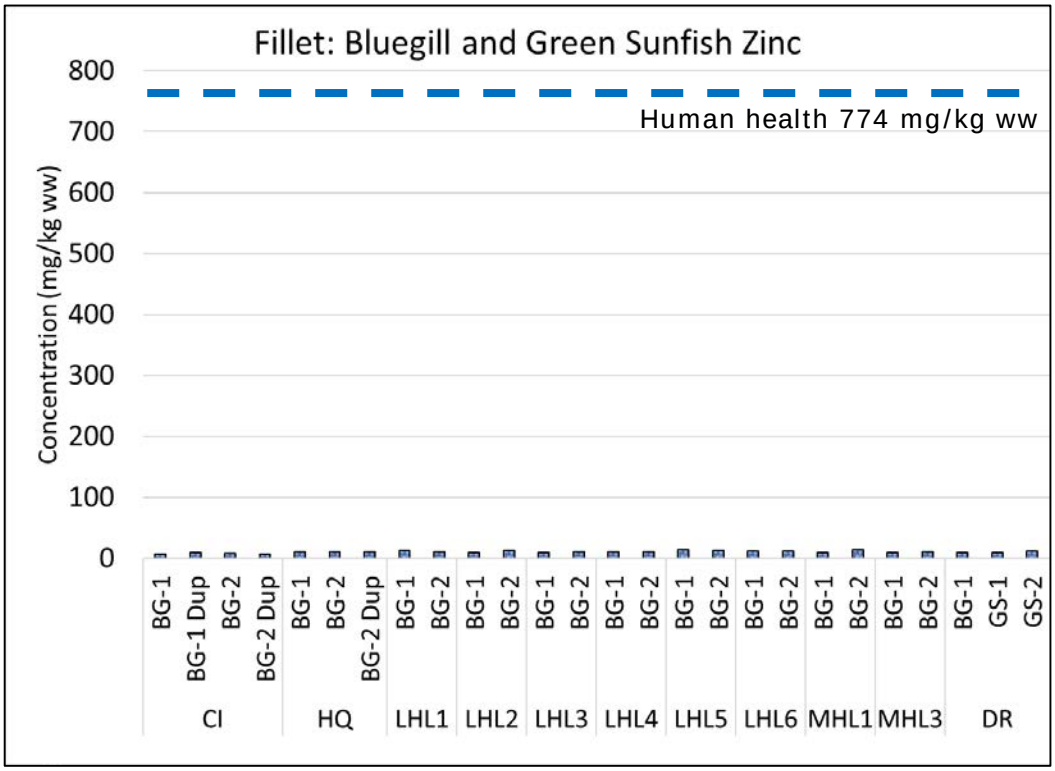
RAMBOLL

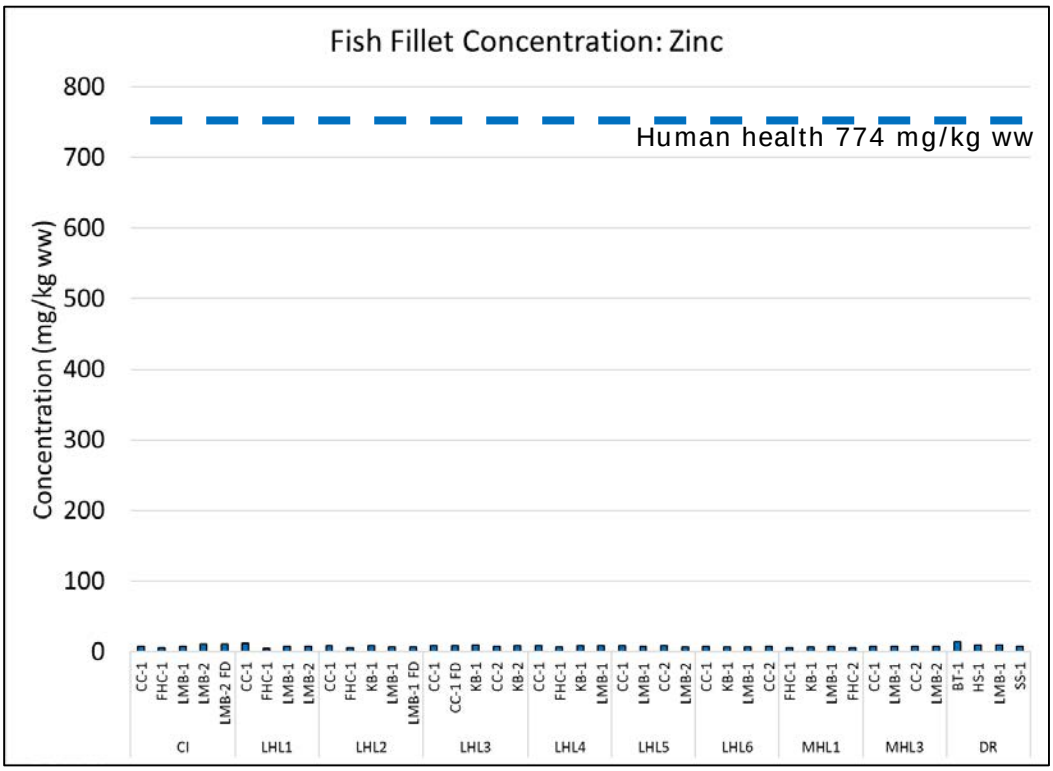
DRAFTED BY: PAL | DATE: 4/12/2018

ZINC IN FISH-TISSUE WHOLE-BODY (WET WEIGHT)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-7A

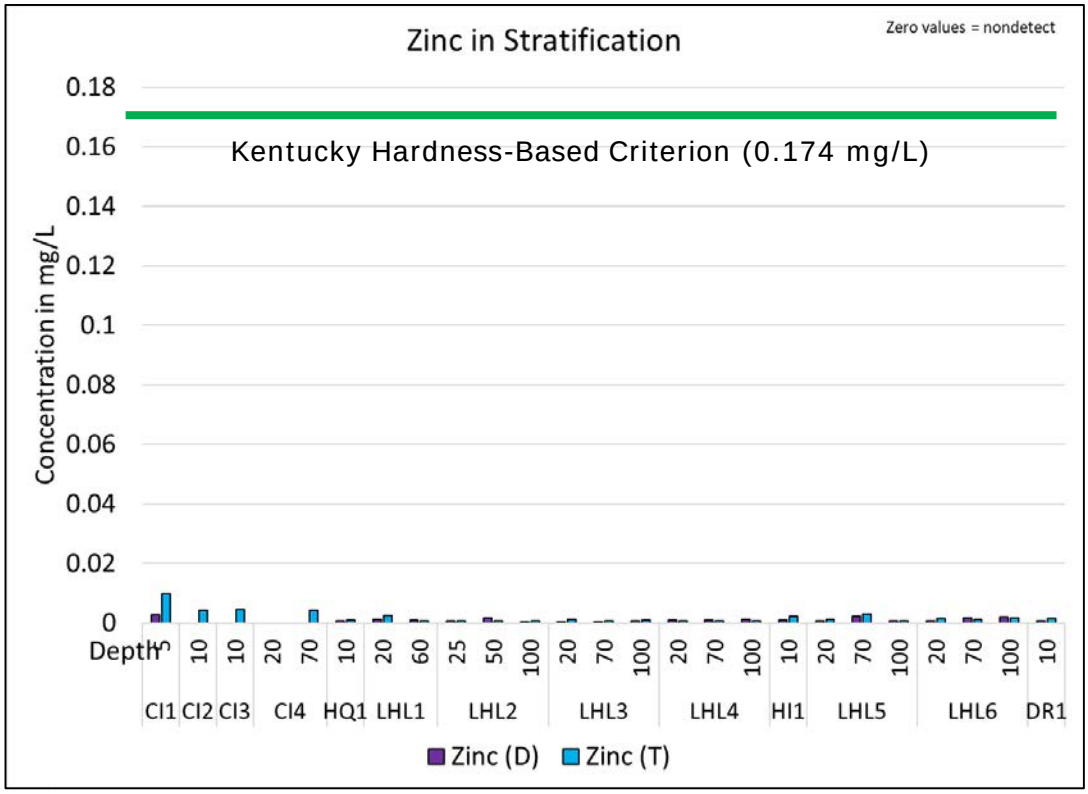


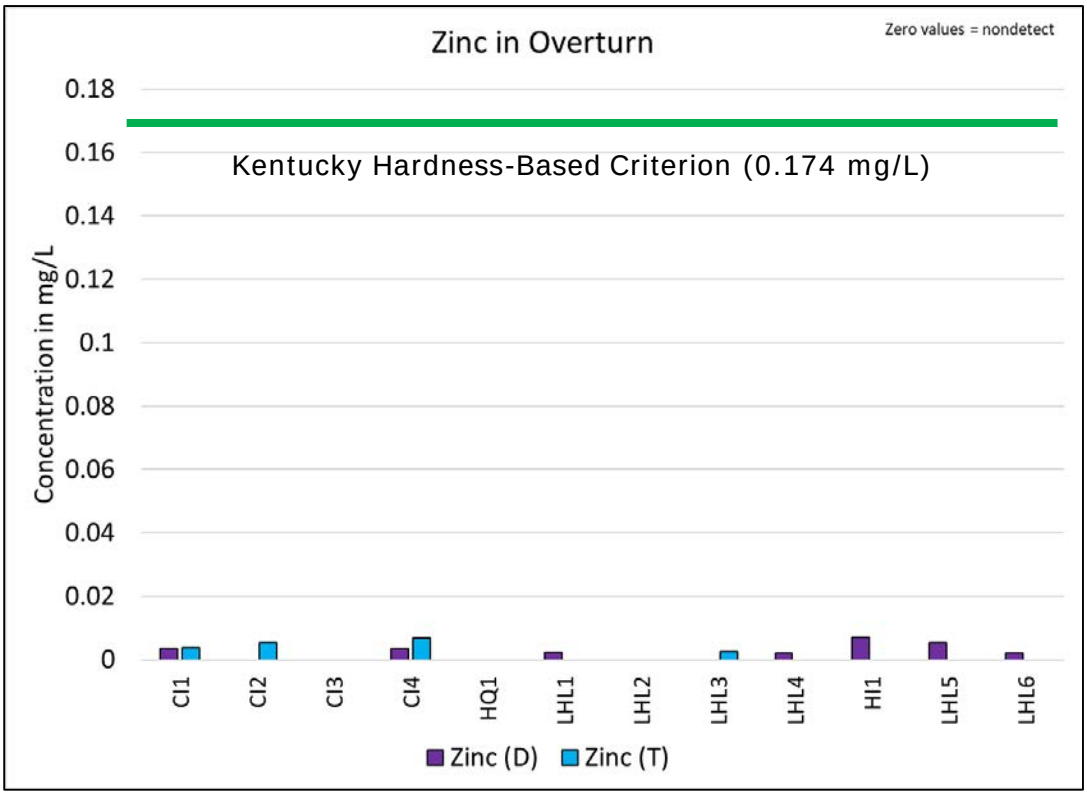


Bluegill (BG), Green Sunfish (GS), Flathead Catfish (FHC), Largemouth Bass (LMB), Kentucky Bass (KB), Channel Catfish (CC), Brown Trout (BT), Northern Hogsucker (HS), Dry Weight (DW), Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Middle Herrington Lake (MHL), Dix River (DR), Wet Weight (WW)

The human health value of 774 mg/kg ww based on 52 meals/year

RAMBOLL	ZINC IN FISH FILLET TISSUE (WET WEIGHT) Herrington Lake CAP Phase 1 Tech Memo Mercer County, Kentucky	FIGURE 5-7B
DRAFTED BY: PAL	DATE: 4/12/2018	





Curds Inlet (CI), Hardin's Inlet (HI), HQ Inlet (HQ), Lower Herrington Lake (LHL), milligrams per liter (mg/L)

Kentucky Human Health 26 mg/L for Consumption of Fish and Kentucky Human Health 7.4 mg/L for drinking water standard (not shown because higher than scale allows)

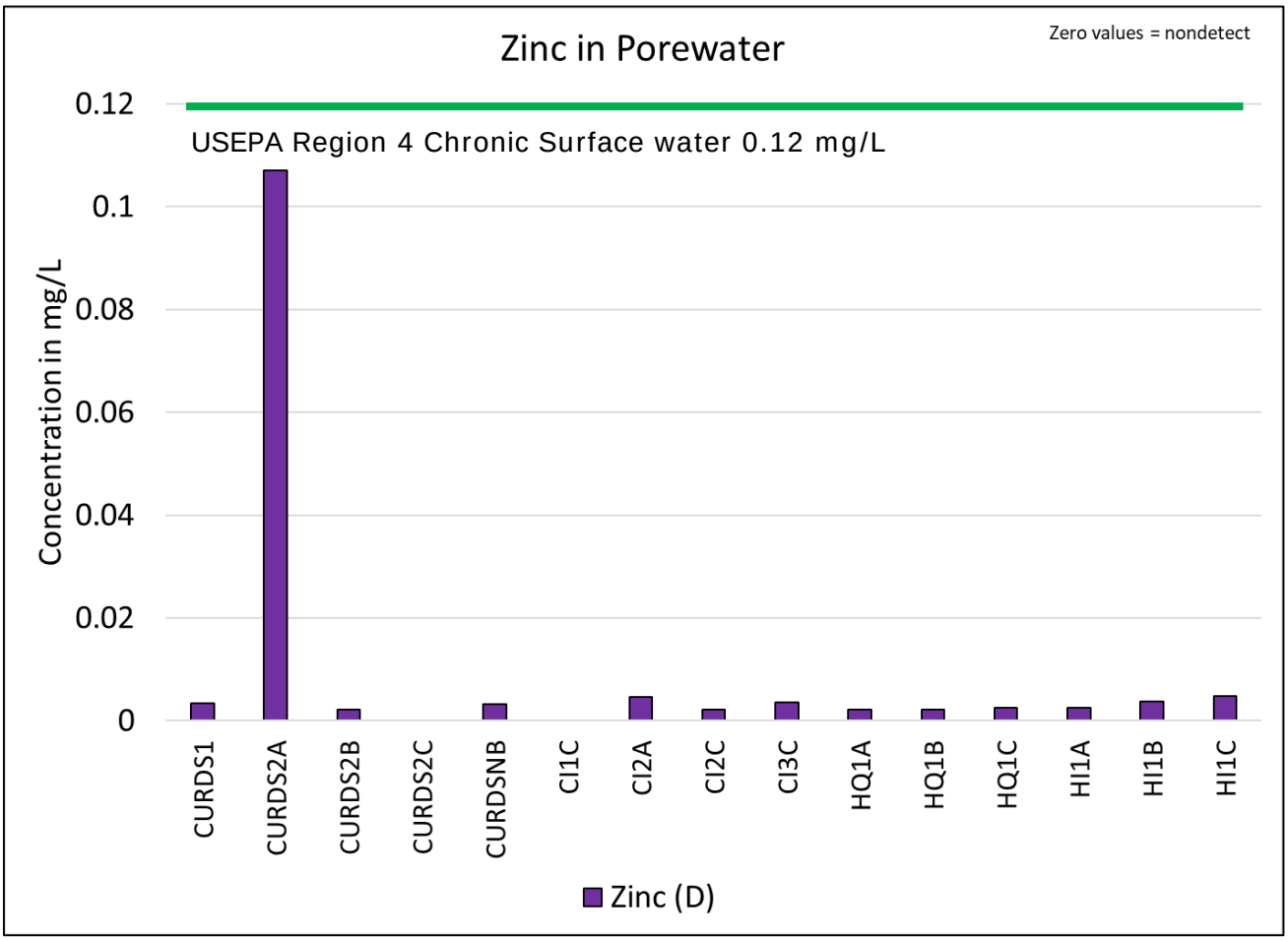
RAMBOLL

DRAFTED BY: PAL | DATE: 4/12/2018

ZINC IN SURFACE WATER
(STRATIFICATION AND OVERTURN)

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-7C



Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), milligrams per kilogram (mg/L)

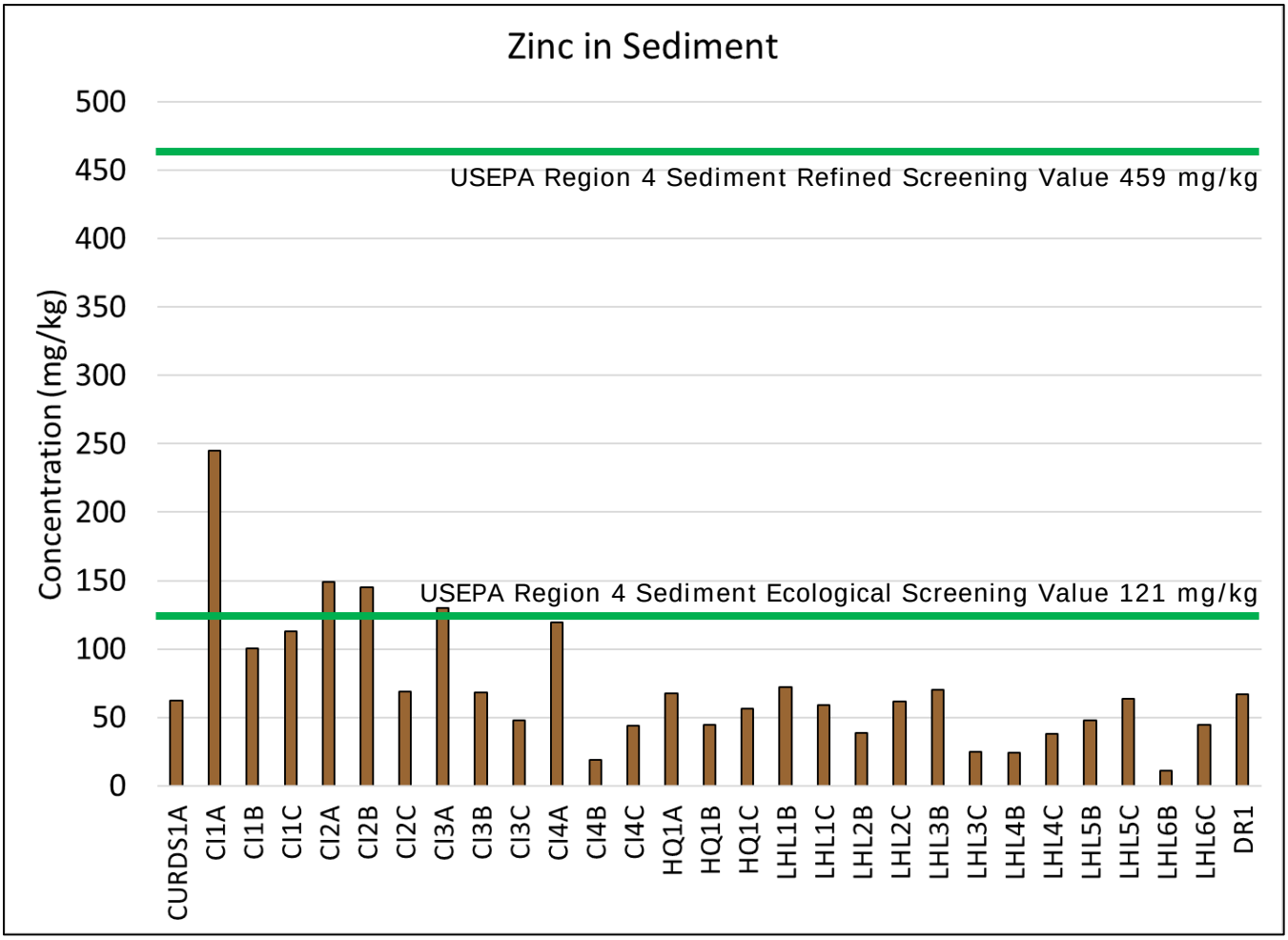
RAMBOLL

DRAFTED BY: PAL | DATE: 4/12/2018

ZINC IN SEDIMENT PORE WATER

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-7D



Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), milligrams per kilogram (mg/kg)

USEPA Region 4 Sediment Ecological Screening Value 121 mg/kg
USEPA Region 4 Sediment Refined Screening Value 459 mg/kg

Human Health value for zinc in sediment 23,000 mg/kg (not shown because the value is higher than the scale allows)

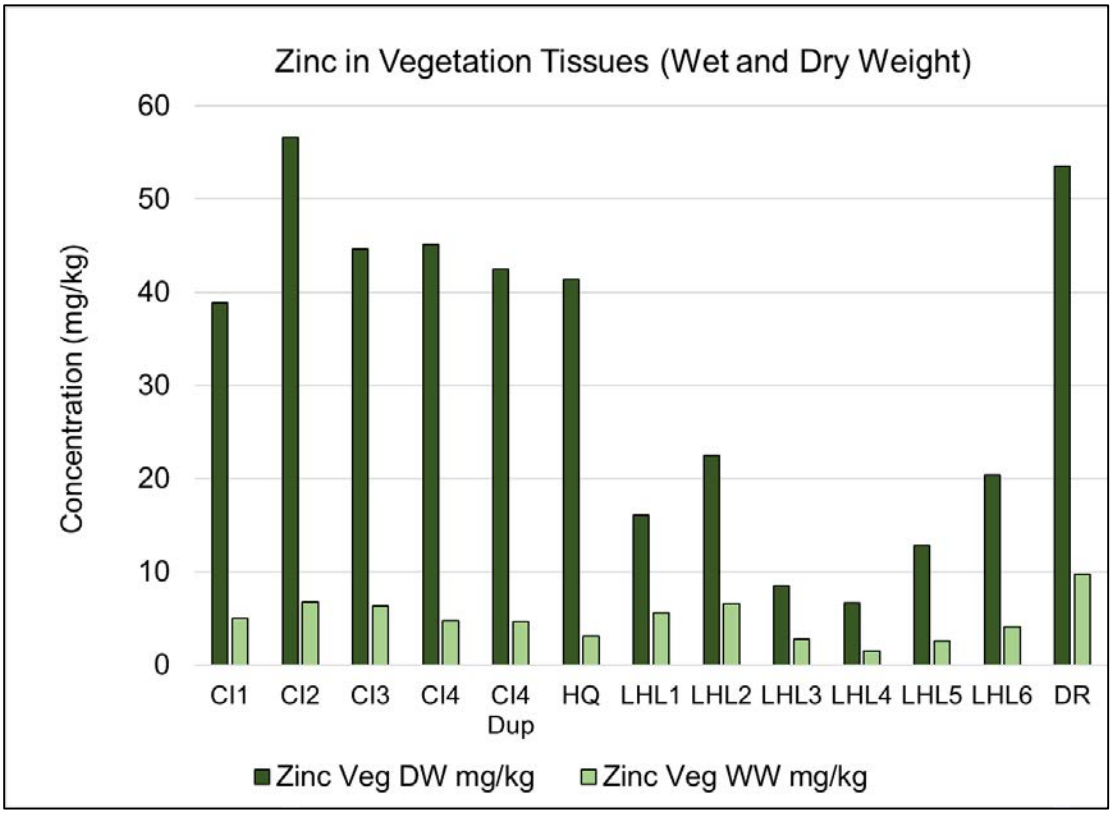
RAMBOLL

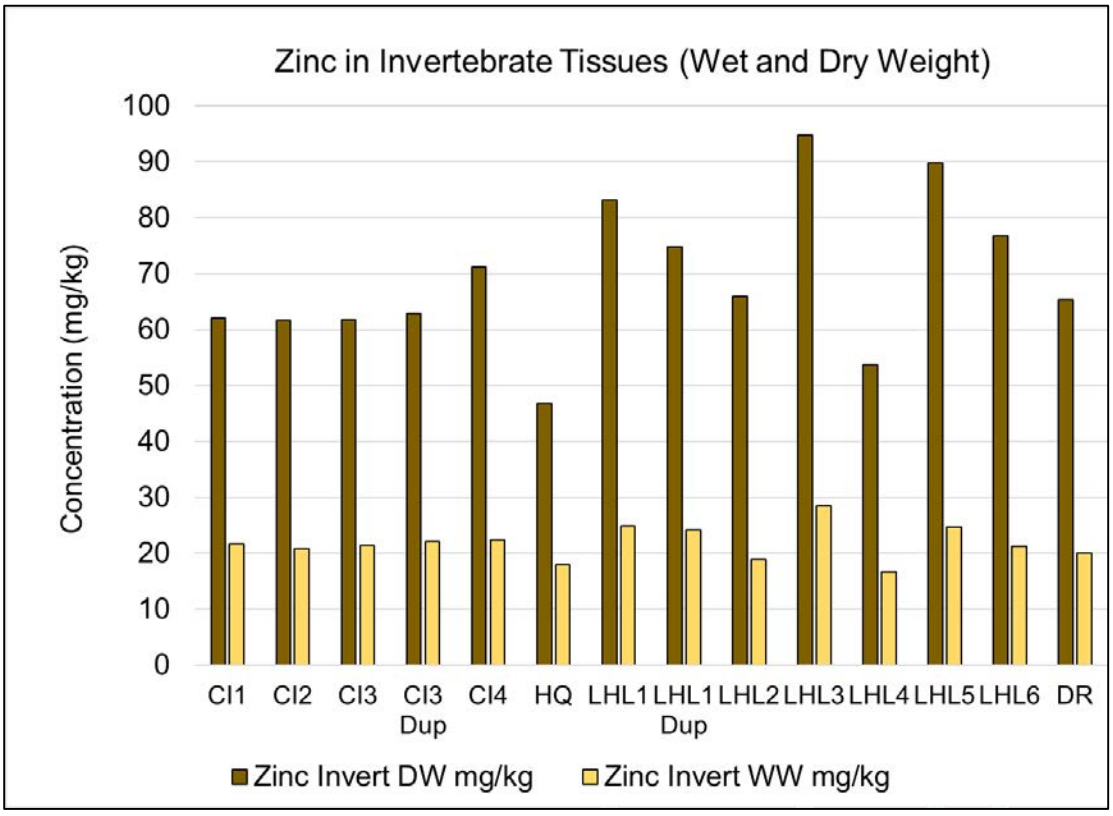
DRAFTED BY: PAL | DATE: 4/12/2018

ZINC IN SEDIMENT

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-7E





Curds Inlet (CI), HQ Inlet (HQ), Lower Herrington Lake (LHL), Dix River (DR), Wet Weight (WW), Dry Weight (DW), milligrams per kilogram (mg/kg)

RAMBOLL

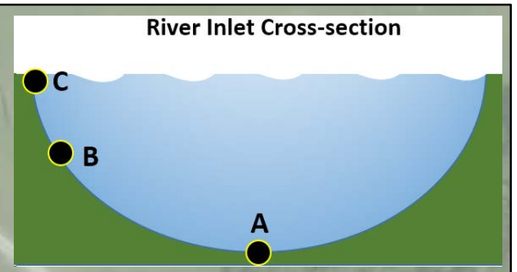
DRAFTED BY: PAL | DATE: 4/12/2018

ZINC IN VEGETATION AND INVERTEBRATES

Herrington Lake CAP Phase 1 Tech Memo
Mercer County, Kentucky

FIGURE
5-7F

DRAFT
Privileged and Confidential Prepared at Request of Counsel



NOTES:
Location A:
Subaqueous, close to the deepest point (thalweg) of the channel.
Location B:
Subaqueous ~ 3-5 feet below the water line at the time of sampling.
Location C:
Above winter pool elevation (~725 feet msl) and below summer pool elevation (~740 feet msl).

Upper Curds Inlet
Middle Curds Inlet
Lower Curds Inlet
HQ Inlet

CI-1
CI-2
CI-2.1
CI-2.2
CI-3
CI-3.1
CI-3.2
CI-4
HQ-1

Proposed Sample Locations

- Proposed Phase II Sediment Sample
- Proposed Phase II Pore Water Sample
- Proposed Phase II Sediment and Pore Water Sample
- Phase I Surface Water Transect (for reference)
- Phase II Surface Water Transect
- Phase II Young Of the Year (YOY) Bass
- Phase II Fish Tissue (Bluegill)
- Phase II Fish Tissue (Multi-Species)

RAMBOLL

Map Design: AJS, Date: Mar 22, 2018

0 200 Feet N

Phase II Proposed Sampling Locations for Curds Inlet and HQ Inlet, Lower Herrington Lake, Herrington Lake Corrective Action Plan Phase 1 Technical Memorandum
Mercer County, Kentucky

FIGURE 6-1-A

Project:

DRAFT
Privileged and Confidential Prepared at Request of Counsel

Former Main Ash Pond and Current Landfill

CI-1

CI-2, CI-2.1, CI-2.2

CI-3, CI3.1, CI-3.2

CI-4

Curds Inlet

HQ Inlet

HQ-1

Auxiliary Pond

Mile 1

LHL-1

LHL-1.1

LHL-2

LHL-3 Cove (YOY Bass, Adult Bluegill, and Surface Water)

Cane Run-Dix River Subwatershed

Hardin Inlet

Lower Herrington Lake

Rocky Run

Cane Run-Dix River Subwatershed

Mile 2

Mile 3

Lower Herrington Lake

Mallard Cove

LHL-6 (Multi-species Adult Fish)

LHL-6 Cove (YOY Bass, Adult Bluegill, and Surface Water)

Cane Run

Mile 4

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User

Phase II Proposed Sample Locations

- Proposed Phase II Sediment Sample
- Proposed Phase II Pore Water Sample
- Proposed Phase II Sediment and Pore Water Sample
- Phase II Young Of the Year (YOY) Bass
- Phase II Fish Tissue (Bluegill)
- Phase II Fish Tissue (Multi-Species)
- Phase I Surface Water Transect (for reference)
- Phase II Surface Water Transect
- Lake Mile Marker (Miles Begin at Dix Dam)
- Former Main Ash Pond and Current Landfill
- Auxiliary Pond
- E.W. Brown Station

RAMBOLL

Map Design: AJS, Date: Mar 22, 2018

0 1,000 Feet

N

Notes:
Lake miles begin at Dix Dam and extend Southward to the Hwy 52 Upper Herrington Lake limit

Phase II Proposed Sampling for Lower Herrington Lake
Herrington Lake Corrective Action Plan Phase 1 Technical Memorandum
Mercer County, Kentucky

FIGURE 6-1B

Project: