Quality Assurance Project Plan

Section A: Planning Elements		
A1. Title (Project Name):	Yadkin River Fish Tissue Sample Event	
EPA ID#:		
Project Location:	Yadkin River from High Rock Lake to Lake Tillery located in Rowan, Davidson, Stanly and Montgomery County, North Carolina	
Project Requestor and Organization:	Ken Rhame, OSC, Superfund Division, 61 Forsyth St. S. W., Atlanta, GA 30303-8960	
Project Manager's Name, Position, and Organization:	Sandy Mort, Health Assessor, NC DHHS, 1912 MSC, Raleigh, NC 27609 Jeanette Stanley, Environmental Chemist, NC Superfund Section, 401 Oberlin Rd., Raleigh, NC 27605	
Project Manager's Signature:	Jeanette Stanley	Date: Aug 4, 2011
Technical Reviewer's Name and Position:	Jim Bateson, Head, Site Evaluation and Removal Branch, NC Superfund	
Technical Reviewer's Signature:	Jim Bateson	Date: 08/04/2011
QA Reviewer's Name and Position:	Jack Butler, Section Chief, NC Superfund	
QA Reviewer's Signature:	Jack Butler	Date: 8-4-11
DAO's Name, Position, and Organization:	Ken Rhame, US EPA	
DAO's Signature:		Date:
A2. Table of Contents	• Page i of the NC generic QAPP • Section No. TOC of NC Superfund Section Health and Safety SOP Manual (http://www.wastenotnc.org/SAFETY/WebSite/SFSafety.HTM) • Sampling Plan including Table 1, Figures 1 - 3	
A3. Distribution List	Ken Rhame, US EPA Jim Bateson, NC Superfund Sandy Mort, NC DHHS Archie Lee, US EPA SESD Scott Ross (File Room), NC Superfund Jeanette Stanley, NC Superfund Section	

A4. Project Personnel	**Organization**	**Responsibilities**
Jeanette Stanley, Chemist	NC Superfund	*Project Lead/ Sample Management*
Melanie Bartlett, Engineer	NC Superfund	*Sample Management (backup)*
NCDENR Staff	NC DENR	*Boat Driver*
Jeff DeBerardinis	ESS/DWQ	*Sample Collection and Preparation*
Sandy Mort	NC DHHS Public Health	*Health Assessor*

Comments: The NC Superfund Section organizational chart and delegation of duties can be found in Section 3.1 and Appendix A of the NC generic QAPP.

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A5. Background:	This investigation is a joint project with the North Carolina Department of Environment and Natural Resources (NCDENR), the North Carolina Department of Health and Human Services (NC DHHS) and the US EPA Region 4 Superfund Emergency Response and Removal Branch. This is the second phase of a Removal Site Assessment, the first phase of which was collection and analysis of sediments for PCBs. This phase of the study will focus on PCB Congeners in fish tissue in the Yadkin River Basin. NCDHHS has detected PCBs in fish on Badin Lake, one of four reservoirs on the Yadkin River Basin. There is a state park downstream and several boat ramps up and down the Yadkin River Basin. The purpose of this study is to determine the extent of fish tissue contamination in the Yadkin River basin upstream and downstream from Badin Lake. This assessment will focus on fish in Lake Tillery and High Rock Lake.
A6. Project Description	This study has two purposes: (1) document any potential contamination of fish tissue with PCB congeners, and (2) protection of human health. This project will include collection of approximately 100 fish tissue samples for analysis (including about 10 field duplicates) collected during a minimum period of 2 or 3 sample collection events beginning the week of August 20, 2011. Along with the approximately 100 tissue samples collected, two water samples (equipment rinse) will be collected during sample preparation and analyzed for PCB congeners. The EPA Region 4 laboratory will collect approximately 3 equipment rinse blanks which will be analyzed for PCB congeners As for the site locations, High Rock Lake will be sampled in the 1) upper reaches around the Alcoa Game Lands (or near Buck Stream) 2) Second Creek Arm around Bringle Ferry Rd and 3) Abbots Creek Arm above Rt. 8. Lake Tillery sampling sites will be 1) Morrow Mtn State Park 2) Jacobs Creek (mid lake sample) and 3) Norwood Beach/Lower Richland Creek (downstream near dam). Target fish species include: Top predators (largemouth bass and flathead catfish; mid trophic species (redbreast sunfish, bluegill sunfish, and black crappie; and bottom feeders (channel catfish and white catfish). Fish samples will include fillets from each of the six locations shown on the two attached maps (3 locations each on High Rock Lake and Lake Tillery). Fish will be collected from each of the 3 trophic levels at each location. Adequate numbers of fish of each trophic level will be collected to produce 5 composite or single fish samples for analysis at each location, for a total of 45 samples for analysis from each lake. Five duplicate samples will collected from each lake at the discretion of the sampler. At least one duplicate sample will be collected from each

trophic level in each lake.

The first round of fish sample collection will include the top and bottom trophic levels from each of the three locations in one lake. The second round of fish sample collection will include the top and bottom trophic levels from each of the three locations in the other lake. For both the first and second fish collection events, if there are sufficient black crappie caught (the most popular fish for eating), the sample team will also collect the entire mid-trophic level fish samples at that location. However, it is anticipated (due to hot weather and the tendency for black crappie to seek deeper cooler waters in summer) that for at least some locations, an insufficient amount of black crappie will be caught during the first two rounds of fish collection. A third round of fish sample collection is therefore scheduled for collection of the remaining mid-trophic fish samples from both lakes as necessary to complete the sample collection event. This third round of fish sample collection will occur later in the fall (most likely October or November) when black crappie move into shallower waters where they can be caught in adequate numbers with standard fish collection methods.

Samples for analysis will be numbered YR101Top; YR102Top; YR103Top; etc., YR101Mid; YR101Bot; YR201Top, and so forth, indicating the numbered location shown on the attached map, the sample number, and the respective trophic level. *Duplicate samples will be indicated in the following manner (for example) YR101DTop. The exact location and trophic level of the duplicate sample will be selected by the sample team at their discretion. Therefore, the duplicate sample number may be different from that shown in the attached table.*

GPS Coordinates will be collected for each sample location.

NC DWQ representatives will coordinate boat(s), captain/crew, and fish tissue collection equipment for fish tissue collection, as well as foil and plastic bags for the fish fillets. Generally, fish tissue samples will be collected the week of August 20, September 12, and a week in October or November, as discussed above.

NC DWQ will prepare the fillets, record data on the individual fish as appropriate *(fish species, length, weight, etc.) and prepare a spreadsheet of the fillet information.* Fillet samples will be wrapped in foil, placed in plastic bags, and stored frozen in NC DWQ's -20^{o}C freezer prior to shipment. Frozen tissue samples will be shipped to EPA Region 4 via the EPA-approved shipping method (to be determined if wet ice or dry ice shipment)

All fish tissue samples will be shipped to the US EPA Region 4

	laboratory after each group of fillets is prepared, where they will be stored until analysis. The US EPA Regional lab will perform fillet grinding using the dry ice procedure. Twenty samples will be analyzed each month (September – January) to accommodate laboratory analytical capacity. It has been determined that holding times on frozen fish tissue is one year; therefore, holding times will be met. During the first round of fillet preparation, NC DENR will collect two equipment rinse blanks of fillet equipment / foil, gloves, etc. and ship these to the Region 4 for analysis for PCB congeners. US EPA Region 4 laboratory will perform their own equipment rinse blanks of their fish grinding equipment as required for their SOP. NC DENR Superfund will provide coolers, ice for shipment, and shipment costs. NC Superfund will not provide fish tissue storage or freezer space. NC Superfund personnel will provide physical assistance for fillet and rinse blank preparation and shipping as needed, NC Superfund personnel will prepare sample labels and chain-of custody forms using the Scribe program. NC DENR Superfund will submit electronic chains of custody to the laboratory. NC DENR will use the EPA-assigned project numbers for each group of 20 samples. When preparing a group of samples for shipment, NC Superfund will prepare separate chain of custody forms for each project, as appropriate. NC DHHS will receive the data and generate any Health Risk Assessment, as appropriate.
Decision(s) to be made based on data:	Based on findings, a decision will be made as to whether further action is needed. In addition, data will be used to determine if any fish tissue is contaminated such that a fish consumption advisory is appropriate for any segment of the Yadkin River basin as determined by NC DHHS
Applicable regulatory information, action levels, etc.	Data will be compared with regulatory benchmarks, including NC DHHS Div. of Public Health fish consumption advisory action level tables.
Field Study Date:	August 22, 2011 is scheduled to be the first week of fish tissue collection; the first shipment of fish tissue to the lab is scheduled for the week of Sept. 6, 2011. The last fish tissue shipment is scheduled for late-October to late-November. Exact schedule to be confirmed.
Projected Lab Completion Date:	March 30, 2012
Final Report Completion Date:	June 30, 2012
A7. Quality Objectives and Criteria:	This study has two purposes: (1) document any potential contamination of fish tissue with PCB congeners, and (2) protection of human health. EPA will provide individual congener reporting limits as low as achievable while meeting Method 1668 performance criteria. Reporting Limits (RLs) of 10 ng/kg (parts per trillion) for the majority of congeners is expected, with higher RLs for some congeners of not more than 50 ng/kg. Data will be used for prediction of potential human health effects related to ingestion of total PCB congeners in fish tissue. RLs as low as

	achievable with the laboratory's analytical system will provide a margin of safety in the health evaluation which will be impacted by the current uncertainties in the toxicity of individual and combined effects of dioxin-like and non-dioxin-like PCB congeners.
A8. Special Training/ Certifications:	• Section 3.3 of the NC generic QAPP. • Section 2.1 and Appendix A of NC Superfund Section Health and Safety SOP Manual (http://www.wastenotnc.org/SAFETY/WebSite/SFSafety.HTM)
A9. Documents and Records:	Section 3.4 of the NC generic QAPP.
Section B: Data Generation and Acquisition	
B1. Sampling Design	An authoritative sampling design was chosen based on the data quality objectives of the study. Sample IDs and locations can be found in the attached Table and Figures in the attached letter. The rationale for collecting fish at these locations is to determine the extent of fish contamination as well as to document potential contamination at locations from which fish is removed and consumed. Volume, Holding time, and Preservation requirements are in accordance with: *SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual, Figure 3-1*
B2. Sampling Methods, General Procedures:	*SESD Field Branches Quality System and Technical Procedures;* • *Found at http://www.epa.gov/region4/sesd/fbqstp/index.html*Fish Field Sampling, April 14, 2011 • *Standard Operating Procedures Fish Tissue Assessments, Environmental Sciences Section, NC Department of Environment and Natural Resources, Division of Water Quality, June 2006*. http://h2o.enr.state.nc.us/esb/BAUwww/FinalNewSOPv2.pdf • Packing, Marking, Labeling and Shipping of Environmental and Waste Samples, April 20, 2011 • Field Equipment Cleaning and Decontamination, November 1, 2007 • Logbooks, October 8, 2010
B3. Sampling Handling and Custody:	All samples will be handled and custody maintained in accordance with *SESD Operating Procedures for Sample Evidence Management*, SESDPROC-005-R1.
B4. Analytical Methods:	Sample analyses will be assigned to CLP and/or SESD laboratories
CLP:	Analytical methods for CBC01.0 – Chlorinated Biphenyl Congeners

SESD:	Analytical methods for *SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual, July 2011 Chapter 9* *Taken from SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual, July 2011 Chapter 7, the PCB (as Congeners) Method Reporting Limit (MRL) for Method 1668 for Water is 500 pg/L, Soil/Sed 17 ng/Kg, and Tissue 50 ng/Kg.* *A lower reporting limit for most congeners is desirable if achievable, and SESD will go as low as they can for the MRLs, depending on the QC study results.*
B5. Quality Control:	
Field:	• Rinsate blanks are collected on a quarterly basis on equipment used for sampling during that calendar quarter. • Rinsate blanks are collected on a quarterly basis on gloves utilized for sampling during that calendar quarter. • Section 3.5 of the NC generic QAPP
Laboratory:	• A minimum of one MS/MSD sample per twenty samples per media will be collected, if appropriate for fish tissue. • Section 3.5 of the NC generic QAPP
B6. Instrument/Equipment Testing, Inspection and Maintenance:	• Section 3.4 and Appendix B of the NC generic QAPP • Section 6 of NC Superfund Section Health and Safety SOP Manual (http://www.wastenotnc.org/SAFETY/WebSite/SFSafety.HTM)
B7. Instrument/Equipment Calibration and Frequency:	All monitoring equipment and instruments are calibrated a minimum of once daily, at the start of the day, when field activities requiring use of the equipment occur. Serial numbers and calibration records are maintained in the field logbook for the project. Any inconsistencies and errors during calibration are also to be noted in the field logbook. Equipment to be used for this project and requiring calibration includes: Global Positioning System, April 20, 2011.
B8. Inspection/Acceptance for Supplies and Consumables:	All critical supplies and consumables for this field investigation are inspected and maintained by the QAO and designated staff, as discussed in Section 3.2 of the NC generic QAPP. A list of these supplies is included in Appendix B of the NC generic QAPP.
B9. Non-direct Measurements:	Not applicable.
B10. Data Management:	The project manager will be responsible for ensuring that all requirements for data management are met. All data generated for this field investigation, whether hand-recorded or obtained using an electronic data logger, will be recorded, stored, and managed according to the following procedures: *SESD Operating Procedure for Control of Records*, SESDPROC-002-R3. *SESD Operating Procedures for Logbooks*, SESDPROC-010-R3.

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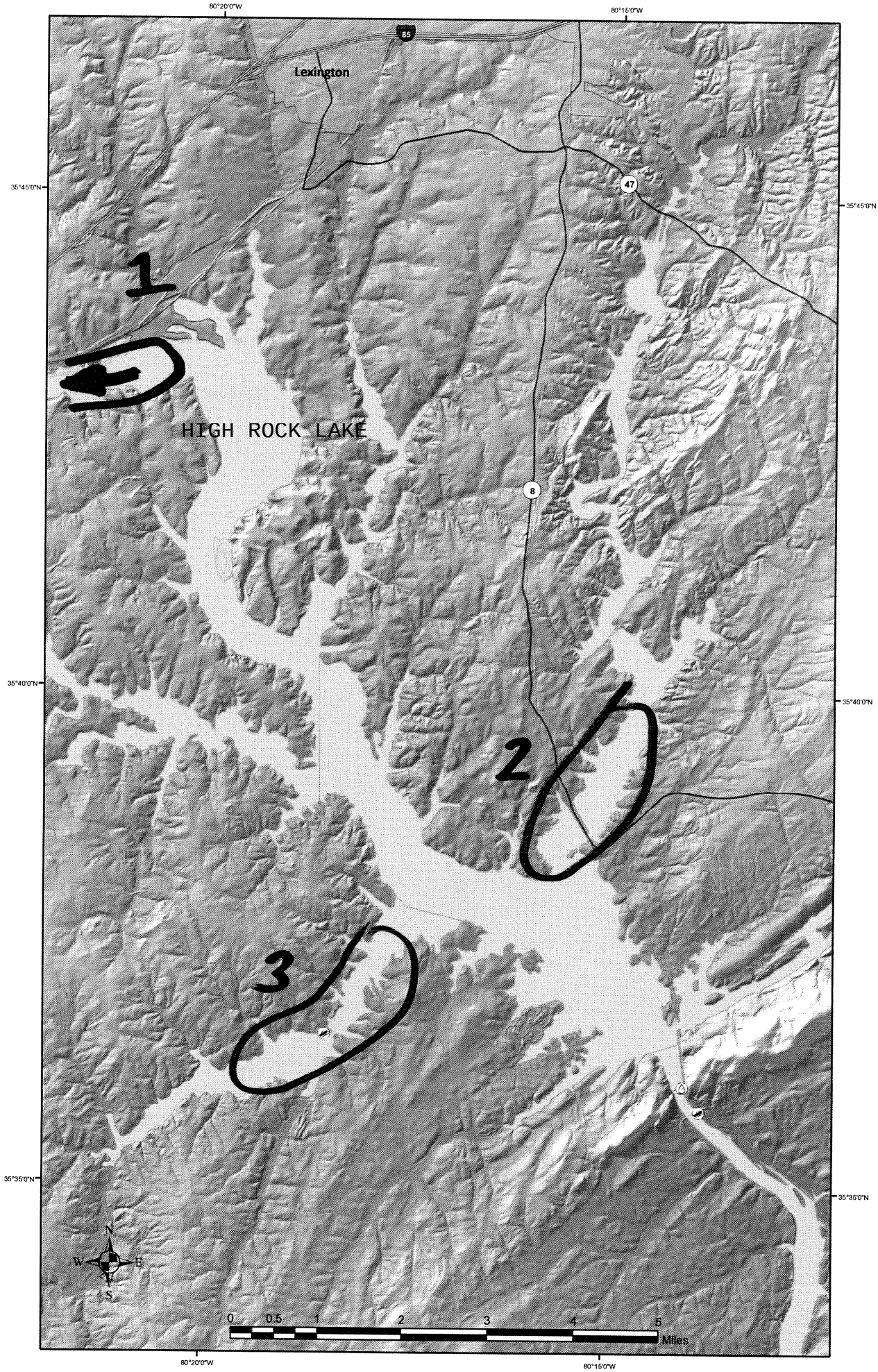
Section C: Assessment/Oversight	
C1. Assessments and Response Actions:	Assessments will be conducted during the field investigation according to *SESD Operating Procedure for Project Planning*, SESDPROC-0916-R1 to ensure the QAPP is being implemented as approved. The Project Manager is responsible for all corrective actions while in the field. Section 3.2.4 of the NC generic QAPP.
C2. Reports to Management:	The Project Manager will report to their immediate supervisor if any circumstances arise during the field investigation that may adversely impact the quality of the data collected. The Project Manager and/or their immediate supervisor will also be responsible for notifying the EPA Project Manager if any circumstances arise during the field investigation that may adversely impact the quality of the data collected. Section 3.2.4 of the NC generic QAPP
Section D: Data Validation and Usability	
D1. Data Review, Verification, and Validation:	Section 3.2.4 of the NC generic QAPP.
D2. Verification and Validation Methods:	Section 3.2.4 of the NC generic QAPP.
D3. Reconciliation with User Requirements:	Review of data is evaluated by the Project Manager using the following guidelines: Section 3.2 of the NC generic QAPP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1
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8
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3
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1
2
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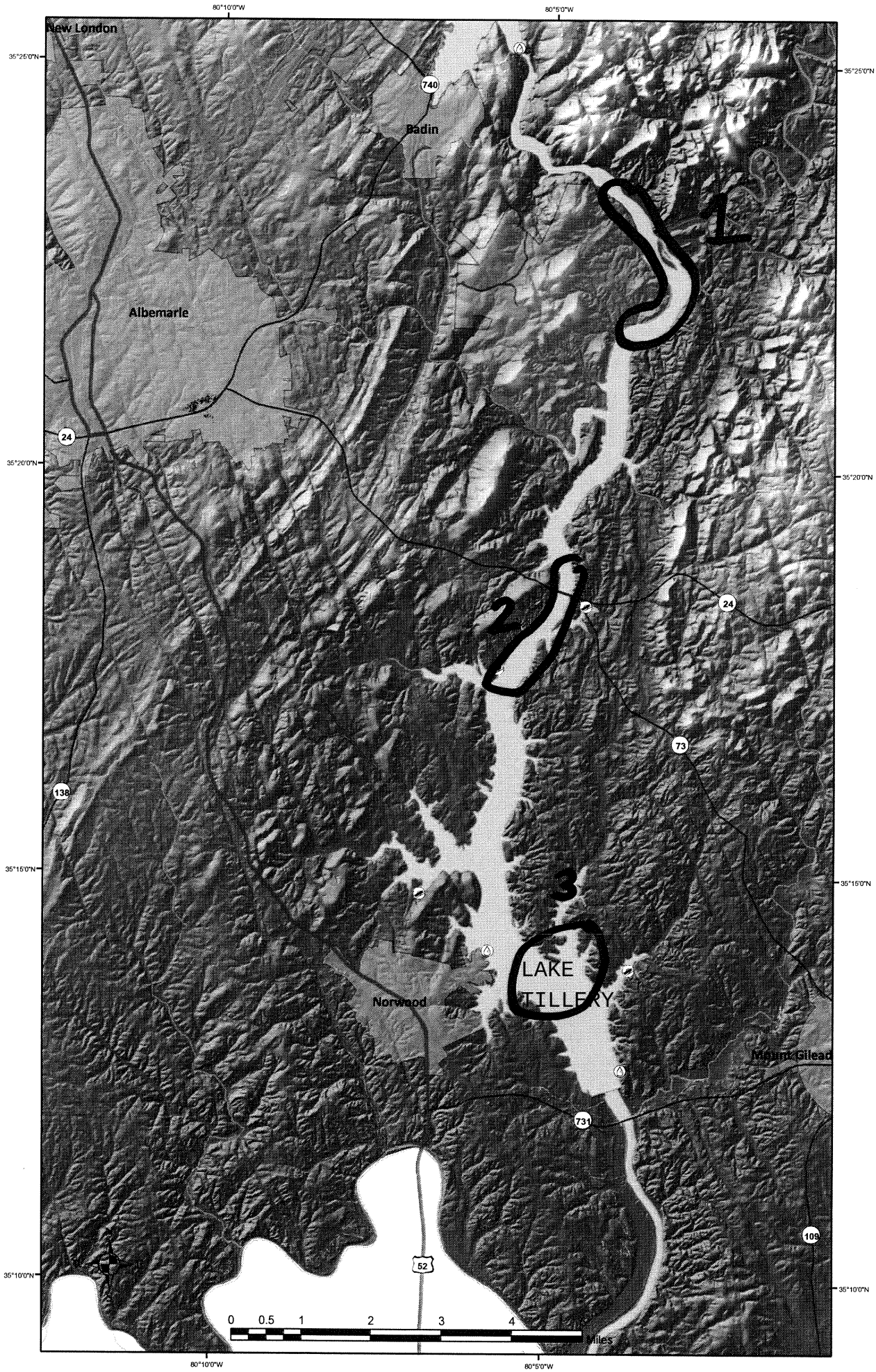
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Badin
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Albemarle
24
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24
73
138
35°15'0"N
3
LAKE
TILLERY
Norwood
Mount Gilead
731
109
52
35°10'0"N
0 0.5 1 2 3 4
Miles

Sample Number	Location Description	Analysis
YRH101Top	High Rock Lake, Upper Reaches, Top Trophic Layer, Sample 1	Scan, PCB Congeners
YRH102Top	High Rock Lake, Upper Reaches, Top Trophic Layer, Sample 2	
YRH103Top	High Rock Lake, Upper Reaches, Top Trophic Layer, Sample 3	
YRH104Top	High Rock Lake, Upper Reaches, Top Trophic Layer, Sample 4	
YRH105Top	High Rock Lake, Upper Reaches, Top Trophic Layer, Sample 5	
YRH101Mid	High Rock Lake, Upper Reaches, Middle Trophic Layer, Sample 1	
YRH102Mid	High Rock Lake, Upper Reaches, Middle Trophic Layer, Sample 2	
YRH103Mid	High Rock Lake, Upper Reaches, Middle Trophic Layer, Sample 3	
YRH104Mid	High Rock Lake, Upper Reaches, Middle Trophic Layer, Sample 4	
YRH105Mid	High Rock Lake, Upper Reaches, Middle Trophic Layer, Sample 5	
YRH101Bot	High Rock Lake, Upper Reaches, Bottom Trophic Layer, Sample 1	
YRH102Bot	High Rock Lake, Upper Reaches, Bottom Trophic Layer, Sample 2	
YRH103Bot	High Rock Lake, Upper Reaches, Bottom Trophic Layer, Sample 3	
YRH104Bot	High Rock Lake, Upper Reaches, Bottom Trophic Layer, Sample 4	
YRH105Bot	High Rock Lake, Upper Reaches, Bottom Trophic Layer, Sample 5	
YRH104DMid	High Rock Lake, Upper Reaches, Middle Trophic Layer, Sample 4 Duplicate	
YRH105DBot	High Rock Lake, Upper Reaches, Bottom Trophic Layer, Sample 5 Duplicate	

Sample Number	Location Description	Analysis
YRH201Top	High Rock Lake, Second Creek Arm, Top Trophic Layer, Sample 1	Scan, PCB Congeners
YRH202Top	High Rock Lake, Second Creek Arm, Top Trophic Layer, Sample 2	
YRH203Top	High Rock Lake, Second Creek Arm, Top Trophic Layer, Sample 3	
YRH204Top	High Rock Lake, Second Creek Arm, Top Trophic Layer, Sample 4	
YRH205Top	High Rock Lake, Second Creek Arm, Top Trophic Layer, Sample 5	
YRH201Mid	High Rock Lake, Second Creek Arm, Mid Trophic Layer, Sample 1	
YRH202Mid	High Rock Lake, Second Creek Arm, Mid Trophic Layer, Sample 2	
YRH203Mid	High Rock Lake, Second Creek Arm, Mid Trophic Layer, Sample 3	
YRH204Mid	High Rock Lake, Second Creek Arm, Mid Trophic Layer, Sample 4	
YRH205Mid	High Rock Lake, Second Creek Arm, Mid Trophic Layer, Sample 5	
YRH201Bot	High Rock Lake, Second Creek Arm, Bottom Trophic Layer, Sample 1	
YRH202Bot	High Rock Lake, Second Creek Arm, Bottom Trophic Layer, Sample 2	
YRH203Bot	High Rock Lake, Second Creek Arm, Bottom Trophic Layer, Sample 3	
YRH204Bot	High Rock Lake, Second Creek Arm, Bottom Trophic Layer, Sample 4	
YRH205Bot	High Rock Lake, Second Creek Arm, Bottom Trophic Layer, Sample 5	
YRH201DTop	High Rock Lake, Second Creek Arm, Top Trophic Layer, Sample 1 Duplicate	

Sample Number	Location Description	Analysis
YRH301Top	High Rock Lake, Abbotts Creek Arm, Top Trophic Layer, Sample 1	
YRH302Top	High Rock Lake, Abbotts Creek Arm, Top Trophic Layer, Sample 2	
YRH303Top	High Rock Lake, Abbotts Creek Arm, Top Trophic Layer, Sample 3	
YRH304Top	High Rock Lake, Abbotts Creek Arm, Top Trophic Layer, Sample 4	
YRH305Top	High Rock Lake, Abbotts Creek Arm, Top Trophic Layer, Sample 5	
YRH301Mid	High Rock Lake, Abbotts Creek Arm, Mid Trophic Layer, Sample 1	
YRH302Mid	High Rock Lake, Abbotts Creek Arm, Mid Trophic Layer, Sample 2	
YRH303Mid	High Rock Lake, Abbotts Creek Arm, Mid Trophic Layer, Sample 3	
YRH304Mid	High Rock Lake, Abbotts Creek Arm, Mid Trophic Layer, Sample 4	
YRH305Mid	High Rock Lake, Abbotts Creek Arm, Mid Trophic Layer, Sample 5	
YRH301Mid	High Rock Lake, Abbotts Creek Arm, Bottom Trophic Layer, Sample 1	
YRH302Mid	High Rock Lake, Abbotts Creek Arm, Bottom Trophic Layer, Sample 2	
YRH303Mid	High Rock Lake, Abbotts Creek Arm, Bottom Trophic Layer, Sample 3	
YRH304Mid	High Rock Lake, Abbotts Creek Arm, Bottom Trophic Layer, Sample 4	
YRH305Mid	High Rock Lake, Abbotts Creek Arm, Bottom Trophic Layer, Sample 5	
YRH302DTop	High Rock Lake, Abbotts Creek Arm, Top Trophic Layer, Sample 2 Duplicate	
YRH304DMid	High Rock Lake, Abbotts Creek Arm, Mid Trophic Layer, Sample 4 Duplicate	

Sample Number	Location Description	Analysis
YRT101Top	Lake Tillery, Morrow Mtn, Top Trophic Layer, Sample 1	
YRT102Top	Lake Tillery, Morrow Mtn, Top Trophic Layer, Sample 2	
YRT103Top	Lake Tillery, Morrow Mtn, Top Trophic Layer, Sample 3	
YRT104Top	Lake Tillery, Morrow Mtn, Top Trophic Layer, Sample 4	
YRT105Top	Lake Tillery, Morrow Mtn, Top Trophic Layer, Sample 5	
YRT101Mid	Lake Tillery, Morrow Mtn, Mid Trophic Layer, Sample 1	
YRT102Mid	Lake Tillery, Morrow Mtn, Mid Trophic Layer, Sample 2	
YRT103Mid	Lake Tillery, Morrow Mtn, Mid Trophic Layer, Sample 3	
YRT104Mid	Lake Tillery, Morrow Mtn, Mid Trophic Layer, Sample 4	
YRT105Mid	Lake Tillery, Morrow Mtn, Mid Trophic Layer, Sample 5	
YRT101Bot	Lake Tillery, Morrow Mtn, Bottom Trophic Layer, Sample 1	
YRT102Bot	Lake Tillery, Morrow Mtn, Bottom Trophic Layer, Sample 2	
YRT103Bot	Lake Tillery, Morrow Mtn, Bottom Trophic Layer, Sample 3	
YRT104Bot	Lake Tillery, Morrow Mtn, Bottom Trophic Layer, Sample 4	
YRT105Bot	Lake Tillery, Morrow Mtn, Bottom Trophic Layer, Sample 5	
YRT103DMid	Lake Tillery, Morrow Mtn, Mid Trophic Layer, Sample 3 Duplicate	
YRT102DBot	Lake Tillery, Morrow Mtn, Bottom Trophic Layer, Sample 2 Duplicate	

Sample Number	Location Description	Analysis
YRT201Top	Lake Tillery, Jacobs Creek, Top Trophic Layer, Sample 1	
YRT202Top	Lake Tillery, Jacobs Creek, Top Trophic Layer, Sample 2	
YRT203Top	Lake Tillery, Jacobs Creek, Top Trophic Layer, Sample 3	
YRT204Top	Lake Tillery, Jacobs Creek, Top Trophic Layer, Sample 4	
YRT205Top	Lake Tillery, Jacobs Creek, Top Trophic Layer, Sample 5	
YRT201Mid	Lake Tillery, Jacobs Creek, Mid Trophic Layer, Sample 1	
YRT202Mid	Lake Tillery, Jacobs Creek, Mid Trophic Layer, Sample 2	
YRT203Mid	Lake Tillery, Jacobs Creek, Mid Trophic Layer, Sample 3	
YRT204Mid	Lake Tillery, Jacobs Creek, Mid Trophic Layer, Sample 4	
YRT205Mid	Lake Tillery, Jacobs Creek, Mid Trophic Layer, Sample 5	
YRT201Bot	Lake Tillery, Jacobs Creek, Bottom Trophic Layer, Sample 1	
YRT202Bot	Lake Tillery, Jacobs Creek, Bottom Trophic Layer, Sample 2	
YRT203Bot	Lake Tillery, Jacobs Creek, Bottom Trophic Layer, Sample 3	
YRT204Bot	Lake Tillery, Jacobs Creek, Bottom Trophic Layer, Sample 4	
YRT205Bot	Lake Tillery, Jacobs Creek, Bottom Trophic Layer, Sample 5	
YRT204DTop	Lake Tillery, Jacobs Creek, Top Trophic Layer, Sample 4 Duplicate	
YRT201DBot	Lake Tillery, Jacobs Creek, Bottom Trophic Layer, Sample 1 Duplicate	

Sample Number	Location Description	Analysis
YRT301Top	Lake Tillery, Norwood Beach, Top Trophic Layer, Sample 1	
YRT302Top	Lake Tillery, Norwood Beach, Top Trophic Layer, Sample 2	
YRT303Top	Lake Tillery, Norwood Beach, Top Trophic Layer, Sample 3	
YRT304Top	Lake Tillery, Norwood Beach, Top Trophic Layer, Sample 4	
YRT305Top	Lake Tillery, Norwood Beach, Top Trophic Layer, Sample 5	
YRT301Mid	Lake Tillery, Norwood Beach, Mid Trophic Layer, Sample 1	
YRT302Mid	Lake Tillery, Norwood Beach, Mid Trophic Layer, Sample 2	
YRT303Mid	Lake Tillery, Norwood Beach, Mid Trophic Layer, Sample 3	
YRT304Mid	Lake Tillery, Norwood Beach, Mid Trophic Layer, Sample 4	
YRT305Mid	Lake Tillery, Norwood Beach, Mid Trophic Layer, Sample 5	
YRT301Bot	Lake Tillery, Norwood Beach, Bottom Trophic Layer, Sample 1	
YRT302Bot	Lake Tillery, Norwood Beach, Bottom Trophic Layer, Sample 2	
YRT303Bot	Lake Tillery, Norwood Beach, Bottom Trophic Layer, Sample 3	
YRT304Bot	Lake Tillery, Norwood Beach, Bottom Trophic Layer, Sample 4	
YRT305Bot	Lake Tillery, Norwood Beach, Bottom Trophic Layer, Sample 5	
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YR001RB	Equipment Rinse Blank	For MS/MSD
YR002RB	Equipment Rinse Blank	
YR003RB	Equipment Rinse Blank	
YR004RB	Equipment Rinse Blank	
YR004DRB	Equipment Rinse Blank, Duplicate of YR004RB	