Eagle Brook Trout Tissue Metals Survey for Fall 2014

December 30, 2014

Prepared for:

Eagle Mine

Prepared by:
ADVANCED ECOLOGICAL MANAGEMENT
22071 7 Mile Road
Reed City, MI 49677

TABLE OF CONTENTS

List of Abbreviations, Acronyms, and Symbols ..... **v**
1.0 EXECUTIVE SUMMARY **6**
2.0 INTRODUCTION **6**
3.0 METHODS **7**
3.1 Fish Collection 7
3.2 Stream Habitat Conditions 7
3.3 Fish Tissue Analyses 8
3.3.1 Tissue Processing 8
4.0 RESULTS **10**
4.1 Stream Habitat Conditions 10
4.2 Metals Concentration in Tissues 11
4.2.1 Salmon Trout River: 11
Station 1 11
Stations 2 and 3 11
Station 6 12
Station 7 12
4.2.2 Salmon Trout River East Branch 13
Station 8 13
Station 9 13
Station 10 14
4.2.3 Cedar Creek 14
Station 4 14
4.2.4 Yellow Dog River 15
Station 5 15
5.0 REFERENCES **16**

EXHIBIT A REPORT FIGURES **17**
Figure 1-1. Sample Station Locations. 18

EXHIBIT B **19**
REPORT TABLES **19**
Table 4-1. 2014 Brook Trout Collection Data. 20
Table 4-2. Sample Station Location Description. 21
Table 4-3. Length, Weight, Sex, and Age of Brook Trout Collected for Metals Analyses in October 2014. 22
Table 4-4. 2014 Fall Physical Stream Dimensions – Stations 1-10. 23
Table 4-5. Fall 2014 Average Water Quality Parameters – Stations 1-10. 23
Table 4-6. 2014 Fall Fish Collection Data – Stations 1-10. 24
Table 4-7. Fillet Tissue Average Metals Concentration and Average Fish Size among Stations for Brook Trout (Salvelinus fontinalis) Collected in September, 2014. 25
Table 4-8. Liver Average Metals Contents and Average Fish Size among Stations for Brook Trout (Salvelinus fontinalis) Collected in September, 2014. 26
Table 4-9. Metals Contents of Brook Trout (Salvelinus fontinalis) Fillets - 2014 Laboratory Data 27
Table 4-10. Metals Contents of Brook Trout (Salvelinus fontinalis) Livers - 2014 Laboratory Data 37

EXHIBIT C **41**
STATION PHOTOGRAPHS **41**
Photograph C-1. Station 1 – Upstream Extent North View, September, 2014. 42
Photograph C-2. Station 1 - Downstream Extent View South, September, 2014. 42

Photograph C-3. Station 2 – Upstream Extent View North, September, 2014.....43
Photograph C-4. Station 2 – Downstream Extent View South, September, 2014.....43
Photograph C-5. Station 3 – Upstream Extent View North, September, 2014.....44
Photograph C-6. Station 3 –Downstream Extent View South, September, 2014.....44
Photograph C-7. Station 6 – Upstream Extent View Southwest, September, 2014.....45
Photograph C-8. Station 6 – Downstream Extent View Southwest, September, 2014. 45
Photograph C-9. Station 7 – Upstream Extent View North, September, 2014.....46
Photograph C-10. Station 7 – Downstream Extent View South, September, 2014.....46
Photograph C-11. Station 8 – Downstream Extent View South, September, 2014.....47
Photograph C-12. Station 8 – Upstream Extent View North, September, 2014.....47
Photograph C-13. Station 9 – Downstream Extent View Southwest, September, 2014.....48
Photograph C-14. Station 9 – Upstream Extent View Northeast, September, 2014. 48
Photograph C-15. Station 10 – Downstream Extent View Southwest, September, 2014.....49
Photograph C-16. Station 10 – Upstream Extent View Northeast, September, 2014. ..49
Photograph C-17. Station 5 – Downstream Extent View West, September, 2014.....50
Photograph C-18. Station 5 – Upstream Extent View East, September, 2014. 50

EXHIBIT D 51
PHOTOGRAPHS OF BROOK TROUT (*Salvelinus fontinalis*) COLLECTED FOR METALS ANALYSES 51
Photograph D-1. Brook trout (Salvelinus fontinalis) # 1 collected from.....52
Station 5in the Yellow Dog River, September, 2014. 52
Photograph D-2. Brook trout (Salvelinus fontinalis) # 2 collected from.....52
Station 5 in the Yellow Dog River, September, 2014. 52
Photograph D-3. Brook trout (Salvelinus fontinalis) # 3 collected from.....53
Station 2 in the Salmon Trout River, September, 2014. 53
Photograph D-4. Brook trout (Salvelinus fontinalis) # 4 collected from.....53
Station 3 in the Salmon Trout River, September, 2014. 53
Photograph D-5. Brook trout (Salvelinus fontinalis) # 5 collected from.....54
Station 1 in the Salmon Trout River, September, 2014. 54
Photograph D-6. Brook trout (Salvelinus fontinalis) # 6 collected from.....54
Station 1 in the Salmon Trout River, September, 2014. 54
Photograph D-7. Brook trout (Salvelinus fontinalis) # 7 collected from.....55
Station 1 in the Salmon Trout River, September, 2014. 55
Photograph D-8. Brook trout (Salvelinus fontinalis) # 8 collected from.....55
Station 1 in the Salmon Trout River, September, 2014. 55
Photograph D-9. Brook trout (Salvelinus fontinalis) # 9 collected from.....56
Station 1 in the Salmon Trout River, September, 2014. 56
Photograph D-10. Brook trout (Salvelinus fontinalis) # 10 collected from.....56
Station 10 in the Salmon Trout River East Branch, September, 2014. 56
Photograph D-11. Brook trout (Salvelinus fontinalis) # 11 collected from.....57
Station 10 in the Salmon Trout River East Branch, September, 2014. 57
Photograph D-12. Brook trout (Salvelinus fontinalis) # 12 collected from.....57
Station 9 in the Salmon Trout River East Branch, September, 2014. 57
Photograph D-13. Brook trout (Salvelinus fontinalis) # 13 collected from.....58
Station 9 in the Salmon Trout River East Branch, September, 2014. 58
Photograph D-14. Brook trout (Salvelinus fontinalis) # 14 collected from.....58
Station 8 in the Salmon Trout River East Branch, September, 2014. 58
Photograph D-15. Brook trout (Salvelinus fontinalis) # 15 collected from.....59

Station 8 in the Salmon Trout River East Branch, September, 2014. 59
Photograph D-16. Brook trout (Salvelinus fontinalis) # 17 collected from 59
Station 8 in the Salmon Trout River East Branch, September, 2014. 59

EXHIBIT E 60
CHAIN OF CUSTODY FORMS 60

List of Abbreviations, Acronyms, and Symbols

AEM	Advanced Ecological Management LLC
$\bar{x}$	Average
CAS No.	Chemical abstract service number
°C	Degrees Celsius
ft	Feet
e.g.	For example
gpm	Gallons per minute
KEMC	Kennecott Eagle Minerals Company
pH	Measure of acidity or alkalinity of a solution
MDEQ	Michigan Department of Environmental Quality
MNFI	Michigan Natural Features Inventory
µS/cm	Micro Siemens per centimeter
mg/L	Milligrams per liter of water
mg/kg	Milligrams per kilogram
ml	Milliliters
MDL	Minimum detection limit
N	North
n.m.	Not measured
n.s.	Not sampled
n	Sample size
s	Standard deviation
Sec.	Section
T	Township
W	West

1.0 EXECUTIVE SUMMARY

A total of 96 brook trout were collected within the vicinity of stations sampled from 19 September 2014 through 21 September 2014 as part of the fall 2014 tissue survey (Table 4-1). Of the 96 brook trout collected, a total of 17, including nine males and eight females, were selected for metals analyses from Stations 1, 2, 3, 5, 8, 9, and 10.

Data from the 2014 fall survey does not include fish from Station 4, which is located within Cedar Creek and is intended to serve as a reference site. Access to Station 4 was not possible during the fall 2014 survey because of a washed out road crossing from high water caused by beaver activity.

Among all brook trout collected during the fall survey, lengths ranged from 50 millimeters (2.0 inches) to 228 millimeters (9.0 inches), and average length was 108 millimeters (4.3 inches; *s* = 1.8 inches; *n* = 96). These length statistics also include brook trout collected from locations that were adjacent to the stations (upstream or downstream of stations) that are typically surveyed during annual summer aquatic surveys. AEM selected brook trout that ranged from 124 millimeters (4.9 inches) to 220 millimeters (8.7 inches) in length for conducting metals analyses. Scale sample analyses indicated that 17 brook trout were at least one to two years old (Table 4-3).

Among all 17 brook trout that were selected for metals analyses, copper concentrations within fillets ranged from 0.30 mg/kg to 0.79 mg/kg ($\bar{x}$ = 0.47 mg/kg; *s* = 0.13 mg/kg), and from 1.7 mg/kg to 36.9 mg/kg ($\bar{x}$ = 14.1 mg/kg; *s* = 10.9 mg/kg) in livers (Tables 4-7 through 4-10). Nickel concentrations ranged from less than 0.012 mg/kg to 0.07 mg/kg ($\bar{x}$ = 0.020 mg/kg; *s* = 0.013 mg/kg) in fillets, and ranged from less than 0.012 mg/kg to 0.11 mg/kg ($\bar{x}$ = 0.038 mg/kg; *s* = 0.028 mg/kg) in livers. Mercury levels in fillets ranged from 0.018 mg/kg to 0.120 mg/kg ($\bar{x}$ = 0.051 mg/kg; *s* = 0.027 mg/kg).

2.0 INTRODUCTION

This memo provides a summary of metals content data in brook trout (*Salvelinus fontinalis*) collected from streams in the vicinity of the Eagle Project as part of the fall 2014 fish tissue metals survey. Brook trout collections for metals analyses were conducted by Advanced Ecological Management, LLC (AEM) in accordance with the MDEQ Nonferrous Metallic Mineral Mining Permit Number: MP O1 2007, following the GLEAS *Procedure #31 Fish Collection and Processing Procedure* (MDEQ, 1997).

Information from this survey is intended to provide the first year of data regarding metals concentrations within brook trout that were collected from the project vicinity while mining activities were under way.

3.0 METHODS

The 2014 brook trout metals survey was conducted in locations that were sampled in the 2014 aquatic survey using the P-51 survey protocol (Figure 1-1, Exhibit A). These sample stations are situated in the same sample locations, or close to the sample locations that were surveyed by AEM during the previous 2008 and 2011 fall brook trout tissue surveys.

3.1 Fish Collection

Survey stations were blocked at upstream and downstream extents using seines that measured 4 feet by 50 feet, with a 0.19-inch mesh size. A backpack electroshocker was used in narrow (approximately ≤10 feet), or difficult-to-access stations (e.g., areas with abundant woody debris). A barge-mounted electroshocker was used to sample stations that were deep (approximately 2 to 3 feet), wide (approximately >10 feet), and where woody debris was sparse enough to permit the passage of the barge unit. Three consecutive passes were conducted, each in an upstream direction. The duration of electroshocking was recorded for each pass and stunned fish were placed in a live-well for identification and enumeration. Following the third pass and subsequent fish identification, fish were released within the station.

As part of the enumeration process, the number of each species present was recorded. One representative of each species that was not identifiable in the field was placed in a voucher jar containing 10% formalin for later identification. Each voucher jar was labeled according to the sample location and date. Fish were identified to species using various taxonomic references (Bailey et al., 2003; Coon, 2001; Becker, 1983).

3.2 Stream Habitat Conditions

Habitat conditions, water quality, and stream dimensions were documented during the aquatic survey. Photographs were taken at each station to illustrate conditions during the sampling period (Exhibit C). Water temperature, dissolved oxygen, pH, and conductivity were measured as part of the stream habitat evaluation. These water

quality parameters were measured using a Yellow Springs Instrument Professional Plus water quality meter.

Wetted stream width was measured at the lower, middle, and upper extent of each sample station. Depth was measured in the center, and at 20% and 80% of each stream width cross section. Stream flow was measured with a Marsh-McBirney Flo-Mate 2000®.

3.3 Fish Tissue Analyses

Consistent with the methodology described in the 8 August 2011 Eagle Brook Trout Metals Analyses Plan that was submitted to the MDEQ, AEM followed the GLEAS, Procedure 31 protocol to collect and handle brook trout (AEM, 2011). A total of nine stream stations were surveyed by AEM fisheries personnel as part of the fall survey using a backpack electro-shocker, or a barge electro-shocking unit (Figure 1-1, Exhibit A). Brook trout were collected for metals analyses during the fall aquatic survey within, or in the nearby vicinity of established stream stations. All collected fish were placed immediately in water-filled tubs to keep collected fish alive. Tubs contained portable battery-operated aerators, and were placed in the stream shocking unit or along the stream banks.

Upon completion of the fish survey within each station, and in accordance with the 2011 Eagle Brook Trout Metals Analyses Plan, the number of brook trout was recorded. Based on sample size, a determination was made to keep approximately 20% of the brook trout collected from the sample station, or release all if five or fewer brook trout were collected. For several sites where more than five brook trout greater than two inches in length were collected, AEM sampled beyond the typical station length in an attempt to provide additional data for metals analyses. Additional sampling beyond the established station length was conducted once the survey of the station area was complete.

3.3.1 Tissue Processing

The processing area and all processing materials (e.g., knives, table, and balance tray) were rinsed with de-ionized water prior to fish processing. Photographs of each fish labeled with date, length, weight, and sample location information were collected (Exhibit B). Working from the smallest specimen to the largest specimen, each fish was weighed, measured, and sex was determined as they were processed. Scale samples

were taken and placed in aging sample envelopes labeled with date, body of water, station number, personnel, sample identification number, fish length, and fish weight.

Fillet tissue samples were processed according to guidance provided in Attachment 10 of GLEAS Procedure 31. The edible portion samples (left and right fillets) were wrapped in aluminum foil with dull side to fillet. Aluminum foil packages for each fish were placed in a separate clear plastic bag and labeled with the following information: date, water body, station number, species, fillet weights, and sample identification number. Liver samples from each fish were wrapped in aluminum foil with dull side to liver and placed in a separate clear plastic bag. Each liver package was labeled with the following information: date, water body, station number, species, liver weight, and sample identification number. Fillet and liver packages for each fish were placed in specimen packages and labeled with the following information: date, water body, station number, species, sample identification number, fish length, and fish weight.

All bags from a given sample station were placed in a large plastic bag and labeled with station number and water body. All bags were placed on ice and samples were frozen daily until all ten sample stations were surveyed. Chain of Custody forms provided by the laboratory were completed where processing was conducted. All samples were placed in a cooler provided by the laboratory, along with completed Chain of Custody forms and ice, and sent to Pace Analytical Services, Inc via next-day courier service following the completion of surveying all ten stations.

Fillets and livers were processed by Pace Analytical Services, Inc. using the Inductively Coupled Plasma-Mass-Spectrometry Method 6020. Fillets were processed for the following metals: aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, and zinc. Livers were processed for divalent metals, including cadmium, copper, lead, nickel, silver, and zinc.

Average metals contents presented in Table 4-7 and Table 4-8 were calculated based on laboratory results provided by Pace Analytical Services, Inc. Reported Minimum Detectable Limit (MDL) varied according to the amount of tissue that was available for analyses. MDL values were used in the calculation of average statistics for samples that were recorded as non-detect in Table 4-7 and Table 4-8.

4.0 RESULTS

A total of 96 brook trout were collected within the vicinity of stations sampled from 19 September 2014 through 21 September 2014 as part of the fall 2014 tissue survey (Table 4-1). Of the fish collected, 17 brook trout, including nine males and eight females, were selected for metals analyses from Stations 1, 2, 3, 5, 8, 9, and 10. Sample station locations are described in Table 4-2 (Exhibit B).

Station 4 is located in Cedar Creek and serves as a reference location for the brook trout metals survey. Station 4 was not accessible due to a washed out stream crossing from high water caused by beaver activity, and was not surveyed for the 2014 brook trout metals analyses.

Among all brook trout collected during the fall survey, lengths ranged from 50 millimeters (2.0 inches) to 228 millimeters (9.0 inches), and average length was 108 millimeters (4.3 inches; standard deviation - s = 1.8 inches; sample size - n = 96). These length statistics also include brook trout collected from locations that were adjacent to the stations (upstream or downstream of stations) that are typically surveyed. AEM selected brook trout that ranged from 124 millimeters (4.9 inches) to 220 millimeters (8.7 inches) in length for conducting metals analyses. Scale sample analyses indicated that 17 brook trout were at least one to two years old (Table 4-3). Except for brook trout number 16, which was inadvertently not photographed during this survey, photographs of individually labeled brook trout collected for metals analyses are presented in Exhibit D.

4.1 Stream Habitat Conditions

Sample station locations during the 2014 fall fish tissue metals survey were consistent with locations surveyed during brook trout metals surveys conducted by AEM. Average sample station depth ranged from 0.4 feet in Stations 1, 3, and 10 to 1.8 feet in Stations 5 and 6 during the September survey (Table 4-4). Discharge ranged from 40 gallons per minute in Station 6 to 5,508 gallons per minute in Station 5 (Table 4-4). The water levels of Station 6 and Station 7 were influenced by nearby beaver dams and were the only sample stations that had water elevations at bank-full levels during the September survey.

Average water temperature ranged from 8.5ºC in Station 9 to 15.9ºC in Station 7, and varied little among measurements within each station (Table 4-5). Dissolved oxygen levels were the lowest in Station 6 and Station 7 among all sample stations. The

average pH ranged from 6.9 in Station 7 to 8.5 in Station 6, and conductivity was low among all sample stations (Table 4-5).

4.2 Metals Concentration in Tissues

Copper, mercury, and nickel concentrations are summarized within the text of this report, and all other metals data are summarized within Tables 4-7 through 4-10. Chain of Custody forms are presented in Exhibit E.

4.2.1 Salmon Trout River:

Station 1

A total of 24 brook trout were collected from Station 1 and the nearby vicinity (Table 4-1). An additional 100 feet of stream upstream of Station 1 and an additional 250 feet downstream of Station 1 were sampled to increase the sample size for metals analyses. A total of five brook trout, including one male that was at least two years old and four females that ranged from one to at least two years in age were selected from Station 1 for metals analyses (Table 4-3). Brook trout selected for metals analyses from Station 1 ranged in length from 138 millimeters (5.4 inches) to 180 millimeters (7.1 inches; $\bar{x}$ = 158 millimeters; *s* = 6.2 millimeters), and ranged in weight from 26.3 grams (0.9 ounces) to 52.2 grams (1.8 ounces; $\bar{x}$ = 36.3 grams; *s* = 9.6 grams).

Copper concentrations of brook trout fillets ranged from 0.35 mg/kg to 0.79 mg/kg ($\bar{x}$ = 0.53 mg/kg, *s* = 0.16 mg/kg), and from 1.7 mg/kg to 21.0 mg/kg ($\bar{x}$ = 9.2 mg/kg, *s* = 0.04 mg/kg) in livers (Tables 4-7 through 4-10). Nickel concentrations of brook trout fillets ranged from 0.012 mg/kg to 0.018 mg/kg ($\bar{x}$ = 0.014 mg/kg, *s* = 0.002 mg/kg), and from 0.013 mg/kg to 0.091 mg/kg ($\bar{x}$ = 0.038 mg/kg, *s* = 0.032 mg/kg) in livers (Tables 4-7 through 4-10). Mercury levels were only measured in brook trout fillets and ranged from 0.049 mg/kg to 0.064 mg/kg ($\bar{x}$ = 0.056 mg/kg; *s* = 0.006 mg/kg). See Tables 4-7 through 4-10 for additional data on metals contents observed in brook trout collected from Station 1 and adjacent reaches.

Stations 2 and 3

A total of six brook trout were collected from Station 2 and no additional brook trout were collected from the additional segment of stream that was sampled immediately upstream of the station on 20 September 2014 (Table 4-1). One male brook trout that was at least

two years old was selected for metals analyses from Station 2 (Table 4-3). The brook trout was 190 millimeters (7.5 inches) in length and weighed 67.1 grams (2.4 ounces).

Copper concentrations from the Station 2 brook trout in fillets tissue was 0.67 mg/kg and in liver tissue was 17.2 (Tables 4-7 through 4-10). Nickel concentration was 0.02 mg/kg in fillets tissue and was less than 0.04 mg/kg liver tissue. Mercury levels in brook trout fillets were 0.094 mg/kg.

A total of seven brook trout were collected in the vicinity of Station 3 (Table 4-1). Although an attempt to increase the sample size for metals analyses was made by surveying an additional 300 feet of stream immediately downstream of Station 3, no additional brook trout were collected. One female brook trout that was at least two years old was selected for metals analyses from Station 3 (Table 4-3). The brook trout was 162 millimeters (6.4 inches) in length and weighed 34.0 grams (1.2 ounces).

Copper concentrations from the Station 3 brook trout in fillets tissue was 0.40 mg/kg and in liver tissue was 1.8 (Tables 4-7 through 4-10). Nickel concentration was 0.01 mg/kg in fillets tissue and was less than 0.03 mg/kg liver tissue. Mercury levels in brook trout fillets were 0.12 mg/kg. See Tables 4-7 through 4-10 for additional data on metals contents observed in brook trout collected from Stations 2 and 3.

Station 6

Only one brook trout was collected in Station 6, and no additional brook trout were collected from an additional 150 feet of stream that was sampled immediately downstream of Station 6, and an additional 200 feet was that sampled upstream of the station. No brook trout were selected from Station 6 for metals analyses because of low brook trout abundance. Other fish species collected from Station 6 included a total of 214 brook sticklebacks (*Culaea inconstans*) and a total of 123 northern redbelly dace (*Phoxinus eos;* Table 4-6).

Station 7

No brook trout were collected in Station 7 (Table 4-1). Because of low brook trout abundance and high water from beaver activity, an additional segment of stream in the vicinity of Station 7 was not sampled. The fish community within Station 7 was comprised of six northern redbelly dace and five brook sticklebacks during the September 2014 survey (Table 4-6).

4.2.2 Salmon Trout River East Branch

Station 8

A total of 19 brook trout were collected from the vicinity of Station 8 (Table 4-1). Three male brook trout ranging from one to at least two years in age, and one female that was at least one year in age were selected for metals analyses (Table 4-3). Two brook trout that were selected for metals analyses were collected from a 100-foot long reach located immediately upstream of Station 8, and two more were selected from a 200-foot long reach located immediately downstream of Station 8. Brook trout selected for metals analyses ranged in length from 164 millimeters (6.5 inches) to 172 millimeters (6.8 inches; $\bar{x}$ = 168 millimeters; *s* = 4 millimeters), and ranged in weight from 49.1 grams (1.7 ounces) to 55.2 grams (1.9 ounces; $\bar{x}$ = 51.6 grams; *s* = 2.7 grams).

Copper concentrations from brook trout collected within the vicinity of Station 8 ranged from 0.40 mg/kg to 0.54 mg/kg ($\bar{x}$ = 0.47 mg/kg; *s* = 0.07 mg/kg) in fillets and from 3.5 mg/kg to 32.9 mg/kg ($\bar{x}$ = 15.9 mg/kg; *s* = 12.5 mg/kg) in livers (Tables 4-7 through 4-10). Nickel concentrations ranged from 0.013 mg/kg to 0.068 mg/kg ($\bar{x}$ = 0.032 mg/kg; *s* = 0.025 mg/kg) in fillets and from 0.02 mg/kg to 0.03 mg/kg ($\bar{x}$ = 0.02 mg/kg; *s* = 0.004 mg/kg) in livers (Tables 4-7 through 4-10). Mercury levels in fillets ranged from 0.029 mg/kg to 0.075 mg/kg ($\bar{x}$ = 0.048 mg/kg; *s* = 0.020 mg/kg). See Tables 4-7 through 4-10 for additional data on metals contents observed in brook trout collected in the vicinity of Station 8.

Station 9

A total of 19 brook trout were collected from the vicinity of Station 9 (Table 4-1). To increase the sample size for metals analyses, an additional 350 feet of stream was sampled immediately downstream of Station 9. Two males from the stream located immediately downstream of Station 9 were selected for metals analyses. The brook trout selected for metals analyses ranged in length from 124 millimeters (4.9 inches) to 158 millimeters (6.2 inches; $\bar{x}$ = 141.0 millimeters; *s* = 24.0 millimeters), and ranged in weight from 15.8 grams (0.9 ounces) to 38.0 grams (3.1 ounces; $\bar{x}$ = 26.9 grams; *s* = 15.7 grams). One of the brook trout selected for metals analyses was at least one year old and the other brook trout was at least two years old (Table 4-3).

Copper concentrations from brook trout collected within the vicinity of Station 9 ranged from 0.35 mg/kg to 0.45 mg/kg ($\bar{x}$ = 0.40 mg/kg; *s* = 0.07 mg/kg) in fillets and from 14.6 mg/kg to 15.7 mg/kg ($\bar{x}$ = 15.2 mg/kg; *s* = 0.8 mg/kg) in livers (Tables 4-7 through 4-10). Nickel concentrations ranged from 0.014 mg/kg to 0.015 mg/kg ($\bar{x}$ = 0.015 mg/kg; *s* = 0.001 mg/kg) in fillets (Tables 4-7 through 4-10). One of the liver samples was recorded as non-detect for nickel and the other was 0.11 mg/kg. Mercury levels in fillets ranged from 0.019 mg/kg to 0.055 mg/kg ($\bar{x}$ = 0.037 mg/kg; *s* = 0.025 mg/kg). See Tables 4-7 through 4-10 for additional data on metals contents observed in brook trout collected in the vicinity of Station 9.

Station 10

A total of 14 brook trout were collected from the vicinity of Station 10 (Table 4-1). An additional 250 feet of stream was surveyed upstream of Station 10 to increase sample size for metals analyses. One female and one male brook trout were selected for metals analyses from fish collected within the vicinity of Station 10 (Table 4-3). Brook trout selected for metals analyses ranged in length from 140 millimeters (5.5 inches) to 151 millimeters (5.9 inches; $\bar{x}$ = 145.5 millimeters; *s* = 57.8 millimeters), and ranged in weight from 24.3 grams (0.9 ounces) to 34.0 grams (1.2 ounces; $\bar{x}$ = 29.2 grams; *s* = 6.9 grams). One of the brook trout selected for metals analyses was at least one year old and the other brook trout was at least two years old (Table 4-3).

Copper concentrations from brook trout collected in Station 10 ranged from 0.36 mg/kg to 0.37 mg/kg in fillets ($\bar{x}$ = 0.37 mg/kg; *s* = 0.01 mg/kg) and from 5.2 mg/kg to 8.3 mg/kg ($\bar{x}$ = 6.8 mg/kg; *s* = 2.2 mg/kg) in brook trout livers (Tables 3-7 through 3-10). Nickel concentration in the fillets of one of the brook trout was below detection limits and the other was 0.026 mg/kg. Both of the liver samples were non-detectable for nickel concentrations. Mercury levels in fillets ranged from 0.030 mg/kg to 0.037 mg/kg ($\bar{x}$ = 0.034 mg/kg; *s* = 0.005 mg/kg). See Tables 4-7 through 4-10 for additional data on metals contents observed in brook trout collected in the vicinity of Station 10.

4.2.3 Cedar Creek

Station 4

As previously stated, Cedar Creek was not sampled during the 2014 brook trout metals survey because of difficulty accessing the site.

4.2.4 Yellow Dog River

Station 5

A total of six brook trout were collected from the vicinity of Station 5 (Table 4-1). One male and one female brook trout ranging from one to at least two years old were selected for metals analyses (Table 4-3). Brook trout selected for metals analyses ranged in length from 204 millimeters (8.0 inches) to 220 millimeters (8.7 inches; $\bar{x}$ = 212 millimeters; *s* = 11 millimeters), and ranged in weight from 79.1 grams (2.8 ounces) to 82.9 grams (2.9 ounces; $\bar{x}$ = 81.0 grams; *s* = 2.7 grams).

Copper concentrations from brook trout collected within the vicinity of Station 5 ranged from 0.30 mg/kg to 0.53 mg/kg ($\bar{x}$ = 0.42 mg/kg; *s* = 0.16 mg/kg) in fillets and from 30.1 mg/kg to 36.9 mg/kg ($\bar{x}$ = 33.5 mg/kg; *s* = 4.8 mg/kg) in livers (Tables 4-7 through 4-10). Nickel concentrations ranged from 0.020 mg/kg to 0.025 mg/kg ($\bar{x}$ = 0.023 mg/kg; *s* = 0.004 mg/kg) in fillets and from 0.03 mg/kg to 0.033 mg/kg ($\bar{x}$ = 0.032 mg/kg; *s* = 0.002 mg/kg) in livers (Tables 4-7 through 4-10). Mercury levels in fillets ranged from 0.018 mg/kg to 0.022 mg/kg ($\bar{x}$ = 0.020 mg/kg; *s* = 0.00 mg/kg). See Tables 4-7 through 4-10 for additional data on metals contents observed in brook trout collected in the vicinity of Station 5.

5.0 REFERENCES

AEM, 2011. Memo: Long Term Brook Trout Tissue Survey Protocol. August 8, 2011. Memo to Kennecott Eagle Minerals Company.

Bailey, R. M., W. C. Latta, and G. R. Smith. 2003. An atlas of Michigan fishes with keys and illustrations for their identification. Miscellaneous Publications, Museum of Zoology, No. 192, University of Michigan, Ann Arbor, MI.

Becker, G. C. 1983. Fishes of Wisconsin. The University of Wisconsin Press, Madison, WI.

Coon, T. G. 2001. Key to the fishes of Michigan. Michigan State University. East Lansing, MI.

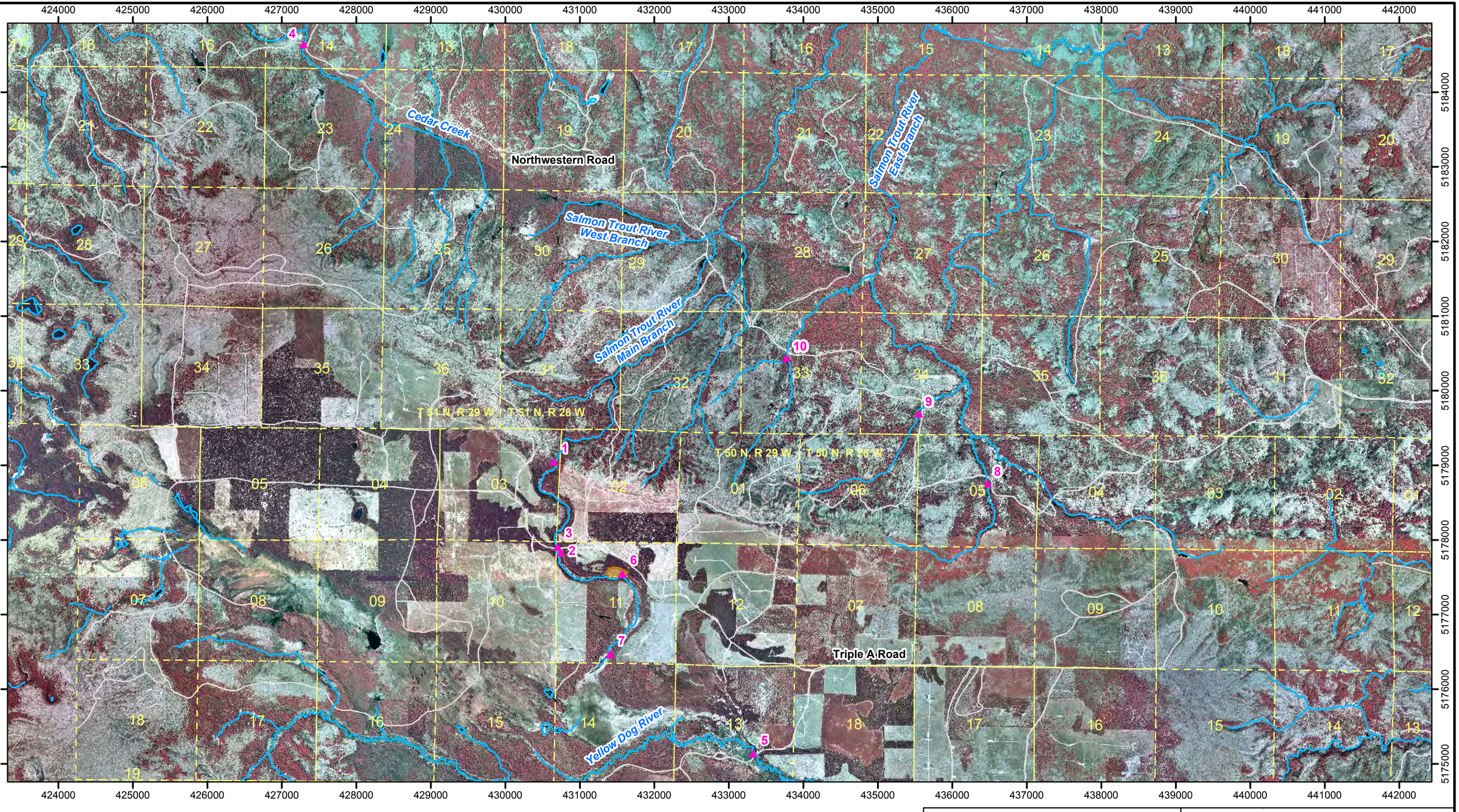
MDEQ (Michigan Department of Environmental Quality). 1997. Revised GLEAS Procedure #31, Fish Contaminant Monitoring Program, Fish Collection and Processing Procedure. Website, <http://www.deq.state.mi.us/documents/deq-swq-gleas-proc31.pdf>. (Accessed 11/18/2008).

MNFI (Michigan Natural Features Inventory). 2008. Marquette County Element Data. Michigan State University. East Lansing, MI.

EXHIBIT A

REPORT FIGURES

Figure 1-1. Sample Station Locations.



NOTES

1. Surface Property Boundary, Ore Body, and Orthophotography supplied by Kennecott via Golder Associates Inc., August, 2005.
2. Horizontal datum based on NAD 83/94. Horizontal coordinates based on UTM Zone 16.
3. Site Location - Project Site within Sections 11 &12, T50N, R29W, Town of Michigamme, Marquette County, Michigan.

LEGEND

- 6 ▲ Aquatic Sampling Location and Number
- River
- Ore Body

N

ADVANCED ECOLOGICAL MANAGEMENT

Foth Infrastructure & Environment, LLC

Foth Infrastructure & Environment, LLC			
REVISED	DATE	BY	DESCRIPTION

Eagle Mine

Figure 1-1
Eagle Project
Aquatic Sampling Locations

CHECKED BY:	DM	DATE: NOV. '08	
APPROVED BY:	RDW	DATE: NOV. '08	
APPROVED BY:		DATE:	
Scale: 0 600 1,200 Meters		Date: NOVEMBER 2008	
Prepared by:	DAT	Scope:	04W018

M:\kmceagle\mxd\AEM\2007\Report\samplinglocations1_11x17.mxd March 28, 2008

EXHIBIT B

REPORT TABLES

Table 4-1. 2014 Brook Trout Collection Data.

	Station									
	1	**2**	**3**	**4***	**5****	**6**	**7**	**8**	**9**	**10**
Number collected in station	7	6	7	ns	6	1	0	8	11	6
Number collected adjacent to station	17	0	0	ns	ns	0	ns	11	8	8
Number selected for metals analyses	5	1	1	0	2	0	0	4	2	2
Total collected from station vicinity	**24**	**6**	**7**	**0**	**6**	**1**	**0**	**19**	**19**	**14**

*** - Cedar Creek**
**** - Yellow Dog River**
ns – Not sampled

Table 4-2. Sample Station Location Description.

Station Number	Stream Name	Latitude/Longitude NAD 1983	Township/Range/ Section	Location Description
1	Salmon Trout River Main Branch	N 46.76130 W 87.90807	Michigamme Twp. T50N, R29W, Sec 3	Approximately 5,220 feet S of AAA Road and continuing S 120 feet.
2	Salmon Trout River Main Branch	N 46.75059 W 87.90720	Michigamme Twp. T50N, R29W, Sec. 11	Upstream extent located immediately S of AAA Road and continuing upstream 100 feet.
3	Salmon Trout River Main Branch	N 46.75148 W 87.90736	Michigamme Twp. T50N, R29W, Sec. 11	Downstream extent located immediately N of AAA Road and continuing downstream 200 feet.
4	Cedar Creek	N 46.81066 W 87.95323	Powell Twp. T51N, R29W, Sec. 14	Downstream extent located 300 feet N of Northwestern Road and continuing upstream to road crossing.
5	Yellow Dog River	N 46.72694 W 87.87268	Michigamme Twp. T50N, R29W, Sec. 13	Downstream extent located immediately upstream of unnamed road and continuing upstream 300 feet.
6	Salmon Trout River Main Branch	N 46.74793 W 89.89584	Michigamme Twp. T50N, R29W, Sec. 11	Downstream extent located approximately 4,600 feet upstream of AAA Road and continuing upstream 300 feet.
7	Salmon Trout River Main Branch	N 46.73808 W 87.89810	Michigamme Twp. T50N, R29W, Sec. 11	Near headwaters and N 100 feet.
8	Tributary to the East Branch of the Salmon Trout River	N 46.760113 W 87.83224	Champion Twp. T50N, R28W, Sec. 5	Upstream extent located 75 feet NE of Northwestern Road and continuing NE for 135 feet.
9	Tributary to the East Branch of the Salmon Trout River	N 46.76862 W 87.84377	Powell Twp. T51N, R28W, Sec. 34	Downstream extent located immediately SW of Northwestern Road and continuing SW for 85 feet.
10	Tributary to the East Branch of the Salmon Trout River	N 46.77471 W 87.86767	Powell Twp. T51N, R29W, Sec. 33	Downstream extent located immediately SW of Northwestern Road and continuing SW for 100 feet.

Table 4-3. Length, Weight, Sex, and Age of Brook Trout Collected for Metals Analyses in October 2014.

Sample Number	Sample Station	Length (mm)	Weight (gm)	Sex	Age
BKT1-YDR	ST5	204	82.9	Male	1+
BKT2-YDR	ST5	220	79.1	Female	2+
BKT3-STR2	ST2	190	67.1	Male	2+
BKT4-STR3	ST3	162	34.0	Female	2+
BKT5-ST1	ST1	180	52.2	Female	2+
BKT6-ST1	ST1	155	35.5	Female	1+
BKT7-ST1	ST1	155	32.2	Female	2+
BKT8-ST1	ST1	160	35.5	Male	2+
BKT9-ST1	ST1	138	26.3	Female	1+
BKT10-ST10	ST10	140	24.3	Female	2+
BKT11-ST10	ST10	151	34.0	Male	1+
BKT12-ST9	ST9	158	38.0	Male	1+
BKT13-ST9	ST9	124	15.8	Male	2+
BKT14-ST8	ST8	164	52.0	Male	2+
BKT15-ST8	ST8	166	50.1	Male	2+
BKT16-ST8	ST8	170	49.1	Female	1+
BKT17-ST8	ST8	172	55.2	Male	1+

mm - millimeters
gm - grams
ST1, ST3, and ST6 – Salmon Trout River
ST4 – Cedar Creek
ST8, ST9, and ST10 – Salmon Trout River East Branch

Table 4-4. 2014 Fall Physical Stream Dimensions – Stations 1-10.

Station	Length (ft)	Wetted width (ft) Average*	*s*	Depth (ft) Average	*s*	Discharge (gpm)
1	120	8.6 (3)	1.6	0.4 (9)	0.1	613
2	100	6.0 (3)	1.2	1.2 (9)	0.4	280
3	200	6.1 (3)	0.8	0.4 (9)	0.2	280
4	300	n.m.	n.m.	n.m.	n.m.	n.m.
5	268	21.3 (3)	2.2	1.8 (9)	0.5	5,508
6	300	17.9 (3)	6.0	1.8 (9)	0.6	40
7	100	5.9 (3)	0.4	1.1 (9)	0.3	n.m.
8	135	9.4 (3)	1.2	0.6 (9)	0.3	1,765
9	85	8.8 (3)	1.5	0.6 (9)	0.3	1,048
10	100	6.3 (3)	1.3	0.4 (9)	0.2	225

Station 4 - Cedar Creek
Station 5 - Yellow Dog River
***sample size is indicated within ( )**
***s* = Standard deviation**
gpm = Gallons per minute
n.m. = Not measured

Table 4-5. Fall 2014 Average Water Quality Parameters – Stations 1-10.

Station Number	Date	Time	Water Temperature (°C)	Dissolved Oxygen (mg/L)	Percent Dissolved Oxygen	pH	Conductivity (µS/cm)
1	9/20/2014	14:34	12.4 (0.1)	8.2 (0.1)	76.5 (1.6)	7.5 (0.3)	67 (0.1)
2	9/20/2014	11:23	12.8 (0.4)	7.9 (0.1)	74.8 (2.0)	8.0 (0.3)	59 (1.3)
3	9/20/2014	11:41	12.7 (0.1)	8.0 (0.1)	75.6 (1.1)	7.4 (0.1)	59 (0.5)
4	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.
5	9/19/2014	15:42	11.1 (0.1)	7.6 (0.2)	69.4 (2.0)	7.8 (0.3)	52 (0.0)
6	9/19/2014	13:09	11.0 (0.3)	4.8 (0.6)	43.3 (5.2)	8.5 (0.4)	59 (1.0)
7	9/20/2014	16:37	15.9 (0.2)	5.4 (0.4)	53.9 (4.5)	6.9 (0.2)	46 (0.1)
8	9/21/2014	15:59	9.7 (0.0)	9.9 (0.3)	87.6 (2.5)	8.0 (0.2)	96 (0.1)
9	9/21/2014	12:31	8.5 (0.0)	10.1 (0.2)	86.3 (2.0)	8.1 (0.2)	96 (0.0)
10	9/21/2014	9:51	11.4 (0.1)	8.9 (0.2)	81.5 (2.3)	8.0 (0.1)	112 (0.7)

Stations 1, 2, 3, 6, 7 - Salmon Trout River Main Branch
Stations 8, 9, 10 - Salmon Trout River East Branch
Station 4 - Cedar Creek
Station 5 - Yellow Dog River
°C = Degrees Celsius
mg/L = Milligrams per liter
n.m. = Not measured
µS/cm = MicroSiemens per centimeter
( ) - Standard deviation

Table 4-6. 2014 Fall Fish Collection Data – Stations 1-10.

		Station									
Scientific Name	**Common Name**	**1**	**2**	**3**	**4***	**5****	**6**	**7**	**8**	**9**	**10**
Catostomus commersonii	White sucker					1					
Cottus bairdii	Mottled sculpin										
Culaea inconstans	Brook stickleback		2			5	214	5			
Margariscus margarita	Pearl dace										
Phoxinus eos	Northern redbelly dace		6				123	6			
Phoxinus neogaeus	Finescale dace										1
Rhinichthys obtusus	Blacknose dace					6					
Salmo trutta	Brown trout					1					
Salvelinus fontinalis	Brook trout	7	6	7		6	1		8	11	6
Semotilus atromaculatus	Creek chub					20					
	Total Number	**7**	**14**	**7**	**ns**	**39**	**338**	**11**	**8**	**11**	**7**

*** - Cedar Creek**
**** - Yellow Dog River**
ns – Not sampled

Table 4-7. Fillet Tissue Average Metals Concentration and Average Fish Size among Stations for Brook Trout (*Salvelinus fontinalis*) Collected in September, 2014.

		Station						
Parameter	**Units**	**1 (5)**	**2(1)**	**3(1)**	**5 (2)**	**8 (4)**	**9(2)**	**10 (2)**
Fish Length	*mm*	158	190	162	212	168	141	141
Fish Weight	*gm*	36.3	67.1	34.0	81.0	51.6	26.9	26.9
Aluminum*	mg/kg	1.7	1.7	1.3	1.7	1.3	1.9	1.9
Antimony*	mg/kg	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Arsenic*	mg/kg	0.200	0.059	0.082	0.235	0.223	0.185	0.785
Barium*	mg/kg	0.05	0.03	0.10	0.04	0.05	0.05	0.08
Beryllium*	mg/kg	0.015	0.015	0.014	0.015	0.015	0.014	0.014
Boron*	mg/kg	0.23	0.23	0.23	0.24	0.23	0.22	0.23
Cadmium*	mg/kg	0.007	0.007	0.007	0.010	0.007	0.007	0.007
Chromium*	mg/kg	0.12	0.49	0.13	0.42	0.27	0.05	0.14
Cobalt*	mg/kg	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Copper	mg/kg	0.53	0.67	0.40	0.42	0.47	0.40	0.37
Iron	mg/kg	7.0	10.6	5.4	8.9	7.1	5.7	11.5
Lead*	mg/kg	0.01	0.01	0.01	0.01	0.01	0.01	0.02
Manganese	mg/kg	0.41	0.17	0.76	0.44	0.46	0.41	1.55
Mercury	mg/kg	0.056	0.094	0.120	0.020	0.048	0.037	0.034
Molybdenum*	mg/kg	0.010	0.010	0.010	0.013	0.010	0.009	0.023
Nickel*	mg/kg	0.01	0.02	0.01	0.02	0.03	0.01	0.02
Selenium	mg/kg	0.28	0.17	0.20	0.25	0.53	0.31	0.38
Silver*	mg/kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Strontium	mg/kg	0.19	0.04	0.70	0.32	0.25	0.21	0.34
Zinc	mg/kg	5.7	5.9	5.9	5.2	5.8	5.8	6.3

*** Minimum Detectable Limit used in calculation of average metals concentration for samples that were recorded as non-detectable.**
mm - millimeters
gm - grams
mg/kg - milligrams per kilograms
( ) - sample size

Table 4-8. Liver Average Metals Contents and Average Fish Size among Stations for Brook Trout (*Salvelinus fontinalis*) Collected in September, 2014.

		Station						
Parameter	**Units**	**1 (5)**	**2 (1)**	**3 (1)**	**5 (2)**	**8 (4)**	**9(2)**	**10 (2)**
Fish Length	*mm*	158	190	162	212	168	141	146
Fish Weight	*gm*	36.3	67.1	34.0	81.0	51.6	26.9	29.2
Cadmium*	mg/kg	0.091	0.69	0.016	0.091	0.063	0.063	0.24
Copper	mg/kg	9.2	17.2	1.8	33.5	15.9	15.2	6.8
Lead*	mg/kg	0.03	0.03	0.02	0.02	0.02	0.05	0.02
Nickel*	mg/kg	0.04	0.04	0.03	0.03	0.02	0.09	0.02
Silver*	mg/kg	0.072	0.13	0.004	0.35	0.077	0.110	0.174
Zinc	mg/kg	26.4	37.6	21.2	42.9	32.3	31.2	25.2

*** Minimum Detectable Limit used in calculation of average metals concentration for samples that were recorded as non-detectable.**
mm = millimeters
gm = grams
mg/kg = milligrams per kilograms
( ) - sample size

Table 4-9. Metals Contents of Brook Trout (*Salvelinus fontinalis*) Fillets - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870001	BKT1YDR	ST5	Aluminum	1.7	0.78	25.0	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Antimony	<0.011	0.011	0.10	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Arsenic	0.27	0.013	0.10	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Barium	0.031	0.017	0.10	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Beryllium	<0.015	0.015	0.10	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Boron	<0.25	0.25	2.0	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Cadmium	0.011	0.0078	0.10	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Chromium	0.37	0.043	0.10	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Cobalt	<0.0056	0.0056	0.10	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Copper	0.53	0.029	0.10	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Iron	8.9	0.79	25.0	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Lead	<0.011	0.011	0.10	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Manganese	0.27	0.044	0.50	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Mercury	0.018	0.0077	0.020	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Molybdenum	0.011	0.010	0.10	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Nickel	0.020	0.013	0.10	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Selenium	0.24	0.075	0.20	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Silver	<0.0019	0.0019	0.050	mg/kg	09/19/14	10/04/14
40103870001	BKT1YDR	ST5	Strontium	0.18	0.022	0.10	mg/kg	09/19/14	10/01/14
40103870001	BKT1YDR	ST5	Zinc	5.1	0.80	2.0	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Aluminum	1.6	0.73	23.4	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Antimony	0.012	0.010	0.093	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Arsenic	0.20	0.013	0.093	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Barium	0.049	0.016	0.093	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Beryllium	<0.014	0.014	0.093	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Boron	<0.23	0.23	1.9	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Cadmium	0.0097	0.0073	0.093	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Chromium	0.47	0.040	0.093	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Cobalt	0.013	0.0052	0.093	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Copper	0.30	0.027	0.093	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Iron	8.9	0.73	23.4	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Lead	0.013	0.010	0.093	mg/kg	09/19/14	10/01/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST5 - Sample station within the Yellow Dog River

Table 4-9 (continued). Metals Contents of Brook Trout (*Salvelinus fontinalis*) Fillets - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870002	BKT2YDR	ST5	Manganese	0.60	0.041	0.47	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Mercury	0.022	0.0072	0.019	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Molybdenum	0.015	0.0098	0.093	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Nickel	0.025	0.012	0.093	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Selenium	0.26	0.070	0.19	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Silver	<0.0017	0.0017	0.045	mg/kg	09/19/14	10/04/14
40103870002	BKT2YDR	ST5	Strontium	0.45	0.021	0.093	mg/kg	09/19/14	10/01/14
40103870002	BKT2YDR	ST5	Zinc	5.3	0.75	1.9	mg/kg	09/19/14	10/01/14
40103870003	BKT3STR2	ST5	Aluminum	1.7	0.74	23.7	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Antimony	<0.010	0.010	0.095	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Arsenic	0.059	0.013	0.095	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Barium	0.033	0.016	0.095	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Beryllium	<0.015	0.015	0.095	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Boron	<0.23	0.23	1.9	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Cadmium	<0.0074	0.0074	0.095	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Chromium	0.49	0.041	0.095	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Cobalt	0.011	0.0053	0.095	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Copper	0.67	0.027	0.095	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Iron	10.6	0.74	23.7	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Lead	<0.010	0.010	0.095	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Manganese	0.17	0.042	0.47	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Mercury	0.094	0.0073	0.019	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Molybdenum	<0.0099	0.0099	0.095	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Nickel	0.023	0.013	0.095	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Selenium	0.17	0.071	0.19	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Silver	<0.0018	0.0018	0.049	mg/kg	09/20/14	10/04/14
40103870003	BKT3STR2	ST2	Strontium	0.040	0.021	0.095	mg/kg	09/20/14	10/01/14
40103870003	BKT3STR2	ST2	Zinc	5.9	0.76	1.9	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Aluminum	1.3	0.73	23.5	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Antimony	<0.010	0.010	0.094	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Arsenic	0.082	0.013	0.094	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Barium	0.10	0.016	0.094	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Beryllium	<0.014	0.014	0.094	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Boron	<0.23	0.23	1.9	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Cadmium	<0.0073	0.0073	0.094	mg/kg	09/20/14	10/01/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST5 - Sample station within the Yellow Dog River
ST2 and ST3 – Sample stations within the Salmon Trout River

Table 4-9 (continued). Metals Contents of Brook Trout (*Salvelinus fontinalis*) Fillets - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870004	BKT4STR3	ST3	Chromium	0.13	0.041	0.094	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Cobalt	0.0066	0.0052	0.094	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Copper	0.40	0.027	0.094	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Iron	5.4	0.74	23.5	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Lead	<0.010	0.010	0.094	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Manganese	0.76	0.042	0.47	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Mercury	0.12	0.0072	0.019	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Molybdenum	<0.0099	0.0099	0.094	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Nickel	0.014	0.012	0.094	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Selenium	0.20	0.071	0.19	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Silver	<0.0017	0.0017	0.047	mg/kg	09/20/14	10/04/14
40103870004	BKT4STR3	ST3	Strontium	0.70	0.021	0.094	mg/kg	09/20/14	10/01/14
40103870004	BKT4STR3	ST3	Zinc	5.9	0.75	1.9	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Aluminum	1.5	0.76	24.3	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Antimony	<0.011	0.011	0.097	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Arsenic	0.15	0.013	0.097	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Barium	0.045	0.016	0.097	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Beryllium	<0.015	0.015	0.097	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Boron	<0.24	0.24	1.9	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Cadmium	<0.0076	0.0076	0.097	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Chromium	0.052	0.042	0.097	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Cobalt	0.011	0.0054	0.097	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Copper	0.52	0.028	0.097	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Iron	6.3	0.76	24.3	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Lead	<0.011	0.011	0.097	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Manganese	0.42	0.043	0.49	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Mercury	0.049	0.0075	0.019	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Molybdenum	<0.010	0.010	0.097	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Nickel	<0.013	0.013	0.097	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Selenium	0.28	0.073	0.19	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Silver	<0.0017	0.0017	0.046	mg/kg	09/20/14	10/04/14
40103870005	BKT5ST1	ST1	Strontium	0.19	0.022	0.097	mg/kg	09/20/14	10/01/14
40103870005	BKT5ST1	ST1	Zinc	6.5	0.78	1.9	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Aluminum	1.2	0.75	23.9	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Antimony	<0.011	0.011	0.095	mg/kg	09/20/14	10/01/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST3 and ST1 - Sample stations within the Salmon Trout River

Table 4-9 (continued). Metals Contents of Brook Trout (*Salvelinus fontinalis*) Fillets - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870006	BKT6ST1	ST1	Arsenic	0.31	0.013	0.095	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Barium	0.029	0.016	0.095	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Beryllium	<0.015	0.015	0.095	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Boron	<0.23	0.23	1.9	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Cadmium	<0.0075	0.0075	0.095	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Chromium	<0.041	0.041	0.095	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Cobalt	0.0064	0.0053	0.095	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Copper	0.52	0.027	0.095	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Iron	5.3	0.75	23.9	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Lead	<0.010	0.010	0.095	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Manganese	0.34	0.042	0.48	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Mercury	0.055	0.0073	0.019	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Molybdenum	<0.010	0.010	0.095	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Nickel	<0.013	0.013	0.095	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Selenium	0.23	0.072	0.19	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Silver	<0.0017	0.0017	0.047	mg/kg	09/20/14	10/04/14
40103870006	BKT6ST1	ST1	Strontium	0.15	0.021	0.095	mg/kg	09/20/14	10/01/14
40103870006	BKT6ST1	ST1	Zinc	4.7	0.76	1.9	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Aluminum	2.1	0.77	24.5	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Antimony	<0.011	0.011	0.098	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Arsenic	0.21	0.013	0.098	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Barium	0.051	0.016	0.098	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Beryllium	<0.015	0.015	0.098	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Boron	<0.24	0.24	2.0	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Cadmium	<0.0077	0.0077	0.098	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Chromium	0.12	0.042	0.098	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Cobalt	0.011	0.0054	0.098	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Copper	0.35	0.028	0.098	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Iron	7.5	0.77	24.5	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Lead	<0.011	0.011	0.098	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Manganese	0.41	0.044	0.49	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Mercury	0.064	0.0075	0.020	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Molybdenum	<0.010	0.010	0.098	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Nickel	0.013	0.013	0.098	mg/kg	09/20/14	10/01/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST1 – Sample station within the Salmon Trout River

Table 4-9 (continued). Metals Contents of Brook Trout (*Salvelinus fontinalis*) Fillets - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870007	BKT7ST1	ST1	Selenium	0.36	0.074	0.20	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Silver	<0.0018	0.0018	0.047	mg/kg	09/20/14	10/04/14
40103870007	BKT7ST1	ST1	Strontium	0.14	0.022	0.098	mg/kg	09/20/14	10/01/14
40103870007	BKT7ST1	ST1	Zinc	5.0	0.79	2.0	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Aluminum	1.7	0.66	21.0	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Antimony	<0.0093	0.0093	0.084	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Arsenic	0.13	0.011	0.084	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Barium	0.054	0.014	0.084	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Beryllium	<0.013	0.013	0.084	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Boron	<0.21	0.21	1.7	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Cadmium	<0.0066	0.0066	0.084	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Chromium	0.15	0.036	0.084	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Cobalt	0.010	0.0047	0.084	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Copper	0.47	0.024	0.084	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Iron	7.6	0.66	21.0	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Lead	<0.0092	0.0092	0.084	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Manganese	0.46	0.037	0.42	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Mercury	0.050	0.0065	0.017	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Molybdenum	<0.0088	0.0088	0.084	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Nickel	0.012	0.011	0.084	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Selenium	0.30	0.063	0.17	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Silver	<0.0016	0.0016	0.043	mg/kg	09/20/14	10/04/14
40103870008	BKT8ST1	ST1	Strontium	0.33	0.019	0.084	mg/kg	09/20/14	10/01/14
40103870008	BKT8ST1	ST1	Zinc	6.9	0.67	1.7	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Aluminum	1.8	0.76	24.4	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Antimony	<0.011	0.011	0.098	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Arsenic	0.20	0.013	0.098	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Barium	0.046	0.016	0.098	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Beryllium	<0.015	0.015	0.098	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Boron	<0.24	0.24	2.0	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Cadmium	<0.0076	0.0076	0.098	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Chromium	0.24	0.042	0.098	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Cobalt	0.013	0.0054	0.098	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Copper	0.79	0.028	0.098	mg/kg	09/20/14	10/01/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST1 – Sample station within the Salmon Trout River

Table 4-9 (continued). Metals Contents of Brook Trout (*Salvelinus fontinalis*) Fillets - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870009	BKT9ST1	ST1	Iron	8.2	0.77	24.4	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Lead	0.017	0.011	0.098	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Manganese	0.43	0.043	0.49	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Mercury	0.060	0.0075	0.020	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Molybdenum	<0.010	0.010	0.098	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Nickel	0.018	0.013	0.098	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Selenium	0.23	0.074	0.20	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Silver	<0.0017	0.0017	0.045	mg/kg	09/20/14	10/04/14
40103870009	BKT9ST1	ST1	Strontium	0.15	0.022	0.098	mg/kg	09/20/14	10/01/14
40103870009	BKT9ST1	ST1	Zinc	5.6	0.78	2.0	mg/kg	09/20/14	10/01/14
40103870010	BKT10ST10	ST10	Aluminum	2.3	0.73	23.3	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Antimony	<0.010	0.010	0.093	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Arsenic	0.86	0.012	0.093	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Barium	0.060	0.016	0.093	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Beryllium	<0.014	0.014	0.093	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Boron	<0.23	0.23	1.9	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Cadmium	<0.0073	0.0073	0.093	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Chromium	0.20	0.040	0.093	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Cobalt	0.0082	0.0052	0.093	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Copper	0.37	0.027	0.093	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Iron	17.7	0.73	23.3	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Lead	<0.010	0.010	0.093	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Manganese	1.0	0.041	0.47	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Mercury	0.037	0.0072	0.019	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Molybdenum	0.036	0.0098	0.093	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Nickel	0.026	0.012	0.093	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Selenium	0.35	0.070	0.19	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Silver	<0.0018	0.0018	0.047	mg/kg	09/21/14	10/04/14
40103870010	BKT10ST10	ST10	Strontium	0.22	0.021	0.093	mg/kg	09/21/14	10/01/14
40103870010	BKT10ST10	ST10	Zinc	5.8	0.75	1.9	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Aluminum	1.5	0.73	23.5	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Antimony	<0.010	0.010	0.094	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Arsenic	0.71	0.013	0.094	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Barium	0.090	0.016	0.094	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Beryllium	<0.014	0.014	0.094	mg/kg	09/21/14	10/01/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST1 – Sample station within the Salmon Trout River
ST10 – Sample station within the East Branch of the Salmon Trout River

Table 4-9 (continued). Metals Contents of Brook Trout (*Salvelinus fontinalis*) Fillets - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870011	BKT11ST10	ST10	Boron	<0.23	0.23	1.9	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Cadmium	<0.0073	0.0073	0.094	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Chromium	0.080	0.040	0.094	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Cobalt	0.0062	0.0052	0.094	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Copper	0.36	0.027	0.094	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Iron	5.3	0.74	23.5	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Lead	0.021	0.010	0.094	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Manganese	2.1	0.042	0.47	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Mercury	0.030	0.0072	0.019	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Molybdenum	<0.0098	0.0098	0.094	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Nickel	<0.012	0.012	0.094	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Selenium	0.40	0.071	0.19	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Silver	<0.0017	0.0017	0.046	mg/kg	09/21/14	10/04/14
40103870011	BKT11ST10	ST10	Strontium	0.46	0.021	0.094	mg/kg	09/21/14	10/01/14
40103870011	BKT11ST10	ST10	Zinc	6.8	0.75	1.9	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Aluminum	2.5	0.66	21.0	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Antimony	<0.0093	0.0093	0.084	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Arsenic	0.12	0.011	0.084	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Barium	0.028	0.014	0.084	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Beryllium	<0.013	0.013	0.084	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Boron	<0.21	0.21	1.7	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Cadmium	<0.0066	0.0066	0.084	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Chromium	0.050	0.036	0.084	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Cobalt	0.0065	0.0047	0.084	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Copper	0.45	0.024	0.084	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Iron	6.4	0.66	21.0	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Lead	<0.0092	0.0092	0.084	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Manganese	0.20	0.037	0.42	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Mercury	0.055	0.0065	0.017	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Molybdenum	<0.0088	0.0088	0.084	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Nickel	0.014	0.011	0.084	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Selenium	0.34	0.063	0.17	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Silver	<0.0016	0.0016	0.042	mg/kg	09/21/14	10/04/14
40103870012	BKT12ST9	ST9	Strontium	0.077	0.019	0.084	mg/kg	09/21/14	10/01/14
40103870012	BKT12ST9	ST9	Zinc	5.2	0.67	1.7	mg/kg	09/21/14	10/01/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST9 and ST10 – Sample stations within East Branch of the Salmon Trout River

Table 4-9 (continued). Metals Contents of Brook Trout (*Salvelinus fontinalis*) Fillets - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870013	BKT13ST9	ST9	Aluminum	1.3	0.72	23.0	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Antimony	<0.010	0.010	0.092	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Arsenic	0.25	0.012	0.092	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Barium	0.072	0.015	0.092	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Beryllium	<0.014	0.014	0.092	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Boron	<0.23	0.23	1.8	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Cadmium	<0.0072	0.0072	0.092	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Chromium	<0.040	0.040	0.092	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Cobalt	0.010	0.0051	0.092	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Copper	0.35	0.026	0.092	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Iron	4.9	0.72	23.0	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Lead	<0.010	0.010	0.092	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Manganese	0.61	0.041	0.46	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Mercury	0.019	0.0071	0.018	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Molybdenum	<0.0097	0.0097	0.092	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Nickel	0.015	0.012	0.092	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Selenium	0.28	0.069	0.18	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Silver	<0.0016	0.0016	0.042	mg/kg	09/21/14	10/04/14
40103870013	BKT13ST9	ST9	Strontium	0.35	0.021	0.092	mg/kg	09/21/14	10/01/14
40103870013	BKT13ST9	ST9	Zinc	6.3	0.74	1.8	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Aluminum	1.4	0.77	24.5	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Antimony	<0.011	0.011	0.098	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Arsenic	0.15	0.013	0.098	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Barium	0.052	0.016	0.098	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Beryllium	<0.015	0.015	0.098	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Boron	<0.24	0.24	2.0	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Cadmium	<0.0076	0.0076	0.098	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Chromium	<0.042	0.042	0.098	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Cobalt	0.0074	0.0054	0.098	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Copper	0.54	0.028	0.098	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Iron	4.6	0.77	24.5	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Lead	<0.011	0.011	0.098	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Manganese	0.47	0.043	0.49	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Mercury	0.029	0.0075	0.020	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Molybdenum	<0.010	0.010	0.098	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Nickel	0.023	0.013	0.098	mg/kg	09/21/14	10/01/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST8 and ST9 – Sample stations within East Branch of the Salmon Trout River

Table 4-9 (continued). Metals Contents of Brook Trout (*Salvelinus fontinalis*) Fillets - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870014	BKT14ST8	ST8	Selenium	0.32	0.074	0.20	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Silver	<0.0018	0.0018	0.050	mg/kg	09/21/14	10/04/14
40103870014	BKT14ST8	ST8	Strontium	0.18	0.022	0.098	mg/kg	09/21/14	10/01/14
40103870014	BKT14ST8	ST8	Zinc	5.6	0.78	2.0	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Aluminum	1.4	0.70	22.4	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Antimony	<0.0099	0.0099	0.090	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Arsenic	0.22	0.012	0.090	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Barium	0.082	0.015	0.090	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Beryllium	<0.014	0.014	0.090	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Boron	<0.22	0.22	1.8	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Cadmium	<0.0070	0.0070	0.090	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Chromium	<0.039	0.039	0.090	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Cobalt	<0.0050	0.0050	0.090	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Copper	0.50	0.026	0.090	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Iron	6.5	0.70	22.4	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Lead	<0.0098	0.0098	0.090	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Manganese	0.80	0.040	0.45	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Mercury	0.075	0.0069	0.018	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Molybdenum	<0.0094	0.0094	0.090	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Nickel	0.068	0.012	0.090	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Selenium	0.41	0.067	0.18	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Silver	<0.0018	0.0018	0.048	mg/kg	09/21/14	10/04/14
40103870015	BKT15ST8	ST8	Strontium	0.60	0.020	0.090	mg/kg	09/21/14	10/01/14
40103870015	BKT15ST8	ST8	Zinc	7.9	0.72	1.8	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Aluminum	1.1	0.77	24.5	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Antimony	<0.011	0.011	0.098	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Arsenic	0.28	0.013	0.098	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Barium	0.027	0.016	0.098	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Beryllium	<0.015	0.015	0.098	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Boron	<0.24	0.24	2.0	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Cadmium	<0.0077	0.0077	0.098	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Chromium	0.95	0.042	0.098	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Cobalt	0.0061	0.0054	0.098	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Copper	0.40	0.028	0.098	mg/kg	09/21/14	10/01/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST8 – Sample station within East Branch of the Salmon Trout River

Table 4-9 (continued). Metals Contents of Brook Trout (*Salvelinus fontinalis*) Fillets - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870016	BKT16ST8	ST8	Iron	11.6	0.77	24.5	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Lead	<0.011	0.011	0.098	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Manganese	0.27	0.044	0.49	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Mercury	0.037	0.0075	0.020	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Molybdenum	<0.010	0.010	0.098	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Nickel	0.024	0.013	0.098	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Selenium	1.1	0.074	0.20	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Silver	<0.0017	0.0017	0.046	mg/kg	09/21/14	10/04/14
40103870016	BKT16ST8	ST8	Strontium	0.076	0.022	0.098	mg/kg	09/21/14	10/01/14
40103870016	BKT16ST8	ST8	Zinc	4.7	0.79	2.0	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Aluminum	1.3	0.75	23.9	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Antimony	<0.011	0.011	0.096	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Arsenic	0.24	0.013	0.096	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Barium	0.029	0.016	0.096	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Beryllium	<0.015	0.015	0.096	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Boron	<0.23	0.23	1.9	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Cadmium	<0.0075	0.0075	0.096	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Chromium	<0.041	0.041	0.096	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Cobalt	0.011	0.0053	0.096	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Copper	0.42	0.028	0.096	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Iron	5.6	0.75	23.9	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Lead	<0.010	0.010	0.096	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Manganese	0.28	0.043	0.48	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Mercury	0.052	0.0074	0.019	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Molybdenum	<0.010	0.010	0.096	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Nickel	<0.013	0.013	0.096	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Selenium	0.30	0.072	0.19	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Silver	<0.0016	0.0016	0.043	mg/kg	09/21/14	10/04/14
40103870017	BKT17ST8	ST8	Strontium	0.14	0.021	0.096	mg/kg	09/21/14	10/01/14
40103870017	BKT17ST8	ST8	Zinc	5.0	0.77	1.9	mg/kg	09/21/14	10/01/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST8 – Sample station within East Branch of the Salmon Trout River

Table 4-10. Metals Contents of Brook Trout (*Salvelinus fontinalis*) Livers - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870018	BKT1YDR	ST5	Cadmium	0.086	0.013	0.16	mg/kg	09/19/14	10/02/14
40103870018	BKT1YDR	ST5	Copper	36.9	0.046	0.16	mg/kg	09/19/14	10/02/14
40103870018	BKT1YDR	ST5	Lead	<0.018	0.018	0.16	mg/kg	09/19/14	10/02/14
40103870018	BKT1YDR	ST5	Nickel	0.030	0.021	0.16	mg/kg	09/19/14	10/02/14
40103870018	BKT1YDR	ST5	Silver	0.39	0.0030	0.080	mg/kg	09/19/14	10/02/14
40103870018	BKT1YDR	ST5	Zinc	44.2	1.3	3.2	mg/kg	09/19/14	10/02/14
40103870019	BKT2YDR	ST5	Cadmium	0.095	0.013	0.17	mg/kg	09/19/14	10/02/14
40103870019	BKT2YDR	ST5	Copper	30.1	0.049	0.17	mg/kg	09/19/14	10/02/14
40103870019	BKT2YDR	ST5	Lead	0.031	0.019	0.17	mg/kg	09/19/14	10/02/14
40103870019	BKT2YDR	ST5	Nickel	0.033	0.023	0.17	mg/kg	09/19/14	10/02/14
40103870019	BKT2YDR	ST5	Silver	0.31	0.0032	0.085	mg/kg	09/19/14	10/02/14
40103870019	BKT2YDR	ST5	Zinc	41.6	1.4	3.4	mg/kg	09/19/14	10/02/14
40103870020	BKT3STR2	ST2	Cadmium	0.069	0.023	0.29	mg/kg	09/20/14	10/02/14
40103870020	BKT3STR2	ST2	Copper	17.2	0.085	0.29	mg/kg	09/20/14	10/02/14
40103870020	BKT3STR2	ST2	Lead	<0.032	0.032	0.29	mg/kg	09/20/14	10/02/14
40103870020	BKT3STR2	ST2	Nickel	<0.039	0.039	0.29	mg/kg	09/20/14	10/02/14
40103870020	BKT3STR2	ST2	Silver	0.13	0.0055	0.15	mg/kg	09/20/14	10/02/14
40103870020	BKT3STR2	ST2	Zinc	37.6	2.4	5.9	mg/kg	09/20/14	10/02/14
40103870021	BKT4STR3	ST3	Cadmium	<0.016	0.016	0.20	mg/kg	09/20/14	10/02/14
40103870021	BKT4STR3	ST3	Copper	1.8	0.058	0.20	mg/kg	09/20/14	10/02/14
40103870021	BKT4STR3	ST3	Lead	<0.022	0.022	0.20	mg/kg	09/20/14	10/02/14
40103870021	BKT4STR3	ST3	Nickel	<0.027	0.027	0.20	mg/kg	09/20/14	10/02/14
40103870021	BKT4STR3	ST3	Silver	<0.0038	0.0038	0.10	mg/kg	09/20/14	10/02/14
40103870021	BKT4STR3	ST3	Zinc	21.2	1.6	4.0	mg/kg	09/20/14	10/02/14
40103870022	BKT5ST1	ST1	Cadmium	0.057	0.0077	0.098	mg/kg	09/20/14	10/02/14
40103870022	BKT5ST1	ST1	Copper	4.2	0.028	0.098	mg/kg	09/20/14	10/02/14
40103870022	BKT5ST1	ST1	Lead	<0.011	0.011	0.098	mg/kg	09/20/14	10/02/14
40103870022	BKT5ST1	ST1	Nickel	<0.013	0.013	0.098	mg/kg	09/20/14	10/02/14
40103870022	BKT5ST1	ST1	Silver	0.037	0.0018	0.049	mg/kg	09/20/14	10/02/14
40103870022	BKT5ST1	ST1	Zinc	21.6	0.79	2.0	mg/kg	09/20/14	10/02/14
40103870023	BKT6ST1	ST1	Cadmium	0.068	0.0087	0.11	mg/kg	09/20/14	10/02/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST1, ST2, and ST3 – Sample stations within the Salmon Trout River
ST5 – Sample station within the Yellow Dog River

Table 4-10. (continued). Metals Contents of Brook Trout (*Salvelinus fontinalis*) Livers - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870023	BKT6ST1	ST1	Copper	1.7	0.032	0.11	mg/kg	09/20/14	10/02/14
40103870023	BKT6ST1	ST1	Lead	<0.012	0.012	0.11	mg/kg	09/20/14	10/02/14
40103870023	BKT6ST1	ST1	Nickel	<0.015	0.015	0.11	mg/kg	09/20/14	10/02/14
40103870023	BKT6ST1	ST1	Silver	0.0060	0.0021	0.056	mg/kg	09/20/14	10/02/14
40103870023	BKT6ST1	ST1	Zinc	19.6	0.90	2.2	mg/kg	09/20/14	10/02/14
40103870024	BKT7ST1	ST1	Cadmium	0.081	0.053	0.68	mg/kg	09/20/14	10/02/14
40103870024	BKT7ST1	ST1	Copper	13.6	0.20	0.68	mg/kg	09/20/14	10/02/14
40103870024	BKT7ST1	ST1	Lead	<0.075	0.075	0.68	mg/kg	09/20/14	10/02/14
40103870024	BKT7ST1	ST1	Nickel	<0.091	0.091	0.68	mg/kg	09/20/14	10/02/14
40103870024	BKT7ST1	ST1	Silver	0.062	0.013	0.34	mg/kg	09/20/14	10/02/14
40103870024	BKT7ST1	ST1	Zinc	29.5	5.5	13.7	mg/kg	09/20/14	10/02/14
40103870025	BKT8ST1	ST1	Cadmium	0.15	0.015	0.19	mg/kg	09/20/14	10/02/14
40103870025	BKT8ST1	ST1	Copper	21.0	0.055	0.19	mg/kg	09/20/14	10/02/14
40103870025	BKT8ST1	ST1	Lead	<0.021	0.021	0.19	mg/kg	09/20/14	10/02/14
40103870025	BKT8ST1	ST1	Nickel	<0.025	0.025	0.19	mg/kg	09/20/14	10/02/14
40103870025	BKT8ST1	ST1	Silver	0.21	0.0035	0.095	mg/kg	09/20/14	10/02/14
40103870025	BKT8ST1	ST1	Zinc	36.7	1.5	3.8	mg/kg	09/20/14	10/02/14
40103870026	BKT9ST1	ST1	Cadmium	0.10	0.026	0.34	mg/kg	09/20/14	10/02/14
40103870026	BKT9ST1	ST1	Copper	5.7	0.097	0.34	mg/kg	09/20/14	10/02/14
40103870026	BKT9ST1	ST1	Lead	<0.037	0.037	0.34	mg/kg	09/20/14	10/02/14
40103870026	BKT9ST1	ST1	Nickel	<0.045	0.045	0.34	mg/kg	09/20/14	10/02/14
40103870026	BKT9ST1	ST1	Silver	0.043	0.0062	0.17	mg/kg	09/20/14	10/02/14
40103870026	BKT9ST1	ST1	Zinc	24.7	2.7	6.7	mg/kg	09/20/14	10/02/14
40103870027	BKT10ST10	ST10	Cadmium	0.28	0.022	0.28	mg/kg	09/21/14	10/02/14
40103870027	BKT10ST10	ST10	Copper	8.3	0.080	0.28	mg/kg	09/21/14	10/02/14
40103870027	BKT10ST10	ST10	Lead	<0.031	0.031	0.28	mg/kg	09/21/14	10/02/14
40103870027	BKT10ST10	ST10	Nickel	<0.037	0.037	0.28	mg/kg	09/21/14	10/02/14
40103870027	BKT10ST10	ST10	Silver	0.26	0.0052	0.14	mg/kg	09/21/14	10/02/14
40103870027	BKT10ST10	ST10	Zinc	26.9	2.2	5.6	mg/kg	09/21/14	10/02/14
40103870028	BKT11ST10	ST10	Cadmium	0.20	0.0073	0.094	mg/kg	09/21/14	10/02/14
40103870028	BKT11ST10	ST10	Copper	5.2	0.027	0.094	mg/kg	09/21/14	10/02/14
40103870028	BKT11ST10	ST10	Lead	0.013	0.010	0.094	mg/kg	09/21/14	10/02/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST1 – Sample station within Salmon Trout River
ST10 – Sample station within East Brach of the Salmon Trout River

Table 4-10. (continued). Metals Contents of Brook Trout (*Salvelinus fontinalis*) Livers - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870028	BKT11ST10	ST10	Nickel	<0.012	0.012	0.094	mg/kg	09/21/14	10/02/14
40103870028	BKT11ST10	ST10	Silver	0.088	0.0017	0.047	mg/kg	09/21/14	10/02/14
40103870028	BKT11ST10	ST10	Zinc	23.4	0.75	1.9	mg/kg	09/21/14	10/02/14
40103870029	BKT12ST9	ST9	Cadmium	0.071	0.019	0.24	mg/kg	09/21/14	10/02/14
40103870029	BKT12ST9	ST9	Copper	14.6	0.070	0.24	mg/kg	09/21/14	10/02/14
40103870029	BKT12ST9	ST9	Lead	<0.027	0.027	0.24	mg/kg	09/21/14	10/02/14
40103870029	BKT12ST9	ST9	Nickel	0.11	0.032	0.24	mg/kg	09/21/14	10/02/14
40103870029	BKT12ST9	ST9	Silver	0.039	0.0045	0.12	mg/kg	09/21/14	10/02/14
40103870029	BKT12ST9	ST9	Zinc	29.7	1.9	4.9	mg/kg	09/21/14	10/02/14
40103870030	BKT13ST9	ST9	Cadmium	0.055	0.045	0.58	mg/kg	09/21/14	10/02/14
40103870030	BKT13ST9	ST9	Copper	15.7	0.17	0.58	mg/kg	09/21/14	10/02/14
40103870030	BKT13ST9	ST9	Lead	<0.064	0.064	0.58	mg/kg	09/21/14	10/02/14
40103870030	BKT13ST9	ST9	Nickel	<0.077	0.077	0.58	mg/kg	09/21/14	10/02/14
40103870030	BKT13ST9	ST9	Silver	0.18	0.011	0.29	mg/kg	09/21/14	10/02/14
40103870030	BKT13ST9	ST9	Zinc	32.6	4.7	11.6	mg/kg	09/21/14	10/02/14
40103870031	BKT14ST8	ST8	Cadmium	0.13	0.012	0.15	mg/kg	09/21/14	10/02/14
40103870031	BKT14ST8	ST8	Copper	16.1	0.043	0.15	mg/kg	09/21/14	10/02/14
40103870031	BKT14ST8	ST8	Lead	<0.016	0.016	0.15	mg/kg	09/21/14	10/02/14
40103870031	BKT14ST8	ST8	Nickel	<0.020	0.020	0.15	mg/kg	09/21/14	10/02/14
40103870031	BKT14ST8	ST8	Silver	0.12	0.0028	0.075	mg/kg	09/21/14	10/02/14
40103870031	BKT14ST8	ST8	Zinc	32.0	1.2	3.0	mg/kg	09/21/14	10/02/14
40103870032	BKT15ST8	ST8	Cadmium	0.044	0.012	0.16	mg/kg	09/21/14	10/02/14
40103870032	BKT15ST8	ST8	Copper	11.1	0.045	0.16	mg/kg	09/21/14	10/02/14
40103870032	BKT15ST8	ST8	Lead	<0.017	0.017	0.16	mg/kg	09/21/14	10/02/14
40103870032	BKT15ST8	ST8	Nickel	<0.021	0.021	0.16	mg/kg	09/21/14	10/02/14
40103870032	BKT15ST8	ST8	Silver	0.040	0.0029	0.078	mg/kg	09/21/14	10/02/14
40103870032	BKT15ST8	ST8	Zinc	35.2	1.3	3.1	mg/kg	09/21/14	10/02/14
40103870033	BKT16ST8	ST8	Cadmium	0.062	0.010	0.13	mg/kg	09/21/14	10/02/14
40103870033	BKT16ST8	ST8	Copper	3.5	0.038	0.13	mg/kg	09/21/14	10/02/14
40103870033	BKT16ST8	ST8	Lead	<0.014	0.014	0.13	mg/kg	09/21/14	10/02/14
40103870033	BKT16ST8	ST8	Nickel	<0.018	0.018	0.13	mg/kg	09/21/14	10/02/14
40103870033	BKT16ST8	ST8	Silver	0.027	0.0024	0.066	mg/kg	09/21/14	10/02/14
40103870033	BKT16ST8	ST8	Zinc	21.3	1.3	2.6	mg/kg	09/21/14	10/02/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST8, ST9, and ST10 – Sample stations within East Branch of the Salmon Trout River

Table 4-10. (continued). Metals Contents of Brook Trout (*Salvelinus fontinalis*) Livers - 2014 Laboratory Data.

Lab Sample Number	Field ID	Sample Station	Parameter	Result	MDL*	EQL**	Units***	Collection Date	Analysis Date
40103870033	BKT16ST8	ST8	Zinc	21.3	1.1	2.6	mg/kg	09/21/14	10/02/14
40103870034	BKT17ST8	ST8	Cadmium	0.017	0.016	0.20	mg/kg	09/21/14	10/02/14
40103870034	BKT17ST8	ST8	Copper	32.9	0.059	0.20	mg/kg	09/21/14	10/02/14
40103870034	BKT17ST8	ST8	Lead	<0.022	0.022	0.20	mg/kg	09/21/14	10/02/14
40103870034	BKT17ST8	ST8	Nickel	<0.027	0.027	0.20	mg/kg	09/21/14	10/02/14
40103870034	BKT17ST8	ST8	Silver	0.12	0.0038	0.10	mg/kg	09/21/14	10/02/14
40103870034	BKT17ST8	ST8	Zinc	40.5	1.6	4.1	mg/kg	09/21/14	10/02/14

***MDL = Minimum detection limit**
****EQL = Estimated quantification limit**
*****mg/kg = Milligrams per kilogram**
ST8 – Sample station within East Branch of the Salmon Trout River

EXHIBIT C

STATION PHOTOGRAPHS

Photograph C-1. Station 1 – Upstream Extent North View, September, 2014.

Photograph C-2. Station 1 - Downstream Extent View South, September, 2014.

Photograph C-3. Station 2 – Upstream Extent View North, September, 2014.

Photograph C-4. Station 2 – Downstream Extent View South, September, 2014.

Photograph C-5. Station 3 – Upstream Extent View North, September, 2014.

Photograph C-6. Station 3 –Downstream Extent View South, September, 2014.

Photograph C-7. Station 6 – Upstream Extent View Southwest, September, 2014.

Photograph C-8. Station 6 – Downstream Extent View Southwest, September, 2014.

Photograph C-9. Station 7 – Upstream Extent View North, September, 2014.

Photograph C-10. Station 7 – Downstream Extent View South, September, 2014.

Photograph C-11. Station 8 – Downstream Extent View South, September, 2014.

Photograph C-12. Station 8 – Upstream Extent View North, September, 2014.

Photograph C-13. Station 9 – Downstream Extent View Southwest, September, 2014.

Photograph C-14. Station 9 – Upstream Extent View Northeast, September, 2014.

Photograph C-15. Station 10 – Downstream Extent View Southwest, September, 2014.

Photograph C-16. Station 10 – Upstream Extent View Northeast, September, 2014.

Photograph C-17. Station 5 – Downstream Extent View West, September, 2014.

Photograph C-18. Station 5 – Upstream Extent View East, September, 2014.

EXHIBIT D

PHOTOGRAPHS OF BROOK TROUT (*Salvelinus fontinalis*) COLLECTED FOR METALS ANALYSES

Photograph D-1. Brook trout (*Salvelinus fontinalis*) # 1 collected from Station 5in the Yellow Dog River, September, 2014.

Photograph D-2. Brook trout (*Salvelinus fontinalis*) # 2 collected from Station 5 in the Yellow Dog River, September, 2014.

Photograph D-3. Brook trout (*Salvelinus fontinalis*) # 3 collected from Station 2 in the Salmon Trout River, September, 2014.

Photograph D-4. Brook trout (*Salvelinus fontinalis*) # 4 collected from Station 3 in the Salmon Trout River, September, 2014.

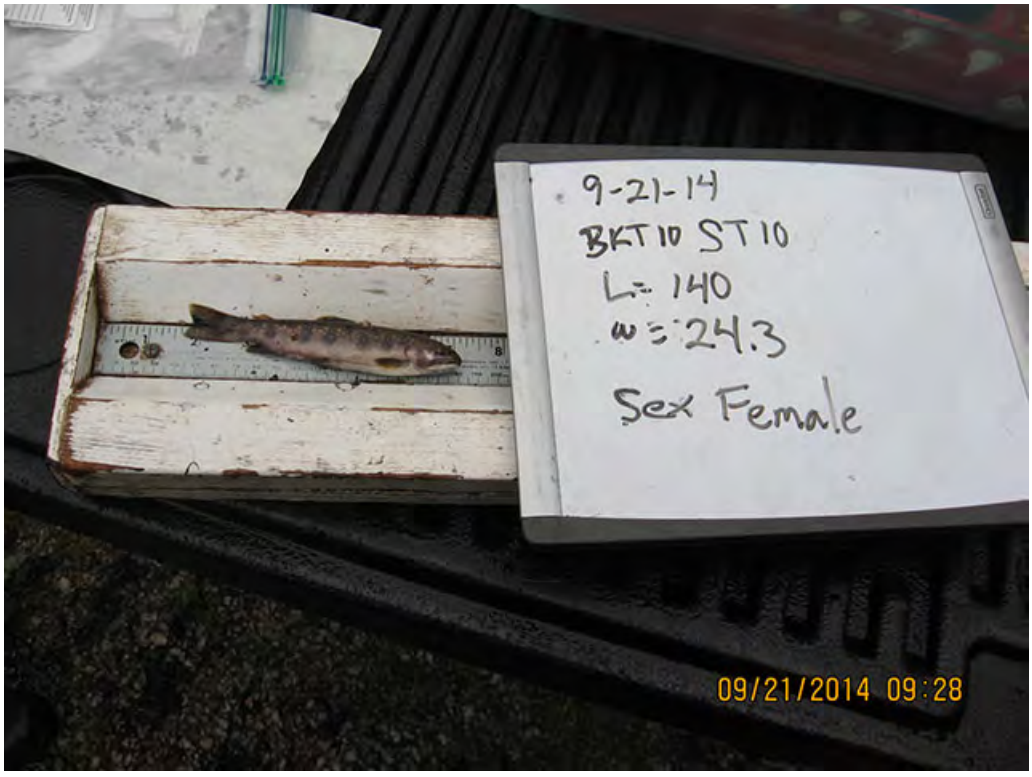
Photograph D-5. Brook trout (*Salvelinus fontinalis*) # 5 collected from Station 1 in the Salmon Trout River, September, 2014.

Photograph D-6. Brook trout (*Salvelinus fontinalis*) # 6 collected from Station 1 in the Salmon Trout River, September, 2014.

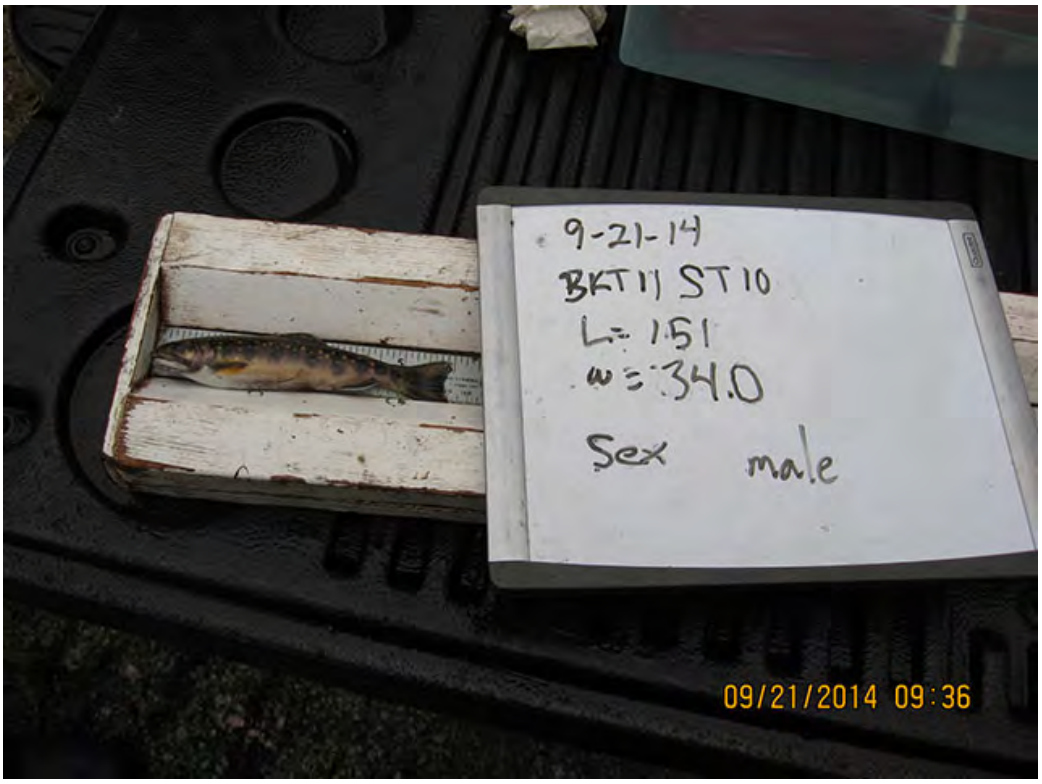
Photograph D-7. Brook trout (*Salvelinus fontinalis*) # 7 collected from Station 1 in the Salmon Trout River, September, 2014.

Photograph D-8. Brook trout (*Salvelinus fontinalis*) # 8 collected from Station 1 in the Salmon Trout River, September, 2014.

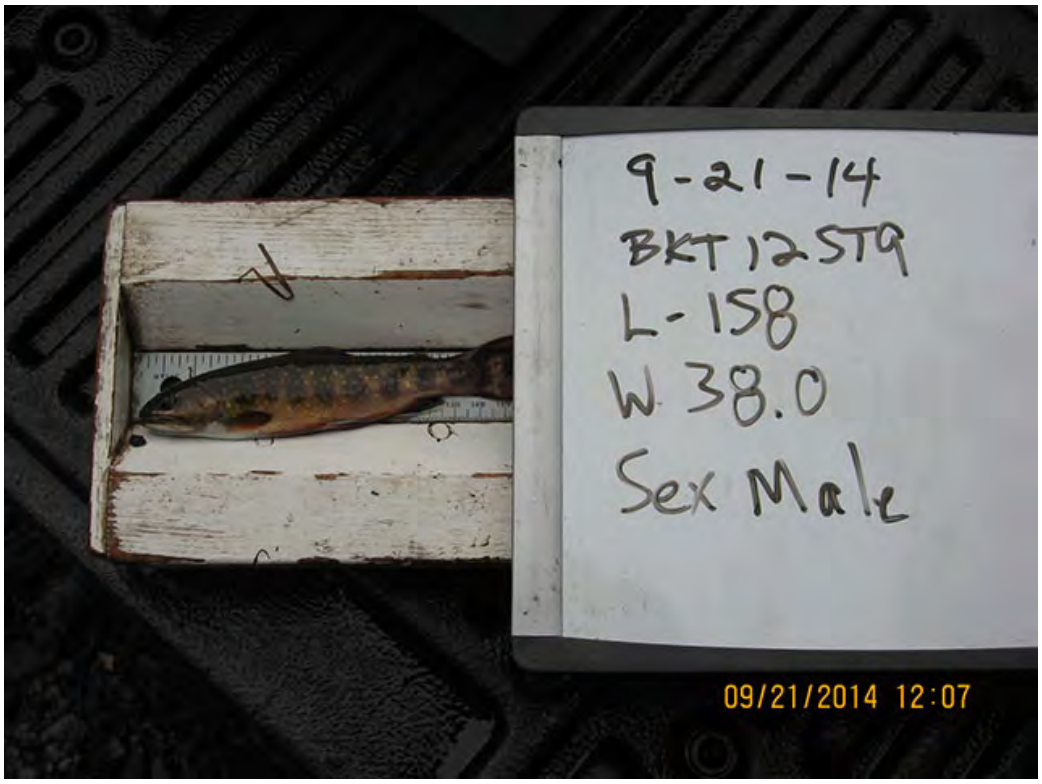
Photograph D-9. Brook trout (*Salvelinus fontinalis*) # 9 collected from Station 1 in the Salmon Trout River, September, 2014.



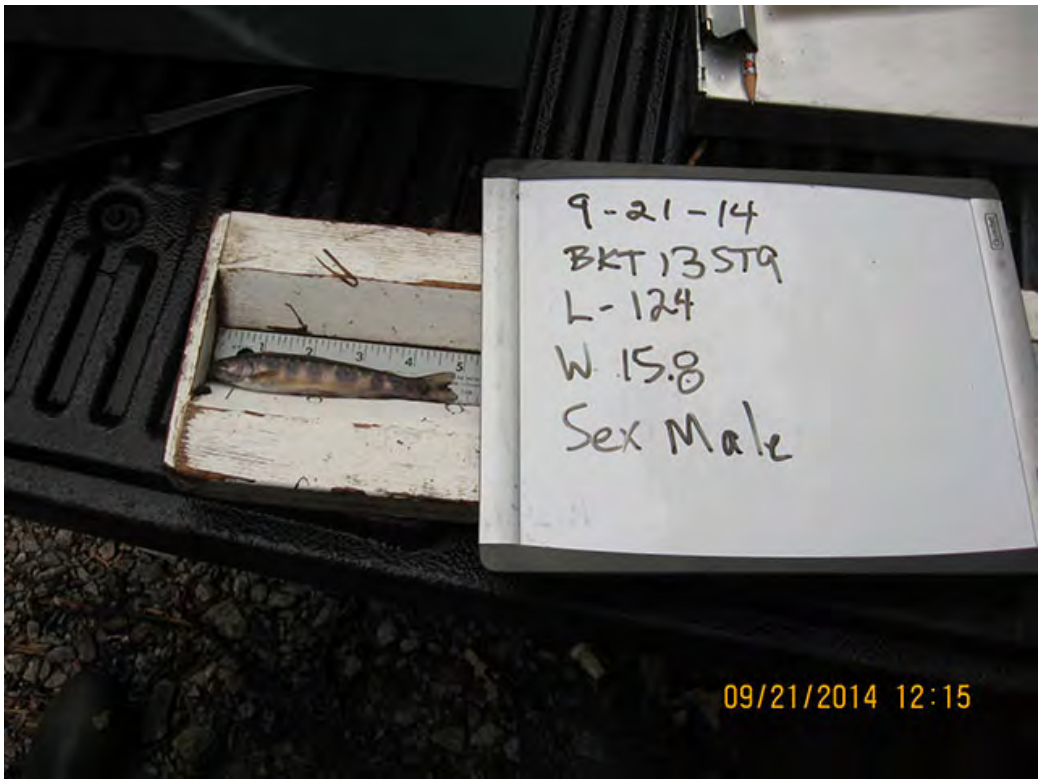
Photograph D-10. Brook trout (*Salvelinus fontinalis*) # 10 collected from Station 10 in the Salmon Trout River East Branch, September, 2014.



Photograph D-11. Brook trout (*Salvelinus fontinalis*) # 11 collected from Station 10 in the Salmon Trout River East Branch, September, 2014.



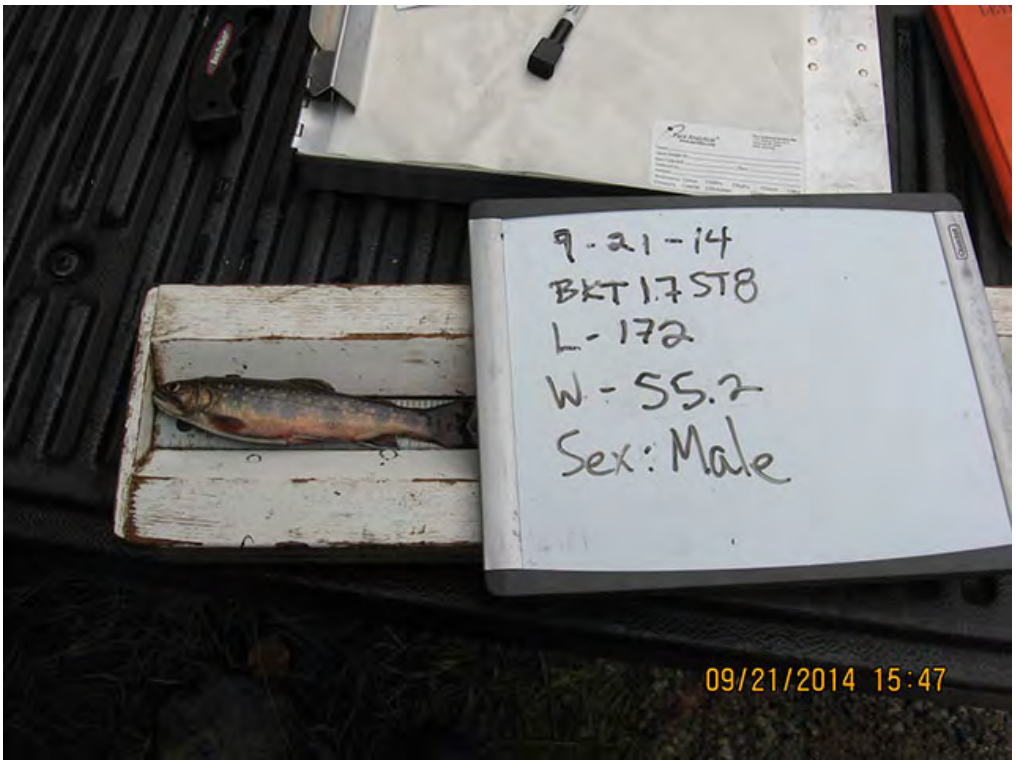
Photograph D-12. Brook trout (*Salvelinus fontinalis*) # 12 collected from Station 9 in the Salmon Trout River East Branch, September, 2014.



Photograph D-13. Brook trout (*Salvelinus fontinalis*) # 13 collected from Station 9 in the Salmon Trout River East Branch, September, 2014.

Photograph D-14. Brook trout (*Salvelinus fontinalis*) # 14 collected from Station 8 in the Salmon Trout River East Branch, September, 2014.

Photograph D-15. Brook trout (*Salvelinus fontinalis*) # 15 collected from Station 8 in the Salmon Trout River East Branch, September, 2014.



Photograph D-16. Brook trout (*Salvelinus fontinalis*) # 17 collected from Station 8 in the Salmon Trout River East Branch, September, 2014.

EXHIBIT E

CHAIN OF CUSTODY FORMS