EXHIBIT A-9

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Rite in the Rain®
ALL-WEATHER WRITING PAPER

ALL-WEATHER
ENVIRONMENTAL FIELD BOOK

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	Dall rock scrapings for this	
	team were conducted using the	
	rubber tubing	

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156 Maximum Concentration of Contaminants for the Toxicity Characteristic

2

Location IRW Date 4/9/07

Project / Client Intensive Sampling (Tahlequah)

CDM Staff: Kara McKenzie, Christopher Leitao, Arianne Neigh

Weather: 40s, partly cloudy

18:25 Begin calibration of In-Situ 9500

Cond 447 stabilized at 447 (Oakton 447 lot No. 2702547)

pH 4.01 stabilized at 4.01 (Oakton pH 4.01 lot No. 2702258)

pH 7.00 stabilized at 7.00 (Oakton pH 7.00 lot No 2702263

pH 10.00 stabilized at 10.00 (Oakton pH 10.00 lot No. 2703142)

turbidity, 10 NTU stabilized at 10 NTU (AMCO Clear lot No P678091)

DO, 100% calibrated with bubbler

0% stabilized at 0% (In-Situ DO Sodium Sulfite 2 molar lot No. 7BW-148-2)

19:07 End

3

Location Terrapin Creek Date 4/10/07

Project / Client Intensive Sampling (Tahlequah)

Weather: 51°F sprinkles

Staff: C. Leitao, A. Neigh, K. McKenzie

Project: Intensive River sampling for Illinois River Watershed near Tahlequah

7:15 Conducted health + safety tailgate meeting

Attendees:

A. Neigh

C. Leitao

K. McKenzie

7:20 packed up car

7:58 arrived at ~~RS-433~~ RS-443

parked along private side road

@ N 35° 39.302' W 094° 54.232' > in hdd° mm.mmm'

8:11 walked to map location

8:25 began flow and depth measurements at first transect

8:55 set-up In-Situ

9:15 photo #100-0772 upstream photo

9:22 photo #100-0773 facing downstream

9:24 turbidity was reading negative readings so re-calibrated

AN

4

Location Terrapin Creek Date 4/10/07

Project / Client OK Chicken Litigation

937 began rock scraping at downstream location

939 RS-443-041007-1 ~250mL

956 RS-443-041007-2 ~250mL

1005 RS-443-041007-3 ~250mL

1025 RS-443-041007-4 ~250mL

1030 RS-443-041007-5 ~250mL

1032 RS-443-041007-6 (composite)

10mL removed from 1-5 to composite

1035 turbidity still reading neg. so attempted to recalibrate w/ 10 NTU solution Lot# P678091 turbidity is reading stable

1040 Location selected for sampling
N 35.65454
W094.90328

1041 Water quality readings
pH: 8.606
cond.: 131.5 µS
DO: 22.07
Temp: 10.87°C
Turbidity: -27.1 NTU
can not get turbidity to read positive

AN

5

Location Terrapin Creek Date 4/10/07

Project / Client OK Chicken Litigation

1043 samples collected
RS-443-041007 chlorophyll A
RS-443-041007 includes
1x 125mL Phosphorus RS-443-041007
2x 40mL VOA for TOC RS-443-041007
AN

1052 collect benthic invert sample at downstream location
remove inverts from net

1115 collect second invert sample

1124 collect last invert sample and place all in bottle
RS-443-041007 inverts

1140 leave site

1215 return to hotel to recalibrate water quality meter
pH = 4.01 Lot# 2702258
7.00 Lot# 2702263
10.00 Lot# 2703142
conductivity = 84 µS Lot# 2702505
447 µS Lot# 2702547
turbidity = 0 NTU used bottled water would not calibrate

1400 called tech support to discuss turbidity

AN

Location Tahlequah Date 4/10/07
Project / Client OK Chicken Litigation

meter
could not resolve problem with turbidity on the phone with tech support. They recommend sending the turbidity meter in for maintenance. We will not record turbidity until the meter is replaced. Qualitative evaluations of water quality will be made from this point.

1543 arrive @ RS-518
park @ N 35.8551
W094.96078
find upstream of road crossing
1552 riffle @ N 35.85488
W094.9609
riffle approx. 30 feet long then 50 ft of pool then small 10 ft riffle
sample only 30 foot riffle
1602 collect water quality readings
pH = 5.71
RDO = 25.91
conductivity 235.3

KM

Location Tahlequah Date 4-10-07
Project / Client OK Chicken Litigation

Temp 12.7C
Turbidity 1.87 NTU
turbidity being taken with a new meter it is a 2100P Turbidimeter by Hach
Lot L3197 calibration @ 20 NTU = 19.8 NTU
Photos taken @ 1607
downstream # 100-0775
upstream # 100-0776
water samples collected
1609 RS-518-041007 X KM Phosphorous
1609 RS-518-041007 X TOC
1609 RS-518-041007 sestonic
1625 ~~1623~~ AW start rock scraping at downstream location and move upstream

1625	RS-518-041007-1	downstream
1627	RS-518-041007-2	↓
1735	RS-518-041007-3	
1739	RS-518-041007-4	
1744	RS-518-041007-5	upstream
1748	RS-518-041007-6 (composite)	

10mL taken out of 1-5, which were brought to 250mL

KM

8

Location Tahlequah Date 4-10-07

Project / Client

1748 collected benthic inverts from 3 locations + composited for ID

RS-518-041007 Benthics

9

Location Illinois Main Stem Date 4-11-07

Project / Client OK Chicken Litigation

Date: 4-11-07
Weather: sunny, chilly, 52°F
Team: A. Neigh
K. McKenzie
C. Leitao
Equipment: Troll 9500
Rugged Reader
2100P Turbidimeter

755 arrive @ RS-433
mainstem of Illinois River
river looks to be fairly deep here and may require modification of sampling profiles which will be detailed if appropriate

758 conducted Health + Safety Tailgate meeting

802 take photos of site
100-0777 facing downstream
100-0778 facing upstream

803 collect water quality readings
can't collect readings because battery died, need to recharge, sent Kara to get batteries

AMN

10

Location Illinois Main Stem Date 4-11-07

Project / Client OK Chicken Litigation

819 ~~collect water samples~~

RS-433-041107A AM	phosphorous
RS-433-041107K	TOC
RS-433-041107	seston chlorophyll

821 collect flow measurements since water is deep we start to collect measurements 1/4 way across stream start downstream

853 start scraping rocks from most downstream location

853	RS-433-041107-1	~250mL
905	RS-433-041107-2	~250mL
911	RS-433-041107-3	~250mL
925	RS-433-041107-4	~250mL
929	RS-433-041107-5	~250mL
931	RS-433-041107-6	(composite) ~50mL

took approximately 10mL from 1-5 + put into 6, add 12.5mL of formalin to make 2% formalin solution

932 Kara arrived with charged water quality meter so we can take water quality readings

AMK

Location Illinois Main Stem Date 4-11-07

Project / Client OK Chicken Litigation

11

water quality readings taken @ N 36.96397 W 94.88381

pH = 8.14

conductivity = 248.8 µS

turbidity = 2.08 NTU

RDO = 18.70 mg/L

Temp = 12.16

941 collected benthic inverts from 3 locations in riffle + composited starting w/ downstream location

RS-433-041107 benthics

1024 left site + ice samples

1059 arrive @ RS-604

parking coordinates N 36.07901 W 94.82439

1109 take photos of river 100-779 downstream 100-780 upstream + water quality

riffle is downstream of crossing approx. 60 feet in length

AMN

12

Location _____ Date 4-11-07

Project / Client OK Chicken Litigation

1111 collect water quality readings
pH = ~~4.34~~ AW 8.22
conductivity = ~~109.6~~ AW µS 110.3 µS
Temp = ~~12.55~~ AW °C 12.55 °C
turbidity =
RDO = ~~21.26~~ AW mg/L 21.35
water quality readings taken
at N 36.07974
W 94.82425

1114 collected water samples

RS-604-041107 A	TOC
RS-604-041107A AW	phosphorous
RS-604-041107	chlorophyll

1122 collected rocks for scraping

1122	RS-604-041107-1	~250mL
1134	RS-604-041107-2	~250mL
1143	RS-604-041107-3	~250mL
1147	RS-604-041107-4	~250mL
1153	RS-604-041107-5	~250mL
1155	RS-604-041107-6	(composite)

took approximately 25mL from 1-5 & put in 6 preserved w/ formalin

1156 collected flow measurements
AMN

Location Tyner Creek Date 4-11-07

Project / Client OK Chicken Litigation

13

1215 collected benthic inverts from 3 locations with kick seine, samples were composited
RS-604-041107 benthics
we also collected stone case caddisflys off rocks & included in benthics since many of these were attached to substrate & kick net was likely to underrepresent the populations

1245 leave site + ice samples

1321 arrive @ ~~RS-544~~ AW ~~544~~ ~~RS-548~~
RS-548 is downstream of road crossing, there are cows in the stream just on the other side of the bridge, there is a chicken house downstream

1322 take site photos
100-0781 downstream
100-0782 upstream

1336 take water quality readings
AMN

14

Location Tyner Creek Date 4-11-07
Project / Client OK Chicken Litigation

1336 water quality
pH = 7.89
conductivity = 171.2 uS
turbidity = 0.67 NTU
Temp = 14.95°C
RDO = 22.49

1338 collect water samples
RS-548-041107A TOC
RS-548-041107A^N phosphorous
RS-548-041107 chlorophyll

1341 collect flow measurement at 5 transects starting upstream

1352 collect rocks for scraping starting upstream

1352 RS-548-041107-1 upstream ~250mL
1411 RS-548-041107-2 ~250mL
1423 RS-548-041107-3 ~250mL
1429 RS-548-041107-4 ~250mL
1442 RS-548-041107-5 downstream ~250mL
1444 RS-548-041107-6 composite.

all samples brought to approximately 250mL with distilled water
composite taken by removing AMN

Location Tyner Creek Date 4-11-07

Project / Client OK Chicken Litigation

25mL from 1-5 & using for 6, added mL of 10% formalin to make a 2% solution

1416 collected benthics from 3 locations starting downstream
benthics placed in isopropyl alcohol preservative RS-548-041107
- forgot to note the sampling location
N 36.02812
W 094.782525

1512 leave site

1521 arrive @ RS-541
located at the junction of two streams one parallel to road & one crossing road
we are downstream from road
parked at N 36.03395
W 094.72677

1524 take water quality measurements @
N 36.03374
W 094.72685

AMN

16

Location _____ Date 4-11-07

Project / Client OK Chicken Litigation

1524 water quality measurements
pH = 7.35
conductivity = 158.4 uS
Temp = 12.05
Turbidity = 0.50
RDO = 17.92

1526 take water samples

RS-541-041107A	TOC
RS-541-041107	phosphorous
RS-541-041107	chlorophyll

1528 take photos
100-0783 downstream
100-0784 upstream
100-0785 Kara take flow measurements

1530 take flow measurements starting downstream

1542 collect rocks for scraping starting upstream

1542	RS-541-041107-1	~250mL upstream
1551	RS-541-041107-2	~250mL
1554	RS-541-041107-3	~250mL
1601	RS-541-041107-4	~250mL
1607	RS-541-041107-5	~250mL downstream

AUN

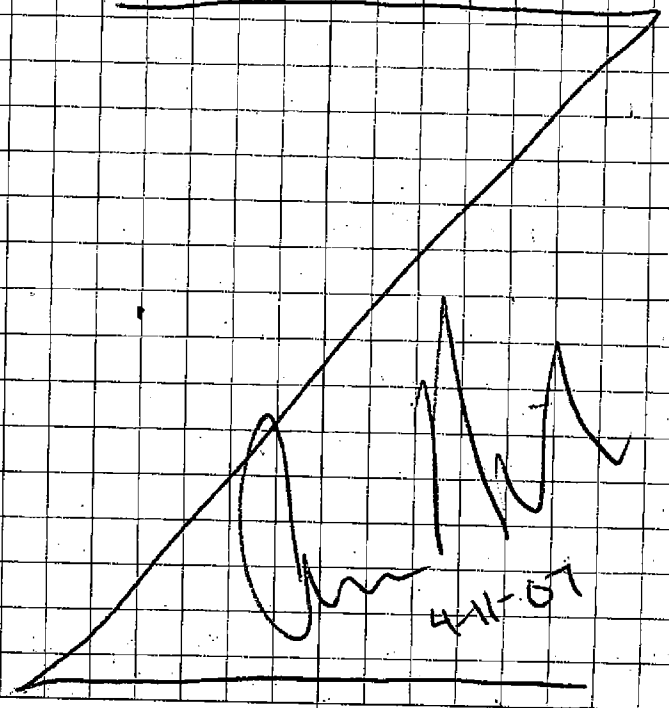
Location _____ Date 4-11-07

17

Project / Client OK Chicken Litigation

1609 RS-541-041107-6 (composite)
25mL from 1-5 taken & put in 6 to make composite, add mL of formalin to make 2% solution

1610 collect benthic inverts from 3 locations starting downstream & composite preserve in isopropyl alcohol



12

18 Location Bidding Creek Date 4-12-07
Project / Client OK Chicken Project

Date: 4-12-07
Weather: clear 45°F
Team: C. Leitao
K. McKenzie
A. Neigh
Equipment: Troll 9500
Rugged Reader
2100P Turbidimeter
705 Health + Safety Tailgate
750 arrive @ RS-706
it is downstream from over road crossing
only went to fenceline since private property
753 take photos of site
100-0786 downstream
100-0787 upstream
754 take water quality readings
pH = 7.65
conductivity = 157.5 uS
Temp = 11.80°C
Turbidity = 1.5 NTU
RDO = 16.31 mg/L
801 take water samples from location

Location Bidding Creek Date 4-12-07 19
Project / Client OK Chicken Project

N 35.85609
W 094.78124
801 sample is ~~RS-6~~
RS-706-041207 for TOC + chlorophyll +
RS-706-041207A for phosphorous
0812 collect rocks for scraping at downstream transect + moving upstream
samples collected
RS-706-041207-1 downstream
RS-706-041207-2
RS-706-041207-3
RS-706-041207-4
RS-706-041207-5
RS-706-041207-6 upstream (composite)
brought all these w/the exception of 6 to 250mL w/distilled H_2O
6 is a composite of 25mL of each of 1-5 + then add 53.5mL of formalin to 6

20 Location Bidding Creek Date 4-12-07
Project / Client OK Chicken Litigation

0824 collect flow measurements starting downstream
had to stop at a barbed wire fence because we did not want to cross on private property. Fenceline was approximate downstream end of riffle. There was a run for about 40ft & then another 15ft riffle on the other side of the fence but these were not measured
0836 collected benthic inverts from 3 transect locations & composited starting downstream. We are no longer spending time to pick bugs in the field we picked bugs off of large debris & then rinsed the rest into the jar. This method seemed to get all of the inverts off the net. the AMN

Location Bidding Creek Date 4-12-07 21
Project / Client OK Chicken Project

Sample [RS-~~700~~ AN 706-041207]
was then preserved with isopropyl alcohol
all sample put on ice
925 leave site
936 arrive @ RS-704
location is downstream of a road crossing that land owner drives through stream, no sedimentation or turbidity through
938 take photos of the site
100-0788 downstream
100-0789 upstream
0940 take water quality readings
@ N 36.84153
W 94.77252
pH = 7.70
turbidity = 0.62 NTU
Temp = 12.44°C
RDO = 18.46 mg/L
conductivity = 205.7 uS
942 take water samples
RS-704-041207A phosphorous
RS-704-041207 TOC + chlorophyll
same location as readings AMN

22 Location Bidding Creek Date 4-12-07
Project / Client OK Chicken Project

1009 collect rocks for scraping starting with the downstream location

RS-704-041207-1	downstream
RS-704-041207-2	↓
RS-704-041207-3	
RS-704-041207-4	
RS-704-041207-5	upstream
RS-704-041207-6	(composite)

all samples taken to 250mL & then 25mL removed from 1-5 & used to composite for 6 added 53 mL of formalin to 6

1022 take flow readings starting at downstream location - after the 1st transect of flow readings were reading in m/s instead of ft/s. we only had this happen at this site & can't get the readings to change back to ft/s, so all readings at this location are in m/s. Depth is still in ft/s

AMW

23 Location Bidding Creek Date 4-12-07
Project / Client OK Chicken Project

1630 collect benthic invertebrate samples starting at downstream location in kick seine

RS-704-041207 benthics

1052 leave site

1131 arrive @ site RS-728

site is downstream of flow over road crossing, lots of snails & cladophora & snails

1132 take photos of site

100-0790 downstream
100-0791 upstream

1144 take water quality readings @ N 35.83242
W 94.64858

pH = 8.23
turbidity = 2.21
conductivity = 267.7 uS
Temp = 13.12 °C
RDO = 21.96 mg/L

1146 take water samples @ same location as readings

RS-728-041207A	phosphorous
RS-728-041207	TOC + chlorophyll

AMW

24 Location Caney Creek Date 4-12-07
Project / Client OK Chicken Litigation

1154 collect flow measurements starting at downstream transect
1208 collect rocks for scraping starting @ downstream location

RS-728-041207-1	downstream
RS-728-041207-2	
RS-728-041207-3	
RS-728-041207-4	
RS-728-041207-5	upstream
RS-728-041207-6	composite

bring each sample up to 250mL
remove 25mL for composite from each + preserve composite w/ 53mL formalin
1225 collect benthic inverts at 3 locations starting downstream

RS-728-041207	benthics

other site photos
100-0792 scraping rocks
100-0793 for benthic chlorophyll

AMM

Location Peavine Creek Date 4-12-07
Project / Client OK Chicken Litigation

1325 leave site
1421 arrive at RS-657 riffle located downstream from road crossing
1422 take photos of site
100-0794 downstream
100-0795 upstream
1424 take water quality sample @ N 35.89410 W 94.62915
pH = 7.59
turbidity = 5.68
conductivity = 209.4 uS
Temp = 13.54°C
RDO = 13.85 mg/L
1426 take water samples

RS-657-041207A	phosphorous
RS-657-041207	TOC + chlorophyll

1429 collect rocks for scraping starting at the downstream transect

RS-657-041207-1
RS-657-041207-2
RS-657-041207-3

AMM

Location Peavine Creek Date 4-12-07

Project / Client OK Chicken Litigation

RS-657-041207-4
RS-657-041207-5 upstream
RS-657-041207-6 composite

took 25mL from 1-5 & used to make composite then add 53mL to composite 1-5 are diluted to 250mL before taking the aliquot for the composite

1445 take flow measurements starting downstream

1501 collect benthic inverts at 3 locations starting downstream

RS-657-041207

1545 leave site

1620 arrive @ RS-682

this site is downstream of road at a short riffle, river bed is large, gravel w/meandering channels

1626 take photos @ site

100-0796 upstream

100-0797 downstream

AMM

Location Baron Fork Date 4-12-07

Project / Client OK Chicken Litigation

1634 take water quality readings @ N 35.90892 W 94.56333

pH = 8.12

turbidity = 0.52 NTU

conductivity = 104.7

RDO = 20.45

Temp. = 15.27

1636 take water samples

RS-682-041207A phosphorous

RS-682-041207 TOC + chlorophyll

collect rocks for scraping starting @ downstream transect

RS-682-041207-1 downstream
RS-682-041207-2
RS-682-041207-3
RS-682-041207-4
RS-682-041207-5 upstream
RS-682-041207-6 composite

25mL aliquot of 1-5 used to make composite, then add 53mL of formalin to 6

collect flow measurements starting downstream

AMM

28

Location Baron Fork Date 4-12-07

Project / Client OK Chicken Litigation

1710 collect benthic inverts from 3 locations starting w/ downstream location [RS-682-041207]

1730 leave site

AMN

Location Tahlequah Creek Date 4-13-07

Project / Client OK Chicken Litigation

29

Date: 4-13-07

Weather: cloudy, potential t-storms, 51°F

Team: C. Leitao
K. McKenzie
A. Neigh

Equipment: Troll 9500
Rugged Reader
2100P Turbidimeter

740 conduct Health + Safety Tailgate

757 arrive @ RS-630

site is located in a park, it is between two streets

0808 calibrate the Troll 9500 starting with pH

pH 4.01 stable Lot# 2702258
7.00 stable Lot# 2702263
10.00 stable Lot# 2703142

conductivity
447 uS Lot# 2702547

Turbidity - calibrated w/ 0, 1, 20, 100, 200, & 800 NTU standards

Also RDO w/ bubbler → Na_2SO_3 Lot# 7845-748-Z

0820 collect water quality samples @

AMN

Location Tahlequah Creek Date 4-13-07
Project / Client OK Chicken Litigation

N 35.91402
W 94.96832
pH = 8.05
turbidity = 2.12 NTU
conductivity = 119.1 uS
Temp = 13.39°C
RDO = 17.92 mg/L

RS-630-041307A	phosphorous
RS-630-041307	TOC + chlorophyll

829 collect flow measurement readings starting downstream
808 take photos of site
100-0798
100-0799
854 it started raining + lightning so we stopped the field effort + will go back to the site when it stops raining
1305 rain lightens up + we arrive back at the site to sample, water has gray cloudiness but the flow does not seem significantly increased

Location Tahlequah Creek Date 4-13-07
Project / Client OK Chicken Litigation

1310 collect rocks for scraping starting at downstream location

RS-630-041307-1	downstream
RS-630-041307-2	↓
RS-630-041307-3	
RS-630-041307-4	
RS-630-041307-5	
RS-630-041307-6	upstream

removed 25mL from 1-5 + used to composite for 6 then added 31mL to make 2% formalin solution
1340 collect benthic inverts from 3 locations starting at downstream location

RS-630-041307	benthics

1435 leave site

4-13-07

32

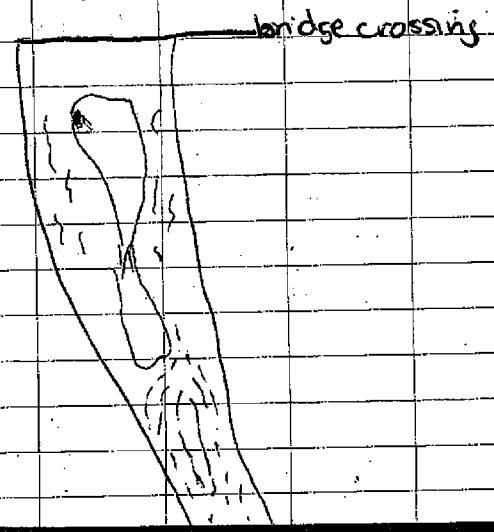
AN Location ~~Peanne~~ Peacheater Creek Date 4-15-07

Project / Client OK Chicken Litigation

Date: 4-15-07
Weather: sunny, 55°F
Team: C. Leitao, K. McKenzie, A. Neigh
Equipment: Troll 9500
2100P Turbidimeter
Rugged Reader

815 Health + Safety Tailgate
910 arrive @ BS-208
site is downstream of bridge with several diverging + merging channels, gravel bottom

upstream



AMN

33

AN Location X-Peacheater Creek Date 4-15-07

Project / Client OK Chicken Litigation

976 water quality meter needs to be charged so have to wait for the charger to be delivered
931 water quality samples collected
AN ~~BS~~ BS-208-041507A phosphorous
BS-208-041507 TOC + chlorophyll
932 take photos of site
100-0803 upstream
100-0804 downstream
951 collect rocks for scraping starting downstream

BS-208-041507-1	downstream
BS-208-041507-2	↓
BS-208-041507-3	
BS-208-041507-4	
BS-208-041507-5	upstream
BS-208-041507-6	composite

all samples (1-5) brought up to 250 ml w/distilled water
the 25 ml removed + used to composite (6) then add 3 ml of formalin

AMN

Location Peacheater Creek Date 4-15-07

Project / Client OK Chicken Litigation

- since there was rain on 4-13-05 we confirmed with the weekly teams regarding scouring & condition of the stream, rocks do not appear to be overturned, some floating algae still present in river, weekly teams will confirm later in the day

1045 water quality meter is charged & we can collect samples @ N 35.97301 W 94.67706

pH =
turbidity = 0.69 NTU
conductivity =
Temp =
DO =

- the water quality meter died again & we can't collect readings, will have to buy batteries & read later

AMK

Location Shell Branch Date 4-15-07

Project / Client OK Chicken Litigation

1111 Collect benthic invert samples starting downstream & moving upstream at 3 locations

1124 leave site

1136 arrive @ site BS-793 site is located at the confluence of two branches. The site has a number of dead animals in the stream & the smell is strong. The northern branch has a cloudy appearance. I spoke with a land owner across the street Danny Curtis, who stated that people often dump dead cattle & dogs in the area. He also stated that the southern branch passing through his property starts at fields where manure is spread & then a spring on his property joins it. The north branch follows the edge of the railroad tracks & comes

AMK

36 Location Shell Branch Date 4-15-07
Project / Client OK Chicken Litigation

from a sewage treatment pond about 1/4 mile upstream. He says they have problems year round with the north branch because of algae, odor. This site has the most odor + algae of the ones that we have visited so far. This card is below + he says that he would like to help however possible.

1201 take photos
100-0805 downstream
100-0806 upstream

1220 take water samples from N 35.95766
W 94.57486
~~RS-793-0415-0~~ AW
RS-793-041507A phosphorous AW
RS-793-041507 TOC+chlorophyll
water quality readings
pH = 8.55
conductivity = 290.4 uS
Turbidity = 2.61 NTU AMH

Location Shell Branch Date 4-15-07 37
Project / Client OK Chicken Litigation

RDO = 9.71 mg/L
Temp = 12.67
this sample is collected on the south branch of shell branch before the confluence. We threw out the water samples because we were told to collect samples after the confluence.

1308 Samples recollected from
N 35.95758
W 94.57507
RS-793-041507A phosphorous
RS-793-041507 TOC+chlorophyll
recollect water quality readings from below confluence at coordinates above
pH = 7.77
Turbidity = 6.51 NTU
Temp = 14.45°C
RDO = 5.83 mg/L
conductivity = 299.1 uS

1315 collect flow measurements starting downstream AMH

38

Location Shell Branch Date 4-15-06

Project / Client OK Chicken Litigation

1330 collect rocks for scraping starting at downstream location

RS-793-041507-1
RS-793-041507-2
RS-793-041507-3
RS-793-041507-4
RS-793-041507-5
RS-793-041507-6

downstream of confluence ↓ from south branch upstream of confluence composite

25mL taken from 1-5 which was brought up to 250mL, this was composited into 6, then 31mL of formalin was added.

1341 collect benthic inverts from 3 locations + composite RS-793-041507 benthics

1342 took additional photos
100-0807 rock after scraping
100-0808 algae & confluence
100-0809 confluence w/ diatoms
south Shell Branch on right & northern branch on left
100-0810 algae + diatoms on rocks

AMN

39

Location Baron Fork Tributary Date 4-15-06

Project / Client OK Chicken Litigation

100-0811 diatoms
1426 left site
1508 go back to RS-208 to collect water quality readings now that the meter is fun
pH = 7.70
Temp 15.20 °C
conductivity 136.3 uS
RDO = 7.56 mg/L
turbidity = 0.69 NTU
1510 leave site
1529 arrive at RS-1067
~~1530~~ 1534 take photos
100-0812 downstream
100-0813 upstream
stream is parallel to road
1548 take water quality readings @ N 35.972824 W 94.699956
pH = 8.28 Temp = 17.42
turbidity = 1.64 NTU
conductivity = 199.5
RDO = 7.89 mg/L

AMN

40

Location Baron Fork Tributary Date 4-15-07

Project / Client OK Chicken Litigation

1550 ~~collect water samples~~

RS-6667-041507A phosphorus

RS-6667-041507 TOC + chlorophyll

at same spot as water quality readings

1558 collect rocks for ~~water~~ AU scraping starting @ downstream location

RS-6667-041507-1 downstream

RS-6667-041507-2

RS-6667-041507-3

RS-6667-041507-4

RS-6667-041507-5 upstream

RS-6667-041507-6 composite

added distilled water to 250mL then removed 25mL & used for composite for 6, added 31mL of formalin to 6

1604 collect flow measurements starting downstream

1615 collect benthic invert samples from 3 locations starting downstream

1642 leave site AMN

41

Location Tahlequah Creek Date 4-16-07

Project / Client OK Chicken Litigation

Date: 4-16-07

Weather: high 72°F sunny

Team: C. Leitao

K. McKenzie

A. Neigh

Equipment: Troll 9500

Rugged Reader

2100P Turbidimeter

7:30 Calibrate water quality meter

pH 4.01 stable Lot# 27022258 AN

7.00 stable Lot# 27022683

10.00 stable Lot# 2703142

conductivity

447 uS stable Lot# 27027547

RDO - calibrate w/ bubbler + sodium sulfite Lot# 7BW-148-2

Turbidity - calibrated w/ 0.1, 20, 100, 200, & 800 NTU solution

747 conduct health + safety tailgate meeting

852 arrive @ RS-578 downstream of bridge, lots of algae growth, no scouring AMN

42

Location Tahlequah Creek Date 4-16-07
Project / Client OK Chicken Litigation

906 take water quality readings at
N 35.89247
W 94.95628
pH = 8.51
conductivity = 224.5 uS
Turbidity = 1.09 NTU
RDO = 10.35 mg/L
Temp = 10.55°C

907 take water sample @ same location
RS-578-041607A phosphorous
RS-578-041607 TOC + chlorophyll

917 collect rocks for scraping starting at downstream location
RS-578-041607-1 downstream
RS-578-041607-2
RS-578-041607-3
RS-578-041607-4
RS-578-041607-5 upstream
RS-578-041607-6 composite

samples 1-5 brought up to 250mL with distilled water, then 25mL removed to

AMN

Location Tahlequah Creek Date 4-16-07
Project / Client OK Chicken Litigation

43

composite, then add 31ml of formalin to 6.

921 take photos of site
100-0814 upstream
100-0815 downstream

922 collect flow measurements starting downstream

941 collect benthic inverts from 3 locations but substrate is mostly bedrock + unsuitable for inverts with the exception of snails
RS-578-041607 benthics

1037 leave site

1050 arrive @ BS-654 mainstem of Illinois River. fish bones + fish parts in water near sampling location
take photos of site
100-0816 downstream
100-0817 upstream

1112 collect water quality readings @ location

AMN

44

Location Illinois Main Stem Date 4-16-07

Project / Client OK Chicken Litigation

N 35.9167
W 94.92838

1115 take water samples @ same location

RS-654-041607A	phosphorous
RS-654-041607	TOC & chlorophyl

pH = 8.47
turbidity = 3.51
conductivity = 250.3 uS
Temp. = 13.98°C
RDO = 8.80 mg/L

1126 collect rocks for scraping starting at downstream location

RS-654-041607-1	downstream
RS-654-041607-2	
RS-654-041607-3	
RS-654-041607-4	
RS-654-041607-5	upstream
RS-654-041607-6	composite

added distilled water to 250mL then removed 25mL from 1-5 to make composite, add 31mL of formalin to the composite

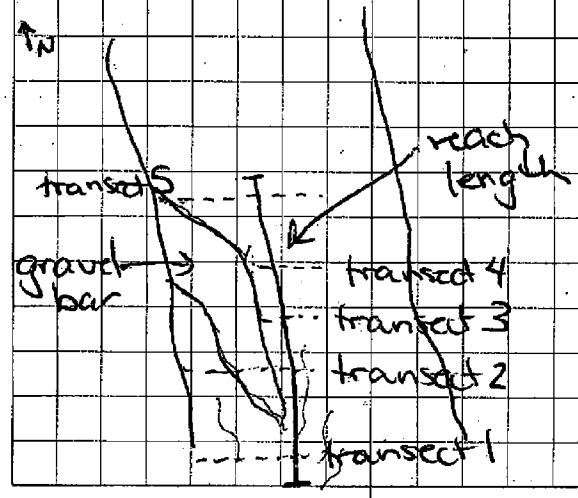
AMN

45

Location Illinois Main Stem Date 4-16-07

Project / Client OK Chicken Litigation

1141 collect flow measurements starting downstream this site doesn't really have a riffle. It is more of a run. We also could not collect flow measurements across the whole river because it is too deep so we can take measurements approximately 30% across river. See sketch of river below-



AMN

Location Baron Fork Date 4-16-05
Project / Client OK Chicken Litigation

1202 collect benthic inverts from 3 locations
RS-654-041607 benthics
1217 leave site
1309 arrive @ RS-649
mainstem of Baron Fork, river gets deep fairly quickly, so sample collected only about half across
1310 take photos of site
100-0818 downstream
100-0819 upstream
1315 take water quality readings @
N 35.86905
W 94.89778
pH = 8.50
turbidity = 1.82 NTU
conductivity = 183.9 uS
Temp = 15.98°C
RDO = 10.07 mg/L
1317 collect water samples from same location
RS-649-041607A phosphorous
RS-649-041607 TSS-chlorophyll
AMN

Location Baron Fork Date 4-16-07
Project / Client OK Chicken Litigation

1335 collect rocks for scraping starting downstream
RS-649-041607-1 downstream
RS-649-041607-2
RS-649-041607-3
RS-649-041607-4
RS-649-041607-5 upstream
RS-649-041607-6 composite
bring samples 1-5 up to 250ml w/distilled water, then remove 25ml from each to make composite, add 3mL to composite of formalin
1345 collect flow measurements starting @ downstream transect
1351 Rogers University arrives at the site w/2 van loads of students. They are going to electroshock fish at the site but downstream.
1407 collect benthic inverts at 3 locations starting downstream
RS-649-041607 benthics
AMN

Location Wall Trip Branch Date 4-16-07
Project / Client OK Chicken Litigation

1429 leave site
1451 arrive @ RS-6646
site is small stream upstream of road with short riffle + a longer run
1455 take photos of site
100-0820 downstream
100-0821 upstream
1459 take water quality readings
@ N 35.91387
W 94.83396
pH = ~~8.50~~ AW 7.44
Conductivity = ~~183.9 µS~~ AW 109.4 µS
turbidity = ~~1.82~~ AW 5.02 NTU
RDO = ~~10.07 mg/L~~ AW 7.35 mg/L
Temp = ~~15.98°C~~ AW 15.08°C
1501 take water samples @ same location
RS-6646-041607A phosphorus
RS-6646-041607 TOC + chlorophyll
1505 collect rocks for scraping from 5 transects starting at the downstream location

AMN

Location Wall Trip Branch Date ~~4-16-07~~ AW 4-16-07
Project / Client OK Chicken Litigation

RS-6646-041607-1 downstream
RS-6646-041607-2
RS-6646-041607-3
RS-6646-041607-4
RS-6646-041607-5 upstream
RS-6646-041607-6 composite
added distilled water until 250mL, removed 25mL aliquot from 1-5 for composite, added 31mL of formalin to 6
1531 collect flow measurements starting @ downstream location
1550 collect benthic inverts from 3 locations. site is highly sedimented + it is difficult to collect benthics
RS-6646-041607 benthics
1610 leave site
* when we were moving samples around we spilled RS-6649-041607-6. We removed 10% of the remaining samples 1-5 so 1-5 now have ~202.5 mL.

AMN

Location Wall Trip Branch Date 4-16-07
Project / Client OK Chicken Litigation

the composite was then remade w/ 22.5mL of 1-5 for a total of 112.5mL, then we added 25mL of formalin.

4-16-07

Location Evansville Creek Date 4-17-07
Project / Client OK Chicken Litigation

Date: 4-17-07
Weather: 66°F, chance of t-storms
Team: C. Leitao
K. McKenzie
A. Neigh
Equipment: Troll 9500
Rugged Reader
2100P Turbidmeter
705 Health & Safety Tailgate meeting
805 arrive @ RS-693
located upstream of crossing
water flowing fast, rocks near road crossing may be moved
810 take photos @ site
100-0822 downstream
100-0823 upstream
812 take water quality readings @
N 35.81222
W 94.5528
pH = 8.18
conductivity = 175.2 uS

AMN

52

Location Evansville Creek Date 4-17-07

Project / Client OK Chicken Litigation

Turbidity = 2.32 NTU
Temp = 12.79°C
RDO = 7.65 mg/L

814 take water samples at the same location

RS-693-041707A phosphorus
RS-693-041707 TOC + chlorophyll

816 collect rocks for scraping from 5 transects beginning downstream

RS-693-041707-1 downstream
RS-693-041707-2
RS-693-041707-3
RS-693-041707-4
RS-693-041707-5 upstream
RS-693-041707-6 composite

832 composite made by taking 25 mL from 1-5. these were brought to 250 mL w/ distilled water, the composite is 125 mL to which 31 mL of formalin was added

AMN

Location Evansville Creek Date 4-17-07

53

Project / Client OK Chicken Litigation

841 collect flow measurements starting at downstream transect

858 take more photos
100-0826 algae on rocks
100-0827 Chris holding the benthic net
100-0828 Kara + Chris doing the kick seine
100-0829 doing kick seine
100-0830 removing inverts from net

0858 collect benthic inverts from 3 locations beginning downstream

RS-693-041707 benthics

920 leave site

940 arrive @ RS-6916

small riffle located downstream of road, riffle is only about 10 feet long so we will do same of run take photos of site

AMN

Location Evansville Creek or Russel Branch Date 4-17-07
Project / Client OK Chicken Litigation

100-0832 downstream
100-0833 upstream
943 take water quality readings @
N 35.7972
W 94.55235
945 take measurements
pH = 8.30
conductivity = 160.2 uS
Temp = 12.32°C
Turbidity = 2.70 NTU
RDO = 8.49 mg/L
947 take water samples @ the same location

RS-696-041707A	phosphorous
RS-696-041707	TOC + chlorophyll

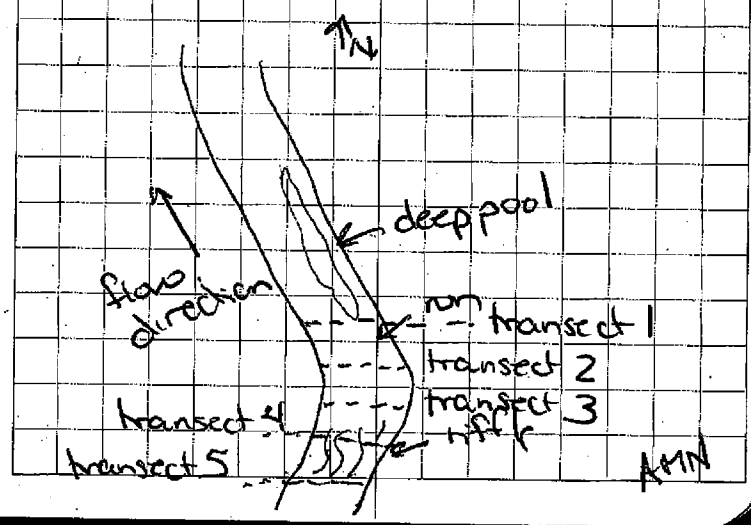
1001 collect rocks for scraping @ 5 transects starting downstream

RS-696-041707-1	downstream
RS-696-041707-2	
RS-696-041707-3	
RS-696-041707-4	
RS-696-041707-5	upstream

AMN

Location Evansville Creek or Russel Branch Date 4-17-07
Project / Client OK Chicken Litigation

RS-696-041707-6 composite
add distilled water to 1-5 to bring up to 250mL, then remove 25mL from each to make composite, add 31mL to composite of formalin
1015 collect flow measurements starting at downstream transect
1021 collect benthic inverts at 3 locations starting downstream
RS-696-041707 benthics
sketch of site:



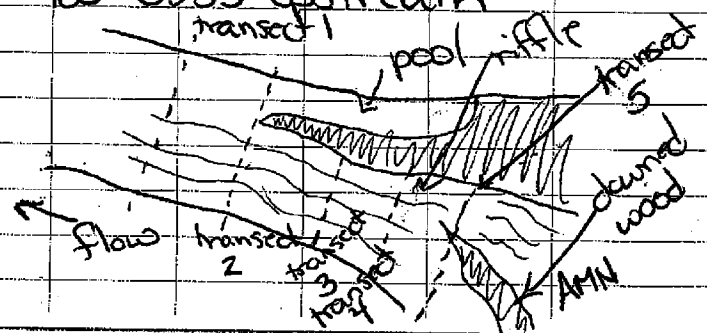
AMN

56

Location _____ Date 4-17-07

Project / Client OK Chicken Litigation

1048 leave site
1246 arrive @ RS-160 downstream from road crossing but road crossing is fairly far upstream
1248 take water quality readings
pH = 7.86
Temp = 14.51 °C
conductivity = 200.5 µS
RDO = 8.86 mg/L
Turbidity = 0.77
readings taken at
N 36.26183
W 94.42605
1250 take photos of site
100-0834 downstream
100-0835 upstream



57

Location _____ Date 4-17-07

Project / Client OK Chicken Litigation

1254 take water samples from same location as water quality readings
RS-160-041707A phosphorous
RS-160-041707
1309 collect rocks for scraping starting at downstream transect
~~1349 co~~
RS-160-041707-1 downstream
RS-160-041707-2
RS-160-041707-3
RS-160-041707-4
RS-160-041707-5 upstream
RS-160-041707-6 composite
samples 1-5 were brought up to 250ml w/distilled water, then 25mL was removed from each + used to make the composite, added 31mL of formalin to composite
1349 collect benthic inverts using kick seine at 3 locations starting AMN

58

Location

Date 4-17-07

Project / Client OK Chicken Litigation

at the downstream location
RS-160-041707 benthics
1422 leave site

4-17-07

Location

Date 4-18-07

59

Project / Client OK Chicken Litigation

This card is for the landowner across the street from site RS-793. We can contact him for any information.

[redacted]

Location Illinois Main Stem Date 4-20-07
Project / Client OK Chicken Litigation

Date: 4-20-07
Team C. Leitao
K McKenzie
A Krejcir
D. Jordan
Weather: 55°F, fair
630 calibrated in-situ in the hotel
pH - 4.01 stable Lot# 2702255
7.00 stable Lot# 2702263
10.00 stable Lot# 2703142
Conductivity
447 uS stable Lot# 2702547
RDO - calibrate w/bubbles + sodium sulfite Lot# 7B0-148-2
Turbidity - calibrated w/ 0.1, 100, 200, + 800 NTU standards
722 Health + Safety Tailgate meeting
Equipment: Troll 9500
2100P Turbidimeter
Ranger Reader
741 arrive @ RS-43
the site is downstream

Location Illinois Main Stem Date 4-20-07
Project / Client OK Chicken Litigation

of road crossing, a small channel is coming in upstream of the riffle, channel is fed by a field
802 collect water quality readings @
N 36.1350
W 94.35572
pH = 7.91
Turbidity = 3.55 NTU
Temp = 15.09°C
Conductivity = 257.0 uS
RDO = 5.46 mg/L
804 collect water samples @ same location
RS-43-042007A phosphorous
RS-43-042007 TOC + chlorophyll
815 collect flow measurements at 5 transects
818 take photos
100-1834 upstream
100-1835 downstream
823 collect macroinvertebrate samples starting at downstream location

Location Illinois Main Stem Date 4-20-07

Project / Client Ok Chicken Litigation

RS-43-042007-1 downstream
RS-43-042007-2
RS-43-042007-3
RS-43-042007-4
RS-43-042007-5 upstream
RS-43-042007-6 composite

add distilled water to #5 up to 250 mL then remove 25 mL from each to make the composite sample to go to lab

RS-43-042007

8:53 collect pending [illegible] at 3 locations w/ same scene

9:9 leave site

1000 arrive @ RS-7195430

located downstream of crossing site has high + fast flow, lots of algae growth and apparent scaring

1011 take water quality readings @

N 36.10657
W 94.53527
pH = 8.46
conductivity = 288.5 uS

AMN

Location Illinois Main Stem Date 4-20-07

Project / Client Ok Chicken Litigation

Temp = 16.12 °C
RDO = 7.74 mg/L
Turbidity = 3.37 NTU

1013 take water samples @ same location

RS-7195430-042007A phosphorous
RS-7195430-042007 chlorophyll

1015 take photos of site
100 - 1836 upstream
100 - 1837 downstream

1040 collect rocks for scraping starting at downstream transect

RS-7195430-042007-1 downstream
RS-7195430-042007-2
RS-7195430-042007-3
RS-7195430-042007-4
RS-7195430-042007-5 upstream
RS-7195430-042007-6 composite

add ~250 mL of distilled water (to bring up to 250 mL) to samples 1-5, then removed 25 mL from each to make the composite sample

Location Illinois Main Stem Date 4-20-07

Project / Client OK Chicken Litigation

added 31 mL of formalin to composite

1055 collected benthic invert from 3 locations beginning downstream

RS-719S430-042007 benthics

1115 took flow measurement readings

1432 go to the lab to filter chlorophyll samples

we took the chlorophyll samples + added 1 mL of $MgCO_3$ per 100 mL of sample. We then poured the sample, 100 mL at a time, onto the filter vacuum pump. Water was pulled through the filter paper (Millipore glass fibre prefilters) until the filters started to turn a little green or brown. The filters were removed, folded in half, wrapped in

AHH

Location

Date 4-20-07

Project / Client OK Chicken Litigation

aluminum foil + frozen

Notebook is being relinquished from Arianne Neigh to Kara McKenzie.

Relinquished by: 4-20-07 16:09

Relinquished to: 4-20-07 16:09

4-20-07

66

Location Little Lee Creek Date 4-22-07

Project / Client OK Chicken Litigation

Date: 4-22-07
Team: C. Leitao
K. McKenzie
Weather: 66°F sunny
7:05 Health and Safety Tailgate meeting
Equipment: Troll 9500
2100P Turbidimeter
Rugged Reader
8:38 Arrive @ RS-10003
location upstream of crossing site has mod. flow and is .13 miles from crossing
8:40 Rugged reader not working, taken back to car to change
9:04 Take water samples @
N ~~[illegible]~~ 35.6534
W 94.6084
RS-10003-042207A phosphorous
RS-10003-042207 Tot. Chlorophyll
9:10 take photos
100-1838 downstream
100-1839 upstream
9:12 collect water quality readings @ same location
pH = 4.50
Turbidity: 1.03 NTU

KM

67

Location Little Lee Creek Date 4-22-07

Project / Client OK Chicken Litigation

Temp = 11.43°C
Conductivity = 167.2 µS
DO = 8.00 mg/L
9:20 collect flow measurements at 5 transects
9:35 collect rocks for sampling starting at downstream location
RS-10003-042207-1 downstream
RS-10003-042207-2
RS-10003-042207-3
RS-10003-042207-4
RS-10003-042207-5 upstream
RS-10003-042207-6 com
add distilled water to 1-5 to bring total volume up to 250mL then remove 25mL from each into composite (6) and add 5mL of formalin
10:05 collected benthic inverts from 3 locations beginning downstream
RS-10003-042207-7 Benthics
11:00 label and pack samples in car
11:30 leave site

KM

Location Little Lee Creek Date 4-22-07

Project / Client OK Chicken Litigation

12:05 Arrive @ RS-10004, site is upstream of crossing

12:07 take water samples @

N 35.63202

W 94.5803

RS-10004-042207A phosphorus

RS-10004-042207 TOC, Chlorophyll

12:10 collect water quality readings @ same location

pH = 8.43

Turbidity = 2.98 NTU

Temp = 16.67 °C

Conductivity = 108.1 µS

RDO = 7.95 mg/L

12:12 take photos

100-1840 Downstream

100-1841 Upstream

12:16 take Flow measurements @ 5 transects

12:46 collect rocks for scraping starting at downstream location

RS-10004-042207-1 downstream

RS-10004-042207-2

RS-10004-042207-3

RS-10004-042207-4

RS-10004-042207-5 upstream

RS-10004-042207-6 com

KM

Location Little Lee Creek Date 4-22-07

Project / Client OK Chicken Litigation

add distilled water to 1-5 to bring total volume up to 250 mL, then remove 25 mL from each into composite (6) and add 3 mL of formalin

12:59 collected benthic inverts from 3 locations beginning downstream

RS-10004-042207 Benthics

13:32 label & pack samples for cost

13:41 leave site

15:30 arrive @ RS-392 N36.02356

15:06 take chlorophyll sample @ W94.47241

RS-392-042207 chlorophyll

15:17 leave site

16:07 arrive @ RS-772

16:09 take chlorophyll sample @ N 36.34488 W94.56904

RS-772-042207 Chlorophyll

16:27 arrive at lab in Siloam Springs to filter chlorophyll samples. We took the chlorophyll samples and added 1 mL of MgCO3 per 100 mL of sample. We poured the

KM

Location _____ Date 4-22-07

Project / Client OK Chicken Litigation

sample 100mL at a time onto the filter vacuum pump. Water was pulled through the filter paper (Millipore glass fibre prefilters) until the filters started to turn a little green. The filters were removed, folded in half, wrapped in aluminum foil and frozen

4-22-07

Location _____ Date _____

Project / Client _____