APPENDIX C

WATER QUALITY DATA SHEETS/RESULTS

June 10, 2004
Wet Weather Event

CHAIN OF CUSTODY RECORD

PROJ. NO	PROJECT NAME
200406.00	ECC - HEATON LAKE WMP

SAMPLERS: (Print Name & Sign)
ADIN M. McCANN

FIELD ID	DATE	TIME	COMP	GRAB	STATION LOCATION	Total No. of Con-tainers	Sample Type	TAT	Lab Order ID / Lab Number
01	6/10			X		3			
02	↓			↓		3			
03	↓			↓		3			
04	↓			↓		3			
05	↓			↓		3			
06	↓			↓		3			
DUP.	↓			↓	Dup of Site 1	3			
BLANK	↓			↓		3			

Relinquished By: (Signature)	Date	Time	Received By: (Signature)	EIS QUOTE NO:
[signature]	6/10/04	4:15PM	[signature]	
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Ship To:
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	

NOTES: 1) **If you were issued a quote number, it must appear on this document.**
2) **Instructions & area for comments are on reverse side.**

EIS ANALYTICAL SERVICES, INC. • 1701 NORTH IRONWOOD DRIVE SUITE B •SOUTH BEND IN 46635 • Phone (574)277–0707 • Fax (574)273–5699
Form: Chain–of–Custody (6–12–97)

INVENTORY CHECKLIST

Elkhart County – 205(j) Grant
Puterbaugh Creek – Heaton Lake Watershed Management Plan
Water Quality Monitoring Program

Item		Item is still in Possession (Y/N)	Functioning Properly? (Y/N)
		Y	
1.	D.O. Meter	Y	Y
2.	Hanna MultiMeter	Y	Y
3.	Calibration Records/Forms	Y	Y
4.	Custody/Sampling Forms	Y	Y
5.	Meter Tape	Y	Y
6.	Water Level Indicator	Y	Y
7.	Kemmerer Sampler	Y	Y
8.	EIS Sampling Bottles	Y	Y
9.	Sample Labels, etc.	Y	Y
10.	Rubber Bands	N/A	N/A
11.	DI Water (2 Gal.)		
12.	Ice Chest/Ice		
13.	Cellular Phone	Y	Y
14.	Rubber Gloves	Y	Y
15.	Paper Towels/Cloth Towels	Y	Y
16.	Life Jackets (if in boat)	N/A	N/A
17.	Clip Board	Y	Y
18.	Pens/Pencils (Sharpies)	Y	Y
19.	9 AA Size Batteries	Y	Y
20.	First Aid Kit	Y	Y
21.	LFA Safety Program	Y	Y
22.	Elkhart County 205(j) QAPP	Y	Y
23.	Elkhart County Road Map	Y	Y
24.	Puterbaugh Creek – Heaton Lake Watershed Map	Y	Y
25.	Sampling Site Pics/Descriptions	Y	Y
26.	Safety Glasses	Y	Y

Comments: _____

_____

_____

Date of Inventory: 6/10/04

Signature: _____

COMPLETE FORM WITH PERMANENT INK ONLY

Lawson-Fisher Associates P.C.
525 West Washington Avenue
South Bend, Indiana 46601
Ph. 574-234-3167
FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 6 / 10 / 2004

Time: hrs.

Crew: AMM, RME, KMB

Weather:

Ambient Temp.:

STREAM INFORMATION

Watershed ID: HUC# 04050001150040

Stream/Lake Name: Rhineheart Laterall

Site Location: #01 up stream

Width (ft.): 7.7

Depth (ft.): DTW = DTB = Water Depth = 1.6

GPS ID No.:

Location Sketch

C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 7.72

Temp (°C): 19.2

Cond. (µS): 373

TDS (ppm): 190

Color: light brown

D.O. (m): 6.97 (mg/L) 75.1 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): #01061004

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
KB			S. [illegible]	6/10/04	16:15
Signature			Signature		
Kimberly Boner	6/10/04	4:15 PM			
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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South Bend, Indiana 46601
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FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 6/10/2004
Time: 1445 hrs.

Crew: AMM, RME, KMB

Weather: overcast, light rain

Ambient Temp.: 21.7°

STREAM INFORMATION

Watershed ID: HUC#040500015 0040

Stream/Lake Name: Kindig / Kellog

Site Location: #02

Width (ft.): 22.2

Depth (ft.): DTW = DTB = Water Depth = 2.5

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 7.22

Temp (°C): 21.3

Cond. (µS): 210

TDS (ppm): 107

Color: rust / brown

D.O. (m): 1.35 (mg/L) 15.1 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): #02 6/10/04

Bottle Numbers:

Comments: East side CR 15, Downstream of confluence of Kindig & Kellog ditch.

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature: KB			Signature: S. [illegible]	6/10/04	16:45
Printed: Kimberly Boner	6/10/04	4:15PM	Printed:		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature:			Signature:		
Printed:			Printed:		

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South Bend, Indiana 46601
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FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 6/10/2004
Time: 1500 hrs.

Crew: AMM, RME, KMB

Weather: overcast

Ambient Temp.: 21.7°C

STREAM INFORMATION

Watershed ID: HUC# 04050001150040

Stream/Lake Name: ~~#03~~ Mather Ditch

Site Location: #03

Width (ft.): 15.8

Depth (ft.): DTW = DTB = Water Depth = 2.45

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.07

Temp (°C): 23.2

Cond. (µS): 388

TDS (ppm): 197

Color: clear

D.O. (m): 6.85 (mg/L) 74.6 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): #03 6/10/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
K. B			S. [illegible]	6/10/04	16:15
Signature			Signature		
Kimberly Boner	6/10/04	4:15PM			
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Date: 6/10/2004
Time: hrs.

Job Number: 200406

Crew: AMM, RME, KMB

Weather: overcast, light rain

Ambient Temp.: 21.7° C

STREAM INFORMATION

Watershed ID: HUC# 04050001150040

Stream/Lake Name: Bishop Ditch

Site Location: #04

Width (ft.): 18.1

Depth (ft.): DTW = DTB = Water Depth = 2.86

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 7.57

Temp (°C): 20.5

Cond. (µS): 361

TDS (ppm): 184

Color: light brown

D.O. (m): 3.88 (mg/L) 43.8 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): #04 6/10/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature:			Signature:	6-10-04	16:15
Printed: Kimberly Boner	6/10/04	4:15 PM	Printed:		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature:			Signature:		
Printed:			Printed:		

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FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant; Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 6/10/2004

Time: hrs.

Crew: AMM, RME, KMB

Weather: overcast

Ambient Temp.: 21.7°C

STREAM INFORMATION

Watershed ID: HUC# 04050001150040

Stream/Lake Name: Jacob Myers Ditch

Site Location: #05

Width (ft.): 33

Depth (ft.): DTW = DTB = Water Depth = 1.6

GPS ID No.:

Location Sketch

C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 7.97

Temp (°C): 21.5

Cond. (µS): 385

TDS (ppm): 196

Color: clear

D.O. (m): 7.01 (mg/L) 79.6 (%)

Sample Type: Kemmerer Grab

Sample Number(s): #05 6/10/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature	6-10-04	16:15
Printed: Kimberly Boner	6/10/04	4:15PM	Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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525 West Washington Avenue
South Bend, Indiana 46601
Ph. 574-234-3167
FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 6/10/200
Time: 15 hrs.

Crew: AMM, RME, KMB

Weather: overcast

Ambient Temp.: 21.7°C

STREAM INFORMATION

Watershed ID: HUC# 04050001150040

Stream/Lake Name: Puterbaugh Creek

Site Location: #06

Width (ft.): 24'

Depth (ft.): DTW = 12 DTB = 13.25 Water Depth = 1.25

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.08

Temp (°C): 21.2°

Cond. (µS): 396

TDS (ppm): 201

Color: clear

D.O. (m): 7.95 (mg/L) 89.2 (%)

Sample Type: Kemmerer Grab

Sample Number(s): #06 6/10/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature	6-10-04	16:15
Printed: Kimberly Bonner	6/10/04	4:15 PM	Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

Rev. 4/1/04

Hanna Multimeter Calibration

The following documents the calibration of the Lawson-Fisher Associates' Multimeter by EIS Analytical Laboratories, Inc.:

Date of Calibration 6-3-04 Barometric Pressure 745 mmHg

EIS' pH Meter:

Model Number: Accumet 915
Serial Number: R831

pH Reading 7.41 / 7.40
Sample Temperature 21.5 C°

EIS' Conductivity Meter:

Model Number: _____
Serial Number: _____

Specific Conductance _____

Lawson-Fisher Associates' Meter:

Manufacturer: Hanna
Model Name: HI 991300 Multimeter

pH Reading 21.8 7.41 / 7.63
Temperature Reading 21.8 C°
Conductivity Reading _____ µS
Total Dissolved Solids Reading _____ ppm

S. Tyma 6-3-04
EIS Representative Date

ANALYTICAL SERVICES, INC.

Dissolved Oxygen Meter Calibration

The following documents the calibration of the Lawson-Fisher Associates' dissolved oxygen meter by EIS

Date of Calibration 6-3-04 Barometric Pressure 745 mmHg

Ambient Temperature 22.5 C° Sample Temperature 22 C°

Winkler Titration Method:

Dissolved Oxygen Reading 7.9 mg/L

EIS' Dissolved Oxygen Meter:

Model Number: YSI RC
Serial Number: 5080
Probe Model: YSI 5905 BOD Probe

Dissolved Oxygen Reading 7.3 mg/L

Lawson-Fisher Associates' Meter:

Model Number: YSI 55
Serial Number: 95C31562

Dissolved Oxygen Reading 7.78 mg/L

S. Tazaro 6-3-04
EIS Representative Date

1701 North Ironwood Drive, Suite B • South Bend, Indiana 46635 • Phone: 574/277-0707 Fax: 574/273-5699

REPORT OF ANALYSIS

Adin M. McCann, P.E.
Lawson-Fisher Associates
525 West Washington Street
South Bend, IN 46601
Tel No: 234-3167
Fax No: 236-1330
PO No:
Project Name: **ECC - Heaton Lake WMP**

Report Date:	6/29/04
EIS Order No:	**040600131**
EIS Sample No:	096501
EIS Project No:	1091-1001-04
Client Sample ID:	**01**
Date Collected:	6/10/04
Date Received:	6/10/04
Collected By:	Client

This report presents results of analysis for your sample(s) received under our Order No above. This Number is to be used in all inquiries concerning this report. The EIS Sample No above, as well as your Sample ID, refer to the first sample in a multi-sample submission

DEFINITIONS:

MDL = Method Detection Limit normally achieved in the absence of interferences or other matrix difficulties.
RDL = Reporting Detection Limit achieved in your sample. If numerically greater than the MDL, dilutions were required in order to perform the analysis. If numerically less than the MDL, alternate techniques were employed.
nd = Not Detected at the RDL value. If present, result is less than this value.
< = Not Detected at the numerical value shown. If present, result is less than this value.
( ) = Result is estimated due to matrix interferences.

CHAIN-OF-CUSTODY is enclosed if received with your sample submission.

DRINKING WATER CERTIFICATIONS: Chemistry = C-71-02 Bacteriology = M-76-5

QUALITY ASSURANCE OFFICER

LABORATORY DIRECTOR

The data in this report has been reviewed and complies with EIS Quality Control unless specifically addressed above.

SAMPLE RESULTS

CLIENT SAMPLE ID: 01
CLIENT PROJECT: ECC - Heaton Lake WMP
SAMPLE TYPE: Water(Non DW)
Date Sampled: 6/10/04

Report Date: 6/29/04
EIS Sample No: 096501
EIS Order No: 040600131
Date Received: 6/10/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	11000	col/100ml	1	1	6/10/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	1.8	mg/L	0.1	0.1	6/18/04	E03	4500-N B
Nitrogen(Ammonia)	0.3	mg/L	0.05	0.05	6/21/04	E03	4500-NH3
Nitrogen(Nitrate)	2.5	mg/L	0.1	0.1	6/11/04	E21	4500-NO3
Phosphorus,ortho	<0.05	mg/L	0.05	0.05	6/11/04	E03	4500-P F
Phosphorus,Total	0.37	mg/L	0.05	0.05	6/18/04	E03	4500-P F
Solids,Total Suspended	35	mg/L	1	1	6/14/04	E21	2540 D
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	6/11/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 02
CLIENT PROJECT: ECC - Heaton Lake WMP
SAMPLE TYPE: Water(Non DW)
Date Sampled: 6/10/04

Report Date: 6/29/04
EIS Sample No: 096502
EIS Order No: 040600131
Date Received: 6/10/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	1360	col/100ml	1	1	6/10/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	1.6	mg/L	0.1	0.1	6/18/04	E03	4500-N B
Nitrogen(Ammonia)	0.2	mg/L	0.05	0.05	6/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	6/11/04	E21	4500-NO3
Phosphorus,ortho	<0.05	mg/L	0.05	0.05	6/11/04	E03	4500-P F
Phosphorus,Total	0.27	mg/L	0.05	0.05	6/18/04	E03	4500-P F
Solids,Total Suspended	6	mg/L	1	1	6/14/04	E21	2540 D
Surfactants (MBAS)	0.21	mg/L	0.1	0.1	6/11/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 03
CLIENT PROJECT: ECC - Heaton Lake WMP
SAMPLE TYPE: Water(Non DW)
Date Sampled: 6/10/04

Report Date: 6/29/04
EIS Sample No: 096503
EIS Order No: 040600131
Date Received: 6/10/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	280	col/100ml	1	1	6/10/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.49	mg/L	0.1	0.1	6/18/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	6/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	6/11/04	E21	4500-NO3
Phosphorus,ortho	<0.05	mg/L	0.05	0.05	6/11/04	E03	4500-P F
Phosphorus,Total	<0.05	mg/L	0.05	0.05	6/18/04	E03	4500-P F
Solids,Total Suspended	18	mg/L	1	1	6/14/04	E21	2540 D
Surfactants (MBAS)	0.20	mg/L	0.1	0.1	6/11/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 04
CLIENT PROJECT: ECC - Heaton Lake WMP
SAMPLE TYPE: Water(Non DW)
Date Sampled: 6/10/04

Report Date: 6/29/04
EIS Sample No: 096504
EIS Order No: 040600131
Date Received: 6/10/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	1640	col/100ml	1	1	6/10/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	1.3	mg/L	0.1	0.1	6/18/04	E03	4500-N B
Nitrogen(Ammonia)	0.3	mg/L	0.05	0.05	6/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	6/11/04	E21	4500-NO3
Phosphorus,ortho	<0.05	mg/L	0.05	0.05	6/11/04	E03	4500-P F
Phosphorus,Total	0.41	mg/L	0.05	0.05	6/18/04	E03	4500-P F
Solids,Total Suspended	5	mg/L	1	1	6/14/04	E21	2540 D
Surfactants (MBAS)	0.14	mg/L	0.1	0.1	6/11/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 05
CLIENT PROJECT: ECC - Heaton Lake WMP
SAMPLE TYPE: Water(Non DW)
Date Sampled: 6/10/04

Report Date: 6/29/04
EIS Sample No: 096505
EIS Order No: 040600131
Date Received: 6/10/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	360	col/100ml	1	1	6/10/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.99	mg/L	0.1	0.1	6/18/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	6/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	6/11/04	E21	4500-NO3
Phosphorus,ortho	<0.05	mg/L	0.05	0.05	6/11/04	E03	4500-P F
Phosphorus,Total	0.24	mg/L	0.05	0.05	6/18/04	E03	4500-P F
Solids,Total Suspended	8	mg/L	1	1	6/14/04	E21	2540 D
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	6/11/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 06
CLIENT PROJECT: ECC - Heaton Lake WMP
SAMPLE TYPE: Water(Non DW)
Date Sampled: 6/10/04

Report Date: 6/29/04
EIS Sample No: 096506
EIS Order No: 040600131
Date Received: 6/10/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	900	col/100ml	1	1	6/10/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	1.1	mg/L	0.1	0.1	6/18/04	E03	4500-N B
Nitrogen(Ammonia)	0.4	mg/L	0.05	0.05	6/21/04	E03	4500-NH3
Nitrogen(Nitrate)	0.12	mg/L	0.1	0.1	6/11/04	E21	4500-NO3
Phosphorus,ortho	<0.05	mg/L	0.05	0.05	6/11/04	E03	4500-P F
Phosphorus,Total	0.34	mg/L	0.05	0.05	6/18/04	E03	4500-P F
Solids,Total Suspended	2	mg/L	1	1	6/14/04	E21	2540 D
Surfactants (MBAS)	0.12	mg/L	0.1	0.1	6/11/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: Duplicate
CLIENT PROJECT: ECC - Heaton Lake WMP
SAMPLE TYPE: Water(Non DW)
Date Sampled: 6/10/04

Report Date: 6/29/04
EIS Sample No: 096507
EIS Order No: 040600131
Date Received: 6/10/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	22000	col/100ml	1	1	6/10/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	1.8	mg/L	0.1	0.1	6/18/04	E03	4500-N B
Nitrogen(Ammonia)	0.4	mg/L	0.05	0.05	6/21/04	E03	4500-NH3
Nitrogen(Nitrate)	2.5	mg/L	0.1	0.1	6/11/04	E21	4500-NO3
Phosphorus,ortho	<0.05	mg/L	0.05	0.05	6/11/04	E03	4500-P F
Phosphorus,Total	0.26	mg/L	0.05	0.05	6/18/04	E03	4500-P F
Solids,Total Suspended	32	mg/L	1	1	6/14/04	E21	2540 D
Surfactants (MBAS)	0.12	mg/L	0.1	0.1	6/11/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: Trip Blank
CLIENT PROJECT: ECC - Heaton Lake WMP
SAMPLE TYPE: Water(Non DW)
Date Sampled: 6/10/04

Report Date: 6/29/04
EIS Sample No: 096508
EIS Order No: 040600131
Date Received: 6/10/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	<1	col/100ml	1	1	6/10/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.72	mg/L	0.1	0.1	6/18/04	E03	4500-N B
Nitrogen(Ammonia)	0.2	mg/L	0.05	0.05	6/21/04	E03	4500-NH3
Nitrogen(Nitrate)	0.23	mg/L	0.1	0.1	6/11/04	E21	4500-NO3
Phosphorus,ortho	<0.05	mg/L	0.05	0.05	6/11/04	E03	4500-P F
Phosphorus,Total	<0.1	mg/L	0.05	0.05	6/18/04	E03	4500-P F
Solids,Total Suspended	<1	mg/L	1	1	6/14/04	E21	2540 D
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	6/11/04	E21	5540 C

QUALITY CONTROL DATA

LABORATORY FORTIFIED METHOD BLANK (LFB)

Matrix: Water

Test: Inorganics

Run Date:

EIS Lab #s With This LFB

96501-96508

Comments Concerning This LFB:

Parameter	Spike Amount	Matrix Spike Result	Matrix Spike % R	Duplicate Spike Result	Duplicate Spike % R	RPD	Quality Control Limits RPD LCL	Quality Control Limits RPD UCL	Quality Control Limits % R LCL	Quality Control Limits % R UCL	QC Batch
Nitrogen(Ammonia)	1.08	1.108	103	0.941	87	16	0	20	80	120	QB03634
Nitrogen(Kjeldahl)Total	2.4	2.358	98	2.289	95	3	0	20	80	120	QB03634
Nitrogen(Nitrate)	2.08	2.365	114	2.353	113	1	0	20	80	120	QB03634
Phosphorus,ortho	2.25	2.252	100	2.207	98	2	0	20	80	120	QB03634
Phosphorus,Total	4.84	4.558	94	4.468	92	2	0	20	80	120	QB03634

LEGEND:

1. The LFB may be either a single spike or in dulicate and may or may not be in a QC Batch with a MS/DMS.
2. % R = Percent Recovery of Spike
3. RPD = Relative Percent Difference of the spike recoveries
4. LCL = Lower Control Limit
5. UCL = Upper Control Limit
6. Units are normally those shown in the Analysis Report and are always the same for the Spike and Duplicate Spike

QUALITY CONTROL DATA

METHOD BLANK RESULTS

Test: Inorganics

Matrix: Water

EIS Lab Numbers: 96501-96508

Comments :

Parameter	Result	Units	Date Analyzed	QC Batch	Detection Limit
Nitrogen(Ammonia)	<0.05	mg/L	6/21/04	QB03634	0.05
Nitrogen(Kjeldahl)Total	<0.1	mg/L	6/18/04	QB03634	0.1
Nitrogen(Nitrate)	<0.1	mg/L	6/11/04	QB03634	0.1
Phosphorus,ortho	<0.05	mg/L	6/11/04	QB03634	0.05
Phosphorus,Total	<0.1	mg/L	6/18/04	QB03634	0.05

QUALITY CONTROL DATA

MATRIX SPIKE / DUPLICATE MATRIX SPIKE (MS/DMS)

EIS Order: 040600131
QC Sample: 096507
Matrix: Water
Test: Inorganics

EIS Lab #s in This Batch: 96501-96508

Comments Concerning This QC Batch:

Parameter	Back-ground	Spike Amount	Matrix Spike		Duplicate Spike		RPD	Quality Control Limits RPD		Quality Control Limits % R		QC Batch
			Result	% R	Result	% R		LCL	UCL	LCL	UCL	
Nitrogen(Ammonia)	0.4	10	10.535	101	10.592	102	1	0	20	75	125	QB03634
Nitrogen(Kjeldahl)Total	1.8	5	6.944	103	7.122	106	3	0	20	75	125	QB03634
Nitrogen(Nitrate)	2.5	5	8.334	117	8.142	113	3	0	20	75	125	QB03634
Phosphorus,ortho	<0.05	2	1.777	89	1.753	88	1	0	20	75	125	QB03634
Phosphorus,Total	0.26	2	1.932	84	2.462	110	27	0	20	75	125	QB03634

LEGEND:

1. Background = Sample Result
2. Spike amount may be adjusted for dilution used in sample analysis
3. % R = Percent Recovery of Spike
4. RPD = Relative Percent Difference of the spike recoveries
5. LCL = Lower Control Limit
6. UCL = Upper Control Limit
7. Units are normally those shown in the Analysis Report and are always the same for the Background and Spike

QUALITY CONTROL DATA

REPLICATE ANALYSIS - SEPARATE DIGESTIONS / EXTRACTIONS

EIS Order: 040600131
QC Sample: 096507
Matrix: Water

Comments Concerning This Analysis:

Parameter	Units	Original Analysis	Replicate Analysis	RPD	Advisory QC Limits	QC Batch
Coliform,E.Coli	col/100ml	22000			0 - 20	QB03634
Nitrogen(Ammonia)	mg/L	0.4	0.4	0.0	0 - 20	QB03634
Nitrogen(Kjeldahl)Total	mg/L	1.8	1.9	5.4	0 - 20	QB03634
Nitrogen(Nitrate)	mg/L	2.5	2.6	3.9	0 - 20	QB03634
Phosphorus,ortho	mg/L	<0.05	<0.05	0.0	0 - 20	QB03634
Phosphorus,Total	mg/L	0.26	0.28	7.4	0 - 20	QB03634
Solids,Total Suspended	mg/L	32	32	0.0	0 - 20	QB03634
Surfactants (MBAS)	mg/L	0.12	0.12	0.0	0 - 20	QB03634

LEGEND:

1. RPD = Relative Percent Difference
2. Advisory QC Limits may not be applicable when results are close to the Sample Detection Limits.

CHAIN OF CUSTODY RECORD

PROJ. NO	PROJECT NAME
200406.00	ECC - HEATON LAKE WMP

SAMPLERS: (Print Name & Sign)
ADIN M. McCANN

FIELD ID	DATE	TIME	COMP	GRAB	STATION LOCATION	Total No. of Con-tainers	Sample Type	TAT	Lab Order ID 0406.131 Lab Number
01	6/10			X		3			96501
02	↓			↓		3			96502
03						3			96503
04						3			96504
05						3			96505
06						3			96506
DUP.					Dup of Site 1	3			96507
BLANK	↓			↓		3			96508

Relinquished By: (Signature)	Date	Time	Received By: (Signature)	EIS QUOTE NO:
[signature]	6/10/04	4:15PM	[signature]	
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Ship To:
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	

NOTES: 1) **If you were issued a quote number, it must appear on this document.**
2) **Instructions & area for comments are on reverse side.**

EIS ANALYTICAL SERVICES, INC. • 1701 NORTH IRONWOOD DRIVE SUITE B •SOUTH BEND IN 46635 • Phone (574)277–0707 • Fax (574)273–5699

September 13, 2004
Dry Weather Event

CHAIN OF CUSTODY RECORD

PROJ. NO	PROJECT NAME
200406.00	ECC-205(j)

SAMPLERS: (Print Name & Sign)
Christopher J. Jeter

FIELD ID	DATE	TIME	COMP	GRAB	STATION LOCATION	Total No. of Containers	ecoli	TSS, NO3+NH3	TKN, Orto P, T. Phos	SP. Cond.	Sample Type	TAT	Lab Order ID / Lab Number
01	9/13			X		3	1	1	1				
02	"			"		3	1	1	1				
03	"			"		3							
04	"			"		3							
05	"			"		3							
06	"			"		3							
Dup.	"			"		3							
Blank	↓			↓	Rinse Water	3							

Relinquished By: (Signature)	Date	Time	Received By: (Signature)
Chris J. Jeter	9-13-04	11:45am	
Relinquished By: (Signature)	Date	Time	Received By: (Signature)
Relinquished By: (Signature)	Date	Time	Received By: (Signature)

EIS QUOTE NO:
Lawson-Fisher
Ship To:

NOTES: 1) **If you were issued a quote number, it must appear on this document.**
2) **Instructions & area for comments are on reverse side.**

COMPLETE FORM WITH PERMANENT INK ONLY

Lawson-Fisher Associates P.C.
525 West Washington Avenue
South Bend, Indiana 46601
Ph. 574-234-3167
FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/13/2004

Time: 1000 hrs. (MI) (0900 IN)

Crew: CJS, PCK, RME

Weather: Sunny

Ambient Temp.: 24.5° C

STREAM INFORMATION

Watershed ID: HUC #040500011500 40

Stream/Lake Name: Rhineheart Lateral

Site Location: #01 upstream

Width (ft.): 7.7

Depth (ft.): DTW = DTB = Water Depth = 1.2

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.1

Temp (°C): 14.9

Cond. (µS):

TDS (ppm):

Color: light brown

D.O. (m): 7.27 (mg/L) 72.0 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): 01-9/13/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/13/2004
Time: 1010 hrs. MI (09/01 IN)

Crew: CJJ, PCK, RME

Weather: sunny

Ambient Temp.: 24.5°C

STREAM INFORMATION

Watershed ID: HUC #040500091150040

Stream/Lake Name: Kinsig / Kellog

Site Location: #02

Width (ft.): 21'

Depth (ft.): DTW = DTB = Water Depth = 1.4'

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 7.4

Temp (°C): 16.3

Cond. (µS):

TDS (ppm):

Color: light brown

D.O. (m): 0.26 (mg/L) 2.6 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): 02-9/13/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/13/2004
Time: 0940 hrs.

Crew: CJJ, ACK, RME

Weather: Sunny

Ambient Temp.: 24.5°C

STREAM INFORMATION

Watershed ID: HUC #04050001150040

Stream/Lake Name: Mather Ditch

Site Location: #03

Width (ft.): 14'

Depth (ft.): DTW = DTB = Water Depth = 1'

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.2

Temp (°C): 22.1

Cond. (µS):

TDS (ppm):

Color: Clear

D.O. (m): 9.9 (mg/L) 113.5 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): #03-9/13/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/13/2004
Time: 0930 hrs.

Crew: CJJ, PCK, RME

Weather: sunny

Ambient Temp.: 24.5°C

STREAM INFORMATION

Watershed ID: HUC #040500011500 40

Stream/Lake Name: Bishop Ditch

Site Location: #04

Width (ft.): 12.8

Depth (ft.): DTW = DTB = Water Depth = 1.6

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 7.7

Temp (°C): 14.8

Cond. (µS):

TDS (ppm):

Color: yellowish - green

D.O. (m): 1.12 (mg/L) 10.9 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): #04 - 9/13/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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525 West Washington Avenue
South Bend, Indiana 46601
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FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Date: 9/3/2004
Time: 0955 hrs.

Job Number: 200406

Crew: CJJ, PCK, RME

Weather: Sunny

Ambient Temp.: 24.5°C

STREAM INFORMATION

Watershed ID: HUC #040500011500 40

Stream/Lake Name: Jacob Myers Ditch

Site Location: #05

Width (ft.): 24'

Depth (ft.): DTW = DTB = Water Depth = 0.85'

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.0

Temp (°C): 18.3

Cond. (µS):

TDS (ppm):

Color: clear (some debris)

D.O. (m): 7.04 (mg/L) 74.8 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): #05 - 9/3/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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525 West Washington Avenue
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Ph. 574-234-3167
FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Date: 9/13/2004
Time: 1010 hrs.

Job Number: 200406

Crew: CJJ, PCK, RME

Weather: Sunny

Ambient Temp.: 24.5°C

STREAM INFORMATION

Watershed ID: HUC #04050001150040

Stream/Lake Name: Puterbaugh Creek

Site Location: #06

Width (ft.): 19'

Depth (ft.): DTW = DTB = Water Depth = 0.75'

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.0

Temp (°C): 16.9

Cond. (µS):

TDS (ppm):

Color: clear

D.O. (m): 7.59 (mg/L) 78.3 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): 06- 9/13/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

INVENTORY CHECKLIST

Elkhart County – 205(j) Grant
Puterbaugh Creek – Heaton Lake Watershed Management Plan
Water Quality Monitoring Program

	Item	Item is still in Possession (Y/N)	Functioning Properly? (Y/N)
1.	D.O. Meter	Y	Y
2.	Hanna MultiMeter	Y	N
3.	Calibration Records/Forms	Y	
4.	Custody/Sampling Forms	Y	
5.	Meter Tape	Y	
6.	Water Level Indicator	Y	
7.	Kemmerer Sampler	Y	NA - grab samples
8.	EIS Sampling Bottles	Y	
9.	Sample Labels, etc.	Y	
10.	Rubber Bands		
11.	DI Water (2 Gal.)		
12.	Ice Chest/Ice	Y	
13.	Cellular Phone	Y	
14.	Rubber Gloves	Y	
15.	Paper Towels/Cloth Towels	Y	
16.	Life Jackets (if in boat)	Y	
17.	Clip Board	Y	
18.	Pens/Pencils (Sharpies)	Y	
19.	9 AA Size Batteries	Y	
20.	First Aid Kit		
21.	LFA Safety Program		
22.	Elkhart County 205(j) QAPP	Y	
23.	Elkhart County Road Map	Y	
24.	Puterbaugh Creek – Heaton Lake Watershed Map	Y	
25.	Sampling Site Pics/Descriptions	Y	
26.	Safety Glasses		
	bucket w/rope		

Comments: _____

Date of Inventory: 9-13-04

Signature: Chris Jost

REPORT OF ANALYSIS

Christopher J. Jeter, P.E.
Lawson-Fisher Associates
525 West Washington Street
South Bend, IN 46601
Tel No: 234-3167
Fax No: 236-1330
PO No:
Project Name: ECC-205 (j)

Report Date:	10/12/04
EIS Order No:	**040900127**
EIS Sample No:	098942
EIS Project No:	1091-1001-04
Client Sample ID:	**01**
Date Collected:	9/13/04
Date Received:	9/13/04
Collected By:	Client

This report presents results of analysis for your sample(s) received under our Order No above. This Number is to be used in all inquiries concerning this report. The EIS Sample No above, as well as your Sample ID, refer to the first sample in a multi-sample submission

DEFINITIONS:

MDL = Method Detection Limit normally achieved in the absence of interferences or other matrix difficulties.
RDL = Reporting Detection Limit achieved in your sample. If numerically greater than the MDL, dilutions were required in order to perform the analysis. If numerically less than the MDL, alternate techniques were employed.
nd = Not Detected at the RDL value. If present, result is less than this value.
< = Not Detected at the numerical value shown. If present, result is less than this value.
( ) = Result is estimated due to matrix interferences.

CHAIN-OF-CUSTODY is enclosed if received with your sample submission.

DRINKING WATER CERTIFICATIONS: Chemistry = C-71-02 Bacteriology = M-76-5

QUALITY ASSURANCE OFFICER

LABORATORY DIRECTOR

The data in this report has been reviewed and complies with EIS Quality Control unless specifically addressed above.

SAMPLE RESULTS

CLIENT SAMPLE ID: 01
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/13/04

Report Date: 10/12/04
EIS Sample No: 098942
EIS Order No: 040900127
Date Received: 9/13/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	700	col/100ml	1	1	9/13/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	3.2	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	0.68	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	0.09	mg/L	0.05	0.05	9/14/04	E03	4500-P F
Phosphorus,Total	0.29	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	370	mg/L	4	2	9/17/04	E21	2540 C
Solids,Total Suspended	140	mg/L	1	1	9/16/04	E21	2540 D
Specific Conductance	580	umhos/cm	1	1	9/20/04	E25	2510 B
Surfactants (MBAS)	0.27	mg/L	0.1	0.1	9/15/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 02
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/13/04

Report Date: 10/12/04
EIS Sample No: 098943
EIS Order No: 040900127
Date Received: 9/13/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	84	col/100ml	1	1	9/13/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	1.8	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	<0.05	mg/L	0.05	0.05	9/14/04	E03	4500-P F
Phosphorus,Total	0.24	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	330	mg/L	4	2	9/17/04	E21	2540 C
Solids,Total Suspended	8	mg/L	1	1	9/16/04	E21	2540 D
Specific Conductance	410	umhos/cm	1	1	9/20/04	E25	2510 B
Surfactants (MBAS)	0.27	mg/L	0.1	0.1	9/15/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 03
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/13/04

Report Date: 10/12/04
EIS Sample No: 098944
EIS Order No: 040900127
Date Received: 9/13/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	11	col/100ml	1	1	9/13/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.23	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	<0.05	mg/L	0.05	0.05	9/14/04	E03	4500-P F
Phosphorus,Total	0.23	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	280	mg/L	4	2	9/17/04	E21	2540 C
Solids,Total Suspended	<1	mg/L	1	1	9/16/04	E21	2540 D
Specific Conductance	410	umhos/cm	1	1	9/20/04	E25	2510 B
Surfactants (MBAS)	0.20	mg/L	0.1	0.1	9/15/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 04
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/13/04

Report Date: 10/12/04
EIS Sample No: 098945
EIS Order No: 040900127
Date Received: 9/13/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	230	col/100ml	1	1	9/13/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.62	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	0.15	mg/L	0.05	0.05	9/14/04	E03	4500-P F
Phosphorus,Total	0.23	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	340	mg/L	4	2	9/17/04	E21	2540 C
Solids,Total Suspended	2	mg/L	1	1	9/16/04	E21	2540 D
Specific Conductance	520	umhos/cm	1	1	9/20/04	E25	2510 B
Surfactants (MBAS)	0.10	mg/L	0.1	0.1	9/15/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 05
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/13/04

Report Date: 10/12/04
EIS Sample No: 098946
EIS Order No: 040900127
Date Received: 9/13/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	110	col/100ml	1	1	9/13/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.64	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	0.07	mg/L	0.05	0.05	9/14/04	E03	4500-P F
Phosphorus,Total	0.28	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	310	mg/L	4	2	9/17/04	E21	2540 C
Solids,Total Suspended	2	mg/L	1	1	9/16/04	E21	2540 D
Specific Conductance	490	umhos/cm	1	1	9/20/04	E25	2510 B
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	9/15/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 06
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/13/04

Report Date: 10/12/04
EIS Sample No: 098947
EIS Order No: 040900127
Date Received: 9/13/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	280	col/100ml	1	1	9/13/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.43	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	0.15	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	0.074	mg/L	0.05	0.05	9/14/04	E03	4500-P F
Phosphorus,Total	0.21	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	300	mg/L	4	2	9/17/04	E21	2540 C
Solids,Total Suspended	12	mg/L	1	1	9/16/04	E21	2540 D
Specific Conductance	500	umhos/cm	1	1	9/20/04	E25	2510 B
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	9/15/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: Duplicate
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/13/04

Report Date: 10/12/04
EIS Sample No: 098948
EIS Order No: 040900127
Date Received: 9/13/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	56	col/100ml	1	1	9/13/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	2.8	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	<0.05	mg/L	0.05	0.05	9/14/04	E03	4500-P F
Phosphorus,Total	0.24	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	330	mg/L	4	2	9/17/04	E21	2540 C
Solids,Total Suspended	5	mg/L	1	1	9/16/04	E21	2540 D
Specific Conductance	410	umhos/cm	1	1	9/20/04	E25	2510 B
Surfactants (MBAS)	0.20	mg/L	0.1	0.1	9/15/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: Rinse Water
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/13/04

Report Date: 10/12/04
EIS Sample No: 098949
EIS Order No: 040900127
Date Received: 9/13/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	<1	col/100ml	1	1	9/13/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	<0.1	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/16/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	<0.05	mg/L	0.05	0.05	9/14/04	E03	4500-P F
Phosphorus,Total	0.13	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	10	mg/L	4	2	9/17/04	E21	2540 C
Solids,Total Suspended	<1	mg/L	1	1	9/16/04	E21	2540 D
Specific Conductance	<1	umhos/cm	1	1	9/20/04	E25	2510 B
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	9/15/04	E21	5540 C

QUALITY CONTROL DATA

LABORATORY FORTIFIED METHOD BLANK (LFB)

Matrix: Water

Test: Inorganics

Run Date:

EIS Lab #s With This LFB

98942-98949

Comments Concerning This LFB:

Parameter	Spike Amount	Matrix Spike		Duplicate Spike		RPD	Quality Control Limits RPD LCL	Quality Control Limits RPD UCL	Quality Control Limits % R LCL	Quality Control Limits % R UCL	QC Batch
		Result	% R	Result	% R						
Nitrogen(Nitrate)	7.1	7.134	100	7.225	102	1	0	20	80	120	QB03828
Phosphorus,ortho	0.82	0.700	85	0.658	80	6	0	20	80	120	QB03828
Nitrogen(Ammonia)	4.4	4.241	96	4.135	94	3	0	20	80	120	QB03836
Nitrogen(Kjeldahl)Total	2.4	2.348	98	2.141	89	9	0	20	80	120	QB03836
Phosphorus,Total	4.84	4.223	87	4.204	87	0	0	20	80	120	QB03836

LEGEND:

1. The LFB may be either a single spike or in dulicate and may or may not be in a QC Batch with a MS/DMS.
2. % R = Percent Recovery of Spike
3. RPD = Relative Percent Difference of the spike recoveries
4. LCL = Lower Control Limit
5. UCL = Upper Control Limit
6. Units are normally those shown in the Analysis Report and are always the same for the Spike and Duplicate Spike

QUALITY CONTROL DATA
METHOD BLANK RESULTS

Test: Inorganics

Matrix: Water

EIS Lab Numbers: 98942-98949

Comments :

Parameter	Result	Units	Date Analyzed	QC Batch	Detection Limit
Nitrogen(Nitrate)	<0.1	mg/L	9/17/04	QB03828	0.1
Phosphorus,ortho	<0.05	mg/L	9/14/04	QB03828	0.05
Coliform,E.Coli	1	col/100ml	9/13/04	QB03836	1
Nitrogen(Ammonia)	<0.05	mg/L	9/21/04	QB03836	0.05
Nitrogen(Kjeldahl)Total	<0.1	mg/L	9/21/04	QB03836	0.1
Phosphorus,Total	<0.05	mg/L	9/21/04	QB03836	0.05
Solids,Total Suspended	<1	mg/L	9/16/04	QB03836	1
Surfactants (MBAS)	<0.1	mg/L	9/15/04	QB03836	0.1

QUALITY CONTROL DATA

MATRIX SPIKE / DUPLICATE MATRIX SPIKE (MS/DMS)

EIS Order: 040900127
QC Sample: 098948
Matrix: Water
Test: Inorganics

EIS Lab #s in This Batch: 98942-98949

Comments Concerning This QC Batch:

Parameter	Back-ground	Spike Amount	Matrix Spike		Duplicate Spike		RPD	Quality Control Limits				QC Batch
								RPD		% R		
			Result	% R	Result	% R		LCL	UCL	LCL	UCL	
Nitrogen(Ammonia)	<0.05	10						0	20	75	125	QB03828
Nitrogen(Kjeldahl)Total	2.8							0	20	75	125	QB03828
Nitrogen(Nitrate)	<0.1	5	4.902	98	4.913	98	0	0	20	75	125	QB03828
Phosphorus,ortho	<0.05	2	1.663	83	1.771	89	6	0	20	75	125	QB03828
Phosphorus,Total	0.24							0	20	75	125	QB03828
Nitrogen(Ammonia)	<0.05	10	9.258	93	9.453	95	2	0	20	75	125	QB03836
Nitrogen(Kjeldahl)Total	2.8	5	5.8002	60	5.822	60	1	0	20	75	125	QB03836
Nitrogen(Nitrate)	<0.1							0	20	75	125	QB03836
Phosphorus,ortho	<0.05							0	20	75	125	QB03836
Phosphorus,Total	0.24	2	2.087	92	2.235	100	8	0	20	75	125	QB03836

LEGEND:

1. Background = Sample Result
2. Spike amount may be adjusted for dilution used in sample analysis
3. % R = Percent Recovery of Spike
4. RPD = Relative Percent Difference of the spike recoveries
5. LCL = Lower Control Limit
6. UCL = Upper Control Limit
7. Units are normally those shown in the Analysis Report and are always the same for the Background and Spike

QUALITY CONTROL DATA

REPLICATE ANALYSIS - SEPARATE DIGESTIONS / EXTRACTIONS

EIS Order: 040900127
QC Sample: 098948
Matrix: Water

Comments Concerning This Analysis:

Parameter	Units	Original Analysis	Replicate Analysis	RPD	Advisory QC Limits	QC Batch
Coliform,E.Coli	col/100ml	56			0 - 20	QB03828
Nitrogen(Ammonia)	mg/L	<0.05			0 - 20	QB03828
Nitrogen(Kjeldahl)Total	mg/L	2.8			0 - 20	QB03828
Nitrogen(Nitrate)	mg/L	<0.1	<0.1	0.0	0 - 20	QB03828
Phosphorus,ortho	mg/L	<0.05	<0.05	0.0	0 - 20	QB03828
Phosphorus,Total	mg/L	0.24			0 - 20	QB03828
Solids,Total Suspended	mg/L	5			0 - 20	QB03828
Surfactants (MBAS)	mg/L	0.20		200.0	0 - 20	QB03828
Coliform,E.Coli	col/100ml	56			0 - 20	QB03836
Nitrogen(Ammonia)	mg/L	<0.05	<0.05	0.0	0 - 20	QB03836
Nitrogen(Kjeldahl)Total	mg/L	2.8	3.1	10.2	0 - 20	QB03836
Nitrogen(Nitrate)	mg/L	<0.1			0 - 20	QB03836
Phosphorus,ortho	mg/L	<0.05			0 - 20	QB03836
Phosphorus,Total	mg/L	0.24	0.24	0.0	0 - 20	QB03836
Solids,Total Suspended	mg/L	5	5	0.0	0 - 20	QB03836
Surfactants (MBAS)	mg/L	0.20	0.20	0.0	0 - 20	QB03836

LEGEND:

1. RPD = Relative Percent Difference
2. Advisory QC Limits may not be applicable when results are close to the Sample Detection Limits.

CHAIN OF CUSTODY RECORD

PROJ. NO	PROJECT NAME
200406.00	ECC-205(j)

SAMPLERS: (Print Name & Sign)
Christopher J. Jeter

FIELD ID	DATE	TIME	COMP	GRAB	STATION LOCATION	Total No. of Con-tainers	Lab Order ID 040127	Sample Type	TAT	Lab Number
01	9/13			X		3				98942
02	↓			↓		3				98943
03						3				98944
04						3				98945
05						3				98946
06						3				98947
Dup.						3				98948
Blank	↓			↓	Rinse Water	3				98949

Relinquished By: (Signature)	Date	Time	Received By: (Signature)	EIS QUOTE NO:
Chris J. Jeter	9-13-04	11:45am		Lawson-Fisher
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Ship To:
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	

NOTES: 1) **If you were issued a quote number, it must appear on this document.**
2) **Instructions & area for comments are on reverse side.**

EIS ANALYTICAL SERVICES, INC. • 1701 NORTH IRONWOOD DRIVE SUITE B •SOUTH BEND IN 46635 • Phone (574)277-0707 • Fax (574)273-5699

September 16, 2004
Wet Weather Event

CHAIN OF CUSTODY RECORD

PROJ. NO	PROJECT NAME
200406.00	Lawson-Fisher

SAMPLERS: (Print Name & Sign)
Christopher J. Jeter

FIELD ID	DATE	TIME	COMP	GRAB	STATION LOCATION	Total No. of Containers	E. coli	TSS, NO3, Surfactant	TKN, T. Phos, Diss. Phos, NH3					Sample Type	Lab Order ID: TAT	Lab Order ID: Lab Number
01	9/16			X		3	1	1	1							
02	↓			↓		3	1	1	1							
03						3	1	1	1							
04						3	1	1	1							
05						3	1	1	1							
06						3	1	1	1							
Dup						3	1	1	1							
FW	↓			↓	Fresh water	3	1	1	1							

Relinquished By: (Signature)	Date	Time	Received By: (Signature)	EIS QUOTE NO:
[signature]	9/16/01	10:37	[signature]	
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Ship To:
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	

NOTES: 1) **If you were issued a quote number, it must appear on this document.**
2) **Instructions & area for comments are on reverse side.**

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COMPLETE FORM WITH PERMANENT INK ONLY

Lawson-Fisher Associates P.C.
525 West Washington Avenue
South Bend, Indiana 46601
Ph. 574-234-3167
FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant; Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/16/ 200

Time: 0830 hrs. MI (0730)

Crew: CJJ, RME

Weather: Sunny

Ambient Temp.: 70°F

STREAM INFORMATION

Watershed ID: HUC #04050001150040

Stream/Lake Name: Rhinehart Lateral

Site Location: #01 upstream

Width (ft.): 7.7'

Depth (ft.): DTW = DTB = Water Depth = 0.9'

GPS ID No.:

Location Sketch

C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.4

Temp (°C): 18.6°

Cond. (µS):

TDS (ppm):

Color: light brown

D.O. (m): 4.7 (mg/L) 50.6 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): 01- 9/16/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

Rev. 4/1/04

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South Bend, Indiana 46601
Ph. 574-234-3167
FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/16/ 200
Time: 0800 hrs.

Crew: CJJ, RME

Weather: Sunny

Ambient Temp.: 70°F

STREAM INFORMATION

Watershed ID: HUC #04050001150040

Stream/Lake Name: Kirdig/ Kellog

Site Location: #02

Width (ft.): 21'

Depth (ft.): DTW = DTB = Water Depth = 1.5'

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 7.6

Temp (°C): 19.2

Cond. (µS):

TDS (ppm):

Color: light brown

D.O. (m): 0.26 (mg/L) 2.8 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): 02-9/16/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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South Bend, Indiana 46601
Ph. 574-234-3167
FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/16/ 200
Time: 0835 hrs.

Crew: CJJ, RME

Weather: Sunny

Ambient Temp.: 70°F

STREAM INFORMATION

Watershed ID: HUC #0405000115 0040

Stream/Lake Name: Maker Ditch

Site Location: #03

Width (ft.): 15.5'

Depth (ft.) DTW = DTB = Water Depth = 1.3'

GPS ID No.

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.4

Temp (°C): 23.4°

Cond. (µS):

TDS (ppm):

Color: Clear

D.O. (m): 8.3 (mg/L) 97.2 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): 03-9/16/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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South Bend, Indiana 46601
Ph. 574-234-3167
FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/16/ 200
Time: 0815 hrs.

Crew: CJJ, RME

Weather: SUNNY

Ambient Temp.: 70°F

STREAM INFORMATION

Watershed ID: HUC#04050001150040

Stream/Lake Name: Bishop Ditch

Site Location: #04

Width (ft.): 12.5'

Depth (ft.): DTW = DTB = Water Depth = 1.6'

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 7.8

Temp (°C): 18.1

Cond. (µS):

TDS (ppm):

Color: light green

D.O. (m): 1.92 (mg/L) 16.6 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): 04-9/16/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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525 West Washington Avenue
South Bend, Indiana 46601
Ph. 574-234-3167
FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/16/2004
Time: 0855 hrs.

Crew: CJJ, RME

Weather: Sunny

Ambient Temp.: 70°F

STREAM INFORMATION

Watershed ID: HUC #040500011500 40

Stream/Lake Name: Jacob Myers Ditch

Site Location: #05

Width (ft.): 24'

Depth (ft.): DTW = DTB = Water Depth = 1.2'

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.0

Temp (°C): 17.6

Cond. (µS):

TDS (ppm):

Color: clear - light green

D.O. (m): 6.48 (mg/L) 67.5 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): 05 - 9/16/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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525 West Washington Avenue
South Bend, Indiana 46601
Ph. 574-234-3167
FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Date: 9/16/2004
Time: 0910 hrs.

Job Number: 200406

Crew: CJJ, RME

Weather: sunny

Ambient Temp.: 70°F

STREAM INFORMATION

Watershed ID: HUC #04050001150040

Stream/Lake Name: Puterbaugh Creek

Site Location: #06

Width (ft.): 19'

Depth (ft.) DTW = DTB = Water Depth = 0.9'

GPS ID No.

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.1

Temp (°C): 17.1

Cond. (µS):

TDS (ppm):

Color: clear - light green

D.O. (m): 6.98 (mg/L) 72.8 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): 06-9/16/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

INVENTORY CHECKLIST

Elkhart County – 205(j) Grant
Puterbaugh Creek – Heaton Lake Watershed Management Plan
Water Quality Monitoring Program

	Item	Item is still in Possession (Y/N)	Functioning Properly? (Y/N)
1.	D.O. Meter	Y	
2.	Hanna MultiMeter	Y	
3.	Calibration Records/Forms		
4.	Custody/Sampling Forms	Y	
5.	Meter Tape	Y	
6.	Water Level Indicator	Y	
7.	Kemmerer Sampler		
8.	EIS Sampling Bottles	Y	
9.	Sample Labels, etc.		
10.	Rubber Bands		
11.	DI Water (2 Gal.) drinking H_2O	Y	
12.	Ice Chest/Ice	Y	
13.	Cellular Phone	Y	
14.	Rubber Gloves	Y	
15.	Paper Towels/Cloth Towels	Y	
16.	Life Jackets (if in boat)		
17.	Clip Board		
18.	Pens/Pencils (Sharpies)	Y	
19.	9 AA Size Batteries		
20.	First Aid Kit		
21.	LFA Safety Program		
22.	Elkhart County 205(j) QAPP	Y	
23.	Elkhart County Road Map		
24.	Puterbaugh Creek – Heaton Lake Watershed Map	Y	
25.	Sampling Site Pics/Descriptions	Y	
26.	Safety Glasses		

Comments: _____

Date of Inventory: 9-16-04

Signature: _____

REPORT OF ANALYSIS

Christopher J. Jeter, P.E.
Lawson-Fisher Associates
525 West Washington Street
South Bend, IN 46601
Tel No: 234-3167
Fax No: 236-1330
PO No:
Project Name: ECC-205 (j)

Report Date:	10/13/04
EIS Order No:	**040900179**
EIS Sample No:	099053
EIS Project No:	1091-1001-04
Client Sample ID:	**01**
Date Collected:	9/16/04
Date Received:	9/16/04
Collected By:	Client

This report presents results of analysis for your sample(s) received under our Order No above. This Number is to be used in all inquiries concerning this report. The EIS Sample No above, as well as your Sample ID, refer to the first sample in a multi-sample submission

DEFINITIONS:

MDL = Method Detection Limit normally achieved in the absence of interferences or other matrix difficulties.
RDL = Reporting Detection Limit achieved in your sample. If numerically greater than the MDL, dilutions were required in order to perform the analysis. If numerically less than the MDL, alternate techniques were employed.
nd = Not Detected at the RDL value. If present, result is less than this value.
< = Not Detected at the numerical value shown. If present, result is less than this value.
( ) = Result is estimated due to matrix interferences.

CHAIN-OF-CUSTODY is enclosed if received with your sample submission.

DRINKING WATER CERTIFICATIONS: Chemistry = C-71-02 Bacteriology = M-76-5

QUALITY ASSURANCE OFFICER

LABORATORY DIRECTOR

The data in this report has been reviewed and complies with EIS Quality Control unless specifically addressed above.

SAMPLE RESULTS

CLIENT SAMPLE ID: 01
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/16/04

Report Date: 10/13/04
EIS Sample No: 099053
EIS Order No: 040900179
Date Received: 9/16/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	21400	col/100ml	1	1	9/16/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	2.4	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	0.39	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	0.12	mg/L	0.05	0.05	9/17/04	E03	4500-P F
Phosphorus,Total	0.46	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	300	mg/L	4	2	9/17/04	E21	2540 C
Solids,Total Suspended	24	mg/L	1	1	9/20/04	E21	2540 D
Specific Conductance	430	umhos/cm	1	1	9/22/04	E25	2510 B
Surfactants (MBAS)	0.13	mg/L	0.1	0.1	9/17/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 02
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/16/04

Report Date: 10/13/04
EIS Sample No: 099054
EIS Order No: 040900179
Date Received: 9/16/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	1540	col/100ml	1	1	9/16/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	4.4	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	0.067	mg/L	0.05	0.05	9/17/04	E03	4500-P F
Phosphorus,Total	0.45	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	320	mg/L	4	2	9/17/04	E21	2540 C
Solids,Total Suspended	29	mg/L	1	1	9/20/04	E21	2540 D
Specific Conductance	420	umhos/cm	1	1	9/22/04	E25	2510 B
Surfactants (MBAS)	0.27	mg/L	0.1	0.1	9/17/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 03
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/16/04

Report Date: 10/13/04
EIS Sample No: 099055
EIS Order No: 040900179
Date Received: 9/16/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	68	col/100ml	1	1	9/16/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.34	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	0.054	mg/L	0.05	0.05	9/17/04	E03	4500-P F
Phosphorus,Total	0.16	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	280	mg/L	4	2	9/20/04	E21	2540 C
Solids,Total Suspended	1	mg/L	1	1	9/20/04	E21	2540 D
Specific Conductance	420	umhos/cm	1	1	9/22/04	E25	2510 B
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	9/17/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 04
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/16/04

Report Date: 10/13/04
EIS Sample No: 099056
EIS Order No: 040900179
Date Received: 9/16/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	450	col/100ml	1	1	9/16/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.71	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	0.13	mg/L	0.05	0.05	9/17/04	E03	4500-P F
Phosphorus,Total	0.24	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	330	mg/L	4	2	9/20/04	E21	2540 C
Solids,Total Suspended	4	mg/L	1	1	9/20/04	E21	2540 D
Specific Conductance	500	umhos/cm	1	1	9/22/04	E25	2510 B
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	9/17/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 05
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/16/04

Report Date: 10/13/04
EIS Sample No: 099057
EIS Order No: 040900179
Date Received: 9/16/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	1100	col/100ml	1	1	9/16/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	<0.1	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	0.13	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	0.055	mg/L	0.05	0.05	9/17/04	E03	4500-P F
Phosphorus,Total	0.20	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	310	mg/L	4	2	9/20/04	E21	2540 C
Solids,Total Suspended	<1	mg/L	1	1	9/20/04	E21	2540 D
Specific Conductance	500	umhos/cm	1	1	9/22/04	E25	2510 B
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	9/17/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 06
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/16/04

Report Date: 10/13/04
EIS Sample No: 099058
EIS Order No: 040900179
Date Received: 9/16/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	3600	col/100ml	1	1	9/16/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.52	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	0.18	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	0.054	mg/L	0.05	0.05	9/17/04	E03	4500-P F
Phosphorus,Total	0.22	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	300	mg/L	4	2	9/20/04	E21	2540 C
Solids,Total Suspended	3	mg/L	1	1	9/20/04	E21	2540 D
Specific Conductance	510	umhos/cm	1	1	9/22/04	E25	2510 B
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	9/17/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: Duplicate
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/16/04

Report Date: 10/13/04
EIS Sample No: 099059
EIS Order No: 040900179
Date Received: 9/16/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	500	col/100ml	1	1	9/16/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.76	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	0.13	mg/L	0.05	0.05	9/17/04	E03	4500-P F
Phosphorus,Total	0.23	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	300	mg/L	4	2	9/20/04	E21	2540 C
Solids,Total Suspended	2	mg/L	1	1	9/20/04	E21	2540 D
Specific Conductance	480	umhos/cm	1	1	9/22/04	E25	2510 B
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	9/17/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: Field Blank
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/16/04

Report Date: 10/13/04
EIS Sample No: 099060
EIS Order No: 040900179
Date Received: 9/16/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	<1	col/100ml	1	1	9/16/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	<0.1	mg/L	0.1	0.1	9/21/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/17/04	E03	4500-NO3
Phosphorus,ortho	<0.05	mg/L	0.05	0.05	9/17/04	E03	4500-P F
Phosphorus,Total	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Solids,Total Dissolved	<2	mg/L	4	2	9/20/04	E21	2540 C
Solids,Total Suspended	<1	mg/L	1	1	9/20/04	E21	2540 D
Specific Conductance	7.9	umhos/cm	1	1	9/22/04	E25	2510 B
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	9/17/04	E21	5540 C

QUALITY CONTROL DATA

LABORATORY FORTIFIED METHOD BLANK (LFB)

Matrix: Water

Test: Inorganics

Run Date:

EIS Lab #s With This LFB

99053-99060

Comments Concerning This LFB:

Parameter	Spike Amount	Matrix Spike		Duplicate Spike		RPD	Quality Control Limits RPD		Quality Control Limits % R		QC Batch
		Result	% R	Result	% R		LCL	UCL	LCL	UCL	
Nitrogen(Ammonia)	4.4	3.733	85	4.313	98	14	0	20	80	120	QB03834
Nitrogen(Kjeldahl)Total	2.4	2.348	98	2.141	89	9	0	20	80	120	QB03834
Nitrogen(Nitrate)	7.1	7.163	101	7.169	101	0	0	20	80	120	QB03834
Phosphorus,ortho	0.82	0.755	92	0.741	90	2	0	20	80	120	QB03834
Phosphorus,Total	4.84	4.204	87	4.158	86	1	0	20	80	120	QB03834

LEGEND:

1. The LFB may be either a single spike or in dulicate and may or may not be in a QC Batch with a MS/DMS.
2. % R = Percent Recovery of Spike
3. RPD = Relative Percent Difference of the spike recoveries
4. LCL = Lower Control Limit
5. UCL = Upper Control Limit
6. Units are normally those shown in the Analysis Report and are always the same for the Spike and Duplicate Spike

QUALITY CONTROL DATA

METHOD BLANK RESULTS

Test: Inorganics

Matrix: Water

EIS Lab Numbers: 99053-99060

Comments :

Parameter	Result	Units	Date Analyzed	QC Batch	Detection Limit
Nitrogen(Ammonia)	<0.05	mg/L	9/21/04	QB03834	0.05
Nitrogen(Kjeldahl)Total	<0.1	mg/L	9/21/04	QB03834	0.1
Nitrogen(Nitrate)	<0.1	mg/L	9/17/04	QB03834	0.1
Phosphorus,ortho	<0.05	mg/L	9/17/04	QB03834	0.05
Phosphorus,Total	<0.05	mg/L	9/21/04	QB03834	0.05
Solids,Total Dissolved	10	mg/L	9/20/04	QB03849	2

QUALITY CONTROL DATA

MATRIX SPIKE / DUPLICATE MATRIX SPIKE (MS/DMS)

EIS Order: 040900179
QC Sample: 099059
Matrix: Water
Test: Inorganics

EIS Lab #s in This Batch: 99053-99060

Comments Concerning This QC Batch:

Parameter	Back-ground	Spike Amount	Matrix Spike		Duplicate Spike		RPD	Quality Control Limits				QC Batch
								RPD		% R		
			Result	% R	Result	% R		LCL	UCL	LCL	UCL	
Nitrogen(Ammonia)	<0.05	10	9.412	94	9.402	94	0	0	20	75	125	QB03834
Nitrogen(Kjeldahl)Total	0.76	5	6.453	114	6.466	114	0	0	20	75	125	QB03834
Nitrogen(Nitrate)	<0.1	5	4.856	97	4.956	99	2	0	20	75	125	QB03834
Phosphorus,ortho	0.13	2	2.065	97	2.064	97	0	0	20	75	125	QB03834
Phosphorus,Total	0.23	2	1.984	88	2.091	93	6	0	20	75	125	QB03834

LEGEND:

1. Background = Sample Result
2. Spike amount may be adjusted for dilution used in sample analysis
3. % R = Percent Recovery of Spike
4. RPD = Relative Percent Difference of the spike recoveries
5. LCL = Lower Control Limit
6. UCL = Upper Control Limit
7. Units are normally those shown in the Analysis Report and are always the same for the Background and Spike

QUALITY CONTROL DATA

REPLICATE ANALYSIS - SEPARATE DIGESTIONS / EXTRACTIONS

EIS Order: 040900179

QC Sample: 099059

Matrix: Water

Comments Concerning This Analysis:

Parameter	Units	Original Analysis	Replicate Analysis	RPD	Advisory QC Limits	QC Batch
Coliform,E.Coli	col/100ml	500			0 - 20	QB03834
Nitrogen(Ammonia)	mg/L	<0.05	<0.05	0.0	0 - 20	QB03834
Nitrogen(Kjeldahl)Total	mg/L	0.76	0.65	15.6	0 - 20	QB03834
Nitrogen(Nitrate)	mg/L	<0.1	<0.1	0.0	0 - 20	QB03834
Phosphorus,ortho	mg/L	0.13	0.12	8.0	0 - 20	QB03834
Phosphorus,Total	mg/L	0.23	0.24	4.3	0 - 20	QB03834
Solids,Total Suspended	mg/L	2	2	0.0	0 - 20	QB03834
Surfactants (MBAS)	mg/L	<0.1	<0.1	0.0	0 - 20	QB03834
Solids,Total Dissolved	mg/L	300	304	1.3	0 - 20	QB03849

LEGEND:

1. RPD = Relative Percent Difference
2. Advisory QC Limits may not be applicable when results are close to the Sample Detection Limits.

CHAIN OF CUSTODY RECORD

PROJ. NO	PROJECT NAME	Total No. of Con-tainers	E. coli	TSS, NO3, Surfactant	TKN, T. Phos, Diss. Phos, NH3						Lab Order ID	
200406.00	Lawson-Fisher 2005										0409.179	
SAMPLERS: (Print Name & Sign) Christopher J. Jeter												
FIELD ID	DATE	TIME	COMP	GRAB	STATION LOCATION						Sample Type	TAT	Lab Number
01	9/16			X		3	1	1	1				99053
02	↓			↓		3	1	1	1				99054
03						3	1	1	1				99055
04						3	1	1	1				99056
05						3	1	1	1				99057
06						3	1	1	1				99058
Dup						3	1	1	1				99059
FW	↓			↓	Fresh water	3	1	1	1				99060

Relinquished By: (Signature)	Date	Time	Received By: (Signature)	EIS QUOTE NO:
[signature]	9/16/04	10:37	[signature]	
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Ship To:
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	

NOTES: 1) **If you were issued a quote number, it must appear on this document.**
2) **Instructions & area for comments are on reverse side.**

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Form: Chain–of–Custody (6–12–97)

September 21, 2004
Dry Weather Event

CHAIN OF CUSTODY RECORD

PROJ. NO	PROJECT NAME
200406.00 ECC Heaton Lake 2056	L-F Elkhart

SAMPLERS: (Print Name & Sign)
Christopher J. Jeter Christopher J. Jeter

FIELD ID	DATE	TIME	COMP	GRAB	STATION LOCATION	Total No. of Containers	Fecal	TSS, NO3, Sus. Solids	TKN, T. Phos, ortho, NH3	conductivity, TDS	Sample Type	TAT	Lab Order ID / Lab Number
01	9-21	9:30am		X	01	3	1	1	1	1			
02	↓	↓		↓	02	3							
03					03	3							
04					04	3							
05					05	3							
06					06	3							
Duplicate					Duplicate	3							
Fresh Water	↓	↓		↓	Rinse Water	3							

Relinquished By: (Signature)	Date	Time	Received By: (Signature)	EIS QUOTE NO:
Christopher J. Jeter	9-21-04	9:35a	Dan Shane	
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Ship To:
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	

NOTES: 1) **If you were issued a quote number, it must appear on this document.**
2) **Instructions & area for comments are on reverse side.**

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COMPLETE FORM WITH PERMANENT INK ONLY

Lawson-Fisher Associates P.C.
525 West Washington Avenue
South Bend, Indiana 46601
Ph. 574-234-3167
FAX 574-236-1330

WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/21/2004
Time: 0700 hrs.

Crew: CJJ, RME

Weather: sunny

Ambient Temp.: 60°F

STREAM INFORMATION

Watershed ID: HUC #04050001150040

Stream/Lake Name: Rhinehart Lateral

Site Location: #01 upstream

Width (ft.): 7.7'

Depth (ft.): DTW = DTB = Water Depth = 0.7'

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.2

Temp (°C): 10.6

Cond. (µS):

TDS (ppm):

Color: light brown

D.O. (m): 6.86 (mg/L) 66.5 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): 01 - 9/21/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/21/2004
Time: 0710 hrs.

Crew: CJJ, RME

Weather: sunny

Ambient Temp.: 60°F

STREAM INFORMATION

Watershed ID: HUC #04050001150040

Stream/Lake Name: Kindig / Kellog

Site Location: #02

Width (ft.): 21'

Depth (ft.): DTW = DTB = Water Depth = 1.17'

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.1

Temp (°C): 12.6

Cond. (µS):

TDS (ppm):

Color: brown

D.O. (m): 1.01 (mg/L) 9.6 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): 02- 9/21/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/21/2004
Time: 0740 hrs.

Crew: CJJ, AME

Weather: Sunny

Ambient Temp.: 60°F

STREAM INFORMATION

Watershed ID: HUC #040500011500 40

Stream/Lake Name: Mather Ditch

Site Location: #03

Width (ft.): 15.5'

Depth (ft.): DTW = DTB = Water Depth = 0.89'

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.4

Temp (°C): 18.5

Cond. (µS):

TDS (ppm):

Color: clear

D.O. (m): 8.98 (mg/L) 95.6 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): 03-9/21/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/21/2004
Time: 0730 hrs.
Crew: CJJ, RME
Weather: sunny
Ambient Temp.: 60°F

STREAM INFORMATION

Watershed ID: HUC #040500011500040
Stream/Lake Name: Bishop Ditch
Site Location: #04
Width (ft.): 10.7'
Depth (ft.): DTW = DTB = Water Depth = 1.3'
GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.0
Temp (°C): 12.4
Cond. (µS):
TDS (ppm):
Color: light brown
D.O. (m): 2.46 (mg/L) 21.5 (%)
Sample Type: Kemmerer (Grab)

Sample Number(s): 04 – 9/21/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/21/2004
Time: 0800 hrs.
Crew: CJJ, RME
Weather: sunny
Ambient Temp.: 60°F

STREAM INFORMATION

Watershed ID: HUC #040500011500 40
Stream/Lake Name: Jacob Myers Ditch
Site Location: #05
Width (ft.): 24'
Depth (ft.) DTW = DTB = Water Depth = 0.83'
GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.2
Temp (°C): 12.3
Cond. (µS):
TDS (ppm):
Color: light green
D.O. (m): 7.84 (mg/L) 73.2 (%)
Sample Type: Kemmerer (Grab)

Sample Number(s): 05-9/21/04
Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

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WATER QUALITY ACQUISITION DATA SHEET

Project: Elkhart County 205(j) Grant
Puterbaugh Creek – Heaton Lake

Job Number: 200406

Date: 9/21/2004
Time: 0915 hrs.

Crew: CJJ, RME

Weather: Sunny

Ambient Temp.: 60°F

STREAM INFORMATION

Watershed ID: HUC#04050001150040

Stream/Lake Name: Puterbaugh Creek

Site Location: #06

Width (ft.): 19'

Depth (ft.): DTW = DTB = Water Depth = 0.73'

GPS ID No.:

Location Sketch
C.R. _____ Facing _____

SAMPLE INFORMATION

pH: 8.2

Temp (°C): 12.7

Cond. (µS):

TDS (ppm):

Color: clear - light green

D.O. (m): 8.47 (mg/L) 79.7 (%)

Sample Type: Kemmerer (Grab)

Sample Number(s): 06-9/21/04

Bottle Numbers:

Comments:

Chain of Custody:

Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		
Relinquished By:	Date	Time	Received By:	Date	Time
Signature			Signature		
Printed			Printed		

INVENTORY CHECKLIST

Elkhart County – 205(j) Grant
Puterbaugh Creek – Heaton Lake Watershed Management Plan
Water Quality Monitoring Program

	Item	Item is still in Possession (Y/N)	Functioning Properly? (Y/N)
1.	D.O. Meter	Y	Y
2.	Hanna MultiMeter		
3.	Calibration Records/Forms	Y	
4.	Custody/Sampling Forms	Y	
5.	Meter Tape		
6.	Water Level Indicator	Y	
7.	Kemmerer Sampler		
8.	EIS Sampling Bottles	Y	
9.	Sample Labels, etc.		
10.	Rubber Bands		
11.	DI Water (2 Gal.)		
12.	Ice Chest/Ice	Y	
13.	Cellular Phone	Y	Y
14.	Rubber Gloves	Y	
15.	Paper Towels/Cloth Towels	Y	
16.	Life Jackets (if in boat)		
17.	Clip Board	Y	
18.	Pens/Pencils (Sharpies)	Y	
19.	9 AA Size Batteries		
20.	First Aid Kit		
21.	LFA Safety Program		
22.	Elkhart County 205(j) QAPP	Y	
23.	Elkhart County Road Map		
24.	Puterbaugh Creek – Heaton Lake Watershed Map	Y	
25.	Sampling Site Pics/Descriptions	Y	
26.	Safety Glasses		

Comments: _____

Date of Inventory: 9-2-04

Signature: _____

REPORT OF ANALYSIS

Christopher J. Jeter, P.E.
Lawson-Fisher Associates
525 West Washington Street
South Bend, IN 46601
Tel No: 234-3167
Fax No: 236-1330
PO No:
Project Name: ECC-205 (j)

Report Date:	10/15/04
EIS Order No:	**040900216**
EIS Sample No:	099153
EIS Project No:	1091-1001-04
Client Sample ID:	**01**
Date Collected:	9/21/04
Date Received:	9/21/04
Collected By:	Client

This report presents results of analysis for your sample(s) received under our Order No above. This Number is to be used in all inquiries concerning this report. The EIS Sample No above, as well as your Sample ID, refer to the first sample in a multi-sample submission

DEFINITIONS:

MDL = Method Detection Limit normally achieved in the absence of interferences or other matrix difficulties.
RDL = Reporting Detection Limit achieved in your sample. If numerically greater than the MDL, dilutions were required in order to perform the analysis. If numerically less than the MDL, alternate techniques were employed.
nd = Not Detected at the RDL value. If present, result is less than this value.
< = Not Detected at the numerical value shown. If present, result is less than this value.
( ) = Result is estimated due to matrix interferences.

CHAIN-OF-CUSTODY is enclosed if received with your sample submission.

DRINKING WATER CERTIFICATIONS: Chemistry = C-71-02 Bacteriology = M-76-5

OCT 18 2004

QUALITY ASSURANCE OFFICER

LABORATORY DIRECTOR

The data in this report has been reviewed and complies with EIS Quality Control unless specifically addressed above.

SAMPLE RESULTS

CLIENT SAMPLE ID: 01
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/21/04

Report Date: 10/15/04
EIS Sample No: 099153
EIS Order No: 040900216
Date Received: 9/21/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	3400	col/100ml	1	1	9/21/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.86	mg/L	0.1	0.1	9/28/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	10/1/04	E03	4500-NH3
Nitrogen(Nitrate)	0.46	mg/L	0.1	0.1	9/22/04	E03	4500-NO3
Phosphorus,ortho	0.07	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Phosphorus,Total	0.16	mg/L	0.05	0.05	9/28/04	E03	4500-P F
Solids,Total Dissolved	390	mg/L	4	2	9/23/04	E21	2540 C
Solids,Total Suspended	27	mg/L	1	1	9/21/04	E21	2540 D
Specific Conductance	590	umhos/cm	1	1	9/23/04	E25	2510 B
Surfactants (MBAS)	0.13	mg/L	0.1	0.1	9/22/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 02
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/21/04

Report Date: 10/15/04
EIS Sample No: 099154
EIS Order No: 040900216
Date Received: 9/21/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	126	col/100ml	1	1	9/21/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	1.7	mg/L	0.2	0.1	9/28/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	10/1/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/22/04	E03	4500-NO3
Phosphorus,ortho	0.073	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Phosphorus,Total	0.40	mg/L	0.1	0.05	9/28/04	E03	4500-P F
Solids,Total Dissolved	340	mg/L	4	2	9/23/04	E21	2540 C
Solids,Total Suspended	12	mg/L	1	1	9/21/04	E21	2540 D
Specific Conductance	430	umhos/cm	1	1	9/23/04	E25	2510 B
Surfactants (MBAS)	0.38	mg/L	0.1	0.1	9/22/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 03
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/21/04

Report Date: 10/15/04
EIS Sample No: 099155
EIS Order No: 040900216
Date Received: 9/21/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	32	col/100ml	1	1	9/21/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	<0.1	mg/L	0.1	0.1	9/28/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/22/04	E03	4500-NO3
Phosphorus,ortho	0.077	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Phosphorus,Total	0.12	mg/L	0.05	0.05	9/28/04	E03	4500-P F
Solids,Total Dissolved	300	mg/L	4	2	9/23/04	E21	2540 C
Solids,Total Suspended	<1	mg/L	1	1	9/21/04	E21	2540 D
Specific Conductance	420	umhos/cm	1	1	9/23/04	E25	2510 B
Surfactants (MBAS)	0.21	mg/L	0.1	0.1	9/22/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 04
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/21/04

Report Date: 10/15/04
EIS Sample No: 099156
EIS Order No: 040900216
Date Received: 9/21/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	118	col/100ml	1	1	9/21/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	1.1	mg/L	0.1	0.1	9/28/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	10/1/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/22/04	E03	4500-NO3
Phosphorus,ortho	0.10	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Phosphorus,Total	0.19	mg/L	0.05	0.05	9/28/04	E03	4500-P F
Solids,Total Dissolved	330	mg/L	4	2	9/23/04	E21	2540 C
Solids,Total Suspended	2	mg/L	1	1	9/21/04	E21	2540 D
Specific Conductance	450	umhos/cm	1	1	9/23/04	E25	2510 B
Surfactants (MBAS)	0.21	mg/L	0.1	0.1	9/22/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 05
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/21/04

Report Date: 10/15/04
EIS Sample No: 099157
EIS Order No: 040900216
Date Received: 9/21/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	580	col/100ml	1	1	9/21/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.22	mg/L	0.1	0.1	9/28/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/22/04	E03	4500-NO3
Phosphorus,ortho	0.087	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Phosphorus,Total	0.24	mg/L	0.05	0.05	9/28/04	E03	4500-P F
Solids,Total Dissolved	330	mg/L	4	2	9/23/04	E21	2540 C
Solids,Total Suspended	1	mg/L	1	1	9/21/04	E21	2540 D
Specific Conductance	520	umhos/cm	1	1	9/23/04	E25	2510 B
Surfactants (MBAS)	0.16	mg/L	0.1	0.1	9/22/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: 06
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/21/04

Report Date: 10/15/04
EIS Sample No: 099158
EIS Order No: 040900216
Date Received: 9/21/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	420	col/100ml	1	1	9/21/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.34	mg/L	0.1	0.1	9/28/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	0.22	mg/L	0.1	0.1	9/22/04	E03	4500-NO3
Phosphorus,ortho	0.092	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Phosphorus,Total	0.21	mg/L	0.05	0.05	9/28/04	E03	4500-P F
Solids,Total Dissolved	360	mg/L	4	2	9/23/04	E21	2540 C
Solids,Total Suspended	5	mg/L	1	1	9/21/04	E21	2540 D
Specific Conductance	490	umhos/cm	1	1	9/23/04	E25	2510 B
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	9/22/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: Duplicate
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/21/04

Report Date: 10/15/04
EIS Sample No: 099159
EIS Order No: 040900216
Date Received: 9/21/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	3800	col/100ml	1	1	9/21/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	0.78	mg/L	0.1	0.1	9/28/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	10/1/04	E03	4500-NH3
Nitrogen(Nitrate)	0.43	mg/L	0.1	0.1	9/22/04	E03	4500-NO3
Phosphorus,ortho	0.12	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Phosphorus,Total	0.32	mg/L	0.05	0.05	9/28/04	E03	4500-P F
Solids,Total Dissolved	400	mg/L	4	2	9/23/04	E21	2540 C
Solids,Total Suspended	23	mg/L	1	1	9/21/04	E21	2540 D
Specific Conductance	590	umhos/cm	1	1	9/23/04	E25	2510 B
Surfactants (MBAS)	0.14	mg/L	0.1	0.1	9/22/04	E21	5540 C

SAMPLE RESULTS

CLIENT SAMPLE ID: Rinse Water
CLIENT PROJECT: ECC-205 (j)
SAMPLE TYPE: Water(Non DW)
Date Sampled: 9/21/04

Report Date: 10/15/04
EIS Sample No: 099160
EIS Order No: 040900216
Date Received: 9/21/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Coliform,E.Coli	<1	col/100ml	1	1	9/21/04	E25	ColiscanMF
Nitrogen(Kjeldahl)Total	<0.1	mg/L	0.1	0.1	9/28/04	E03	4500-N B
Nitrogen(Ammonia)	<0.05	mg/L	0.05	0.05	9/21/04	E03	4500-NH3
Nitrogen(Nitrate)	<0.1	mg/L	0.1	0.1	9/22/04	E03	4500-NO3
Phosphorus,ortho	<0.07	mg/L	0.05	0.05	9/21/04	E03	4500-P F
Phosphorus,Total	<0.05	mg/L	0.05	0.05	9/28/04	E03	4500-P F
Solids,Total Dissolved	12	mg/L	4	2	9/23/04	E21	2540 C
Solids,Total Suspended	<1	mg/L	1	1	9/21/04	E21	2540 D
Specific Conductance	13.7	umhos/cm	1	1	9/23/04	E25	2510 B
Surfactants (MBAS)	<0.1	mg/L	0.1	0.1	9/22/04	E21	5540 C

QUALITY CONTROL DATA

LABORATORY FORTIFIED METHOD BLANK (LFB)

Matrix: Water

Test: Inorganics

Run Date:

EIS Lab #s With This LFB

99153-99160

Comments Concerning This LFB:

Parameter	Spike Amount	Matrix Spike		Duplicate Spike		RPD	Quality Control Limits				QC Batch
							RPD		% R		
		Result	% R	Result	% R		LCL	UCL	LCL	UCL	
Nitrogen(Ammonia)	4.4	3.702	84	3.824	87	3	0	20	80	120	QB03837
Nitrogen(Kjeldahl)Total	2.4	2.129	89	2.201	92	3	0	20	80	120	QB03837
Nitrogen(Nitrate)	8.4	8.45	101	8.461	101	0	0	20	80	120	QB03837
Phosphorus,ortho	0.82	0.683	83	0.695	85	2	0	20	80	120	QB03837
Phosphorus,Total	4.84	4	83	4.119	85	3	0	20	80	120	QB03837

LEGEND:

1. The LFB may be either a single spike or in dulicate and may or may not be in a QC Batch with a MS/DMS.
2. % R = Percent Recovery of Spike
3. RPD = Relative Percent Difference of the spike recoveries
4. LCL = Lower Control Limit
5. UCL = Upper Control Limit
6. Units are normally those shown in the Analysis Report and are always the same for the Spike and Duplicate Spike

QUALITY CONTROL DATA

METHOD BLANK RESULTS

Test: Inorganics

Matrix: Water

EIS Lab Numbers: 99153-99160

Comments :

Parameter	Result	Units	Date Analyzed	QC Batch	Detection Limit
Nitrogen(Ammonia)	<0.05	mg/L	10/1/04	QB03837	0.05
Nitrogen(Kjeldahl)Total	<0.1	mg/L	9/28/04	QB03837	0.1
Nitrogen(Nitrate)	<0.1	mg/L	9/22/04	QB03837	0.1
Phosphorus,ortho	<0.07	mg/L	9/21/04	QB03837	0.05
Phosphorus,Total	<0.05	mg/L	9/28/04	QB03837	0.05
Solids,Total Dissolved	12	mg/L	9/23/04	QB03850	2

QUALITY CONTROL DATA

MATRIX SPIKE / DUPLICATE MATRIX SPIKE (MS/DMS)

EIS Order: 040900216
QC Sample: 099159
Matrix: Water
Test: Inorganics

EIS Lab #s in This Batch: 99153-99160

Comments Concerning This QC Batch:

Parameter	Back-ground	Spike Amount	Matrix Spike		Duplicate Spike		RPD	Quality Control Limits				QC Batch
								RPD		% R		
			Result	% R	Result	% R		LCL	UCL	LCL	UCL	
Nitrogen(Ammonia)	<0.05	10	10.233	102	10.219	102	0	0	20	75	125	QB03837
Nitrogen(Kjeldahl)Total	0.78	5	5.588	96	5.613	97	1	0	20	75	125	QB03837
Nitrogen(Nitrate)	0.43	5	5.364	99	5.384	99	0	0	20	75	125	QB03837
Phosphorus,ortho	0.12	2	2.018	95	1.988	93	2	0	20	75	125	QB03837
Phosphorus,Total	0.32	2	2.401	104	2.315	100	4	0	20	75	125	QB03837

LEGEND:

1. Background = Sample Result
2. Spike amount may be adjusted for dilution used in sample analysis
3. % R = Percent Recovery of Spike
4. RPD = Relative Percent Difference of the spike recoveries
5. LCL = Lower Control Limit
6. UCL = Upper Control Limit
7. Units are normally those shown in the Analysis Report and are always the same for the Background and Spike

QUALITY CONTROL DATA

REPLICATE ANALYSIS - SEPARATE DIGESTIONS / EXTRACTIONS

EIS Order: 040900216
QC Sample: 099159
Matrix: Water

Comments Concerning This Analysis:

Parameter	Units	Original Analysis	Replicate Analysis	RPD	Advisory QC Limits	QC Batch
Coliform,E.Coli	col/100ml	3800			0 - 20	QB03837
Nitrogen(Ammonia)	mg/L	<0.05	<0.05	0.0	0 - 20	QB03837
Nitrogen(Kjeldahl)Total	mg/L	0.78	0.91	15.4	0 - 20	QB03837
Nitrogen(Nitrate)	mg/L	0.43	0.45	4.5	0 - 20	QB03837
Phosphorus,ortho	mg/L	0.12	0.12	0.0	0 - 20	QB03837
Phosphorus,Total	mg/L	0.32	0.35	9.0	0 - 20	QB03837
Solids,Total Suspended	mg/L	23	23	0.0	0 - 20	QB03837
Surfactants (MBAS)	mg/L	0.14	0.13	7.4	0 - 20	QB03837
Solids,Total Dissolved	mg/L	400	390	2.5	0 - 20	QB03850

LEGEND:

1. RPD = Relative Percent Difference
2. Advisory QC Limits may not be applicable when results are close to the Sample Detection Limits.

CHAIN OF CUSTODY RECORD

PROJ. NO: 200406.00 ECC Heaton Lake 2056 | PROJECT NAME: L-F Elkhart

SAMPLERS: (Print Name & Sign): Christopher J. Jeter Christopher J. Jeter

Lab Order ID: 0409216

FIELD ID	DATE	TIME	COMP	GRAB	STATION LOCATION	Total No. of Containers	E. coli	TSS, NO3, Sus. Solids	TKN, T. Phos, o-PO4, NH3	conductivity + TDS	Sample Type	TAT	Lab Number
01	9-21	9:30am		X	01	3	1	1	1	1			99153
02					02	3							99154
03					03	3							99155
04					04	3							99156
05					05	3							99157
06					06	3							99158
Duplicate					Duplicate	3							99159
Fresh Water					Rinse Water	3							99160

Relinquished By: (Signature)	Date	Time	Received By: (Signature)	EIS QUOTE NO:
Christopher J. Jeter	9-21-04	9:35a	Dan Shane	
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Ship To:
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	

NOTES: 1) **If you were issued a quote number, it must appear on this document.**
2) **Instructions & area for comments are on reverse side.**