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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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. Tozano 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.**

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