

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: GW-1

Collection Date: 04/08/13 **Collection Time:** 07:30

Sampled By: K. Tower

Lab Order Number: WW-130693

Date Received: 04/08/13

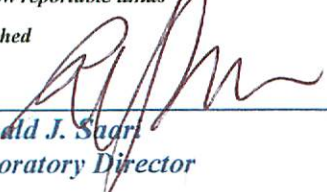
Sample Type	Sample Time	Sample Date	Comments			
GW-1 A	07:30	04/08/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	BRL	6.0	04/09/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	04/16/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/17/13	RIA*	*
Total Iron	mg/L	BRL	0.01	04/11/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/17/13	RIA*	245.1
Boron	mg/L	BRL	0.010	04/09/13	MC	200.7
Copper	mg/L	BRL	0.003	04/09/13	MC	200.7
Nitrate-N	mg/L	0.07	0.01	04/08/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/08/13	LL	300.0
Ammonia-N *	mg/L	0.10*	0.02	04/17/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	<0.2	0.2	04/11/13	MC	SM4500 NH3 C
Chloride	mg/L	<3.0	3.0	04/08/13	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	04/12/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	<0.2	0.2	04/11/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	04/16/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.17	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	<0.10	NA	04/30/13	MC	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	04/09/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	<0.27	NA	04/30/13	MC	Calculation

$$TN = DON (0.05) + PON (0.1) + NH_3 (0.05) + NO_3 (0.07) + NO_2 (0.002) =$$

$$(TN = TN (0.1) + NO_3 (0.07) + NO_2 (0.002) = 0.172) \quad 0.272$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Sagar
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07686

Sample # 001

SAMPLE DESCRIPTION: WW-130693 GW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2013 @ 07:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.10	0.02	mg/l	SM4500-NH3 B,G,H	4/17/2013 23:16	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/16/2013 9:00	TV
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/16/2013 9:00	TV
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07686

Sample # 001

SAMPLE DESCRIPTION: WW-130693 GW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2013 @ 07:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Styrene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Toluene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
MTBE	<2	2	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Acetone	<10	10	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	4/17/2013 12:15	KAC
Surrogates			RANGE	SW-846 8260B	4/17/2013 12:15	KAC
Dibromofluoromethane	104		86-118%	SW-846 8260B	4/17/2013 12:15	KAC
Toluene-d8	99		88-110%	SW-846 8260B	4/17/2013 12:15	KAC
4-Bromofluorobenzene	94		86-115%	SW-846 8260B	4/17/2013 12:15	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260B	4/17/2013 12:15	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/17/2013 14:04	JRW
Mercury Digestion	Digested			SW-846 7470A	4/17/2013 12:51	JRW

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: 2 SR

Collection Date: 04/08/13 **Collection Time:** 09:10

Sampled By: K. Tower

Lab Order Number: WW-130694

Date Received: 04/08/13

Sample Type	Sample Time	Sample Date	Comments			
2SR A	09:10	04/08/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	41	6.0	04/09/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	04/16/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	430 MTBE*	*	04/17/13	RIA*	*
Total Iron	mg/L	BRL	0.01	04/11/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/17/13	RIA*	245.1
Boron	mg/L	BRL	0.010	04/09/13	MC	200.7
Copper	mg/L	BRL	0.003	04/09/13	MC	200.7
Nitrate-N	mg/L	1.64	0.01	04/08/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/08/13	LL	300.0
Ammonia-N *	mg/L	<0.02*	0.02	04/17/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.36	0.2	04/11/13	MC	SM4500 NH3 C
Chloride	mg/L	9.2	3.0	04/08/13	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	04/12/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.29	0.2	04/11/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	04/16/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.64	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.29	NA	04/30/13	MC	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	04/09/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.07	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	1.93	NA	04/30/13	MC	Calculation

$$TN = DON(0.29) + PON(0.07) + NH_3(0.01) + NO_3(1.64) + NO_2(0.002) = 2.012$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Sapi

Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07686

Sample # 002

SAMPLE DESCRIPTION: WW-130694 2SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2013 @ 09:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,H	4/17/2013 23:16	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/16/2013 9:00	TV
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/16/2013 9:00	TV
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07686

Sample # 002

SAMPLE DESCRIPTION: WW-130694 2SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2013 @ 09:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Styrene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Toluene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
MTBE	430	20	ug/l	SW-846 8260B	4/18/2013 10:55	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Acetone	<10	10	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Surrogates			RANGE	SW-846 8260B	4/17/2013 12:41	KAC
Dibromofluoromethane	103		86-118%	SW-846 8260B	4/17/2013 12:41	KAC
Toluene-d8	96		88-110%	SW-846 8260B	4/17/2013 12:41	KAC
4-Bromofluorobenzene	95		86-115%	SW-846 8260B	4/17/2013 12:41	KAC
1,2 Dichloroethane-d4	103		80-120%	SW-846 8260B	4/17/2013 12:41	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/17/2013 14:05	JRW
Mercury Digestion	Digested			SW-846 7470A	4/17/2013 12:51	JRW



April 29, 2013

Mr. Ron Saari
Envirotech Laboratories, Inc.
8 Jan Sebastian Drive
Sandwich, MA 02563

RE: VOC Results
RIAL WO#: 1304-07686

Dear Mr. Saari:

The Quality Assurance Department at R.I. Analytical Laboratories, Inc. (RIAL) has completed its review of the VOC results of the referenced work order. This review was initiated in response to your request of April 29, 2013.

Our review found no errors or transcriptional errors in the sample's identifications, calculations, dilution or reporting forms in the sample. All Quality Assurance and Quality Control criteria were met for the analysis. The QC sets, which included a Method Blank and Laboratory Control Sample (LCS), were recovered within tolerance ranges. The sample was originally analyzed for MTBE with a result of 473 ug/L which was above the calibration range. From a second vial reanalysis was performed at a dilution with an MTBE result of 430 ug/L which confirms the original undiluted sample value. The results stand as reported.

We hope this information is helpful and should you have any other questions or seek further information, please do not hesitate to contact our Customer Service Department. We thank you for your continued business and look forward to servicing your analytical needs in the future.

Sincerely,
R.I. Analytical Laboratories, Inc.

Michael J. Hobin
Quality Assurance Manager

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River **Comments:**
Project Number: 2 DR
Collection Date: 04/08/13 **Collection Time:** 09:50
Sampled By: K. Tower
Lab Order Number: WW-130695
Date Received: 04/08/13

Sample Type	Sample Time	Sample Date	Comments			
2 DR A	09:50	04/08/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	147	6.0	04/09/13	KB	2540 C
Total Organic Carbon*	mg/L	0.77*	0.5	04/16/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/17/13	RIA*	*
Total Iron	mg/L	8.08	0.01	04/11/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/17/13	RIA*	245.1
Boron	mg/L	0.037	0.010	04/09/13	MC	200.7
Copper	mg/L	BRL	0.003	04/09/13	MC	200.7
Nitrate-N	mg/L	0.07	0.01	04/08/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/08/13	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	04/17/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.32	0.2	04/11/13	MC	SM4500 NH3 C
Chloride	mg/L	63.0	3.0	04/08/13	LL	300.0
Total Phosphorous (P)	mg/L	0.057	0.005	04/12/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.29	0.2	04/11/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.81*	0.5	04/16/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.11	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.25	NA	04/30/13	MC	Calculation
Ortho Phosphorous (P)	mg/L	0.031	0.005	04/09/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.36	NA	04/30/13	MC	Calculation

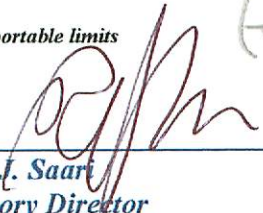
$$TN = DON (0.25) + PON (0.03) + NH_3 (0.04) + NO_3 (0.07) + NO_2 (0.002)$$

$$(TN = TKN (0.32) + NO_3 (0.07) + NO_2 (0.002)) = 0.392$$

$$= 0.392$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07686

Sample # 003

SAMPLE DESCRIPTION: WW-130695 2DR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2013 @ 09:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,G,H	4/17/2013 23:16	KTB
TOC Low Level	0.77	0.5	mg/l	SM-5310B	4/16/2013 9:00	TV
Dissolved TOC	0.81	0.5	mg/l	EPA 415.1	4/16/2013 9:00	TV
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07686

Sample # 003

SAMPLE DESCRIPTION: WW-130695 2DR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2013 @ 09:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Styrene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Toluene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
MTBE	<2	2	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Acetone	<10	10	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	4/17/2013 13:08	KAC
Surrogates			RANGE	SW-846 8260B	4/17/2013 13:08	KAC
Dibromofluoromethane	106		86-118%	SW-846 8260B	4/17/2013 13:08	KAC
Toluene-d8	93		88-110%	SW-846 8260B	4/17/2013 13:08	KAC
4-Bromofluorobenzene	93		86-115%	SW-846 8260B	4/17/2013 13:08	KAC
1,2 Dichloroethane-d4	102		80-120%	SW-846 8260B	4/17/2013 13:08	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/17/2013 14:06	JRW
Mercury Digestion	Digested			SW-846 7470A	4/17/2013 12:51	JRW

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: A21 **Comments:**

Project Number: GW Eel River

Collection Date: 04/08/13 **Collection Time:** 10:55

Sampled By: K. Tower

Lab Order Number: WW-130696

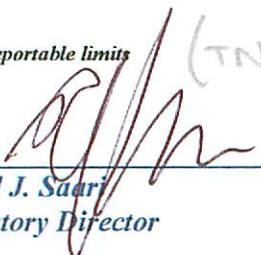
Date Received: 04/08/13

Sample Type	Sample Time	Sample Date	Comments			
A21 A	10:55	04/08/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	75	6.0	04/09/13	KB	2540 C
Total Organic Carbon*	mg/L	0.50*	0.5	04/16/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/17/13	RIA*	*
Total Iron	mg/L	2.08	0.01	04/11/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/17/13	RIA*	245.1
Boron	mg/L	0.013	0.010	04/09/13	MC	200.7
Copper	mg/L	BRL	0.003	04/09/13	MC	200.7
Nitrate-N	mg/L	0.09	0.01	04/08/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/08/13	LL	300.0
Ammonia-N *	mg/L	0.12*	0.02	04/17/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.40	0.2	04/11/13	MC	SM4500 NH3 C
Chloride	mg/L	27.7	3.0	04/08/13	LL	300.0
Total Phosphorous (P)	mg/L	0.024	0.005	04/12/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.39	0.2	04/11/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.59*	0.5	04/16/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.21	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.27	NA	04/30/13	MC	Calculation
Ortho Phosphorous (P)	mg/L	0.019	0.005	04/09/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.48	NA	04/30/13	MC	Calculation

$$TN = DON (0.27) + PON (0.01) + NH_3 (0.12) + NO_3 (0.09) + NO_2 (0.002) =$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Sauri
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07686

Sample # 004

SAMPLE DESCRIPTION: WW-130696 A21

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2013 @ 10:55

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.12	0.02	mg/l	SM4500-NH3 B,G,H	4/17/2013 23:16	KTB
TOC Low Level	0.50	0.5	mg/l	SM-5310B	4/16/2013 9:00	TV
Dissolved TOC	0.59	0.5	mg/l	EPA 415.1	4/16/2013 9:00	TV
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07686

Sample # 004

SAMPLE DESCRIPTION: WW-130696 A21

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2013 @ 10:55

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Styrene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Toluene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
MTBE	<2	2	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Acetone	<10	10	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	4/17/2013 13:35	KAC
Surrogates			RANGE	SW-846 8260B	4/17/2013 13:35	KAC
Dibromofluoromethane	105		86-118%	SW-846 8260B	4/17/2013 13:35	KAC
Toluene-d8	95		88-110%	SW-846 8260B	4/17/2013 13:35	KAC
4-Bromofluorobenzene	92		86-115%	SW-846 8260B	4/17/2013 13:35	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260B	4/17/2013 13:35	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/17/2013 14:08	JRW
Mercury Digestion	Digested			SW-846 7470A	4/17/2013 12:51	JRW

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: A 15

Collection Date: 04/08/13 **Collection Time:** 14:40

Sampled By: K. Tower

Lab Order Number: WW-130697

Date Received: 04/08/13

Sample Type	Sample Time	Sample Date	Comments			
A15 A	14:40	04/08/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	169	6.0	04/09/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	04/16/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/17/13	RIA*	*
Total Iron	mg/L	0.01	0.01	04/11/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/17/13	RIA*	245.1
Boron	mg/L	0.013	0.010	04/09/13	MC	200.7
Copper	mg/L	BRL	0.003	04/09/13	MC	200.7
Nitrate-N	mg/L	1.14	0.01	04/08/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/08/13	LL	300.0
Ammonia-N *	mg/L	<0.02*	0.02	04/17/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.24	0.2	04/11/13	MC	SM4500 NH3 C
Chloride	mg/L	66.5	3.0	04/08/13	LL	300.0
Total Phosphorous (P)	mg/L	0.048	0.005	04/12/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.21	0.2	04/11/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	04/16/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.14	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.21	NA	04/30/13	MC	Calculation
Ortho Phosphorous (P)	mg/L	0.037	0.005	04/09/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	1.35	NA	04/30/13	MC	Calculation

$$TN = DON(0.21) + PON(0.03) + NH_3(0.01) + NO_3(1.14) + NO_2(0.002) = 1.392$$

$$(TN = TKN(0.24) + NO_3(1.14) + NO_2(0.002) = 1.382)$$

BRL=below reportable limits

*see attached

By:


Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07686

Sample # 005

SAMPLE DESCRIPTION: WW-130697 A15

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2013 @ 14:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,H	4/17/2013 23:16	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/16/2013 9:00	TV
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/16/2013 9:00	TV
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07686

Sample # 005

SAMPLE DESCRIPTION: WW-130697 A15

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2013 @ 14:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Styrene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Toluene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
MTBE	<2	2	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Acetone	<10	10	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	4/17/2013 14:02	KAC
Surrogates			RANGE	SW-846 8260B	4/17/2013 14:02	KAC
Dibromofluoromethane	105		86-118%	SW-846 8260B	4/17/2013 14:02	KAC
Toluene-d8	97		88-110%	SW-846 8260B	4/17/2013 14:02	KAC
4-Bromofluorobenzene	92		86-115%	SW-846 8260B	4/17/2013 14:02	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260B	4/17/2013 14:02	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/17/2013 14:09	JRW
Mercury Digestion	Digested			SW-846 7470A	4/17/2013 12:51	JRW

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 4/11/2013
Date Reported: 4/22/2013
P.O. #:
Work Order #: 1304-07686

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

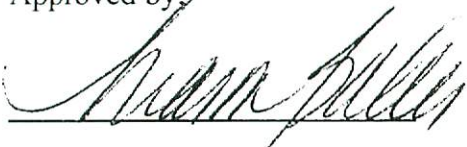
Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:



Sharon Baker
MIS / Data Reporting

enc: Chain of Custody

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: GW Eel River -Plymouth MA
Sampler: Kim Tower (KT)

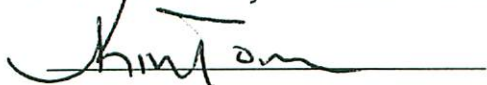
JW-130693
(U)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/8/13	0730	GW-1	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
4/8/13	0910	2SR	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

JW-130694
(V)

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time



Received By: Date/Time:

 4/8/13 1535

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: Kim Tower (KT)

JW-130695

(U)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/8/13	0950	2DR	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
4/8/13	1055	A21	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

JW-130694

(U)

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time



Received By: Date/Time:

 4/8/13 1535

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: Kim Tower (KT)

NW-130697

(U)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/8/13	1440	A15	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, O-Phosphate	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
			2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, O-Phosphate	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By:

Date/Time:

J. D'Amico 4/8/13 1535

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: DW-1

Collection Date: 4/9/13

Collection Time: 7:30

Sampled By: K. Tower

Lab Order Number: WW-130703

Duplicate for A13

Date Received: 04/09/13

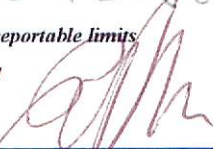
Sample Type	Sample Time	Sample Date	Comments			
DW-1 A	7:30	4/9/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	278	6.0	04/09/13	KB	2540 C
Total Organic Carbon*	mg/L	2.0*	0.5	04/16/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/17/13	RIA*	*
Total Iron	mg/L	2.06	0.01	04/11/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/18/13	RIA*	245.1
Boron	mg/L	0.015	0.010	04/12/13	MC	200.7
Copper	mg/L	BRL	0.003	04/12/13	MC	200.7
Nitrate-N	mg/L	0.22	0.01	04/10/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/10/13	LL	300.0
Ammonia-N *	mg/L	0.14*	0.02	04/17/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.43	0.2	04/11/13	MC	SM4500 NH3 C
Chloride	mg/L	167	3.0	04/11/13	LL	300.0
Total Phosphorous (P)	mg/L	0.025	0.005	04/12/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.42	0.2	04/11/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.0*	0.5	04/16/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.36	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.28	NA	04/30/13	MC	Calculation
Ortho Phosphorous (P)	mg/L	0.021	0.005	04/09/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.64	NA	04/30/13	MC	Calculation

$$TN = DN(0.25) + PON(0.01) + NH_3(0.14) + NO_3(0.22) + NO_2(0.002) = 0.652$$

$$(TN = TKN(0.43) + NO_3(0.22) + NO_2(0.002) = 0.652)$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07687

Sample # 001

SAMPLE DESCRIPTION: WW-130703 DW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/09/2013 @ 07:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.14	0.02	mg/l	SM4500-NH3 B,G,H	4/17/2013 23:16	KTB
TOC Low Level	2.0	0.5	mg/l	SM-5310B	4/16/2013 9:00	TV
Dissolved TOC	2.0	0.5	mg/l	EPA 415.1	4/16/2013 9:00	TV
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07687

Sample # 001

SAMPLE DESCRIPTION: WW-130703 DW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/09/2013 @ 07:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Styrene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Toluene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
MTBE	<2	2	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Acetone	<10	10	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	4/17/2013 14:29	KAC
Surrogates			RANGE	SW-846 8260B	4/17/2013 14:29	KAC
Dibromofluoromethane	106		86-118%	SW-846 8260B	4/17/2013 14:29	KAC
Toluene-d8	95		88-110%	SW-846 8260B	4/17/2013 14:29	KAC
4-Bromofluorobenzene	93		86-115%	SW-846 8260B	4/17/2013 14:29	KAC
1,2 Dichloroethane-d4	102		80-120%	SW-846 8260B	4/17/2013 14:29	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/18/2013 11:04	JRW
Mercury Digestion	Digested			SW-846 7470A	4/18/2013 10:13	JRW

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: A-13

Collection Date: 4/9/13 **Collection Time:** 10:30

Sampled By: K. Tower

Lab Order Number: WW-130704

Date Received: 04/09/13

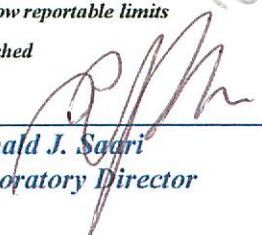
Sample Type	Sample Time	Sample Date	Comments			
A-13 A	10:30	4/9/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	273	6.0	04/09/13	KB	2540 C
Total Organic Carbon*	mg/L	2.0*	0.5	04/16/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/17/13	RIA*	*
Total Iron	mg/L	2.19	0.01	04/11/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/18/13	RIA*	245.1
Boron	mg/L	0.016	0.010	04/12/13	MC	200.7
Copper	mg/L	BRL	0.003	04/12/13	MC	200.7
Nitrate-N	mg/L	0.14	0.01	04/10/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/10/13	LL	300.0
Ammonia-N *	mg/L	0.13*	0.02	04/17/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.41	0.2	04/11/13	MC	SM4500 NH3 C
Chloride	mg/L	164	3.0	04/11/13	LL	300.0
Total Phosphorous (P)	mg/L	0.022	0.005	04/12/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.39	0.2	04/11/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.0*	0.5	04/16/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.27	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.26	NA	04/30/13	MC	Calculation
Ortho Phosphorous (P)	mg/L	0.021	0.005	04/09/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.53	NA	04/30/13	MC	Calculation

$$TN = DON(0.26) + PON(0.02) + NH_3(0.13) + NO_3(0.14) + NO_2(0.002) =$$

$$TN = 0.41 + NO_3(0.14) + NO_2(0.002) = 0.552$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Sauri
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07687

Sample # 002

SAMPLE DESCRIPTION: WW-130704 A13

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/09/2013 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.13	0.02	mg/l	SM4500-NH3 B,G,H	4/17/2013 23:16	KTB
TOC Low Level	2.0	0.5	mg/l	SM-5310B	4/16/2013 9:00	TV
Dissolved TOC	2.0	0.5	mg/l	EPA 415.1	4/16/2013 9:00	TV
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07687

Sample # 002

SAMPLE DESCRIPTION: WW-130704 A13

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/09/2013 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Styrene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Toluene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
MTBE	<2	2	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Acetone	<10	10	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	4/17/2013 14:55	KAC
Surrogates			RANGE	SW-846 8260B	4/17/2013 14:55	KAC
Dibromofluoromethane	106		86-118%	SW-846 8260B	4/17/2013 14:55	KAC
Toluene-d8	95		88-110%	SW-846 8260B	4/17/2013 14:55	KAC
4-Bromofluorobenzene	92		86-115%	SW-846 8260B	4/17/2013 14:55	KAC
1,2 Dichloroethane-d4	103		80-120%	SW-846 8260B	4/17/2013 14:55	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/18/2013 11:05	JRW
Mercury Digestion	Digested			SW-846 7470A	4/18/2013 10:13	JRW

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: A 17

Collection Date: 4/9/13 **Collection Time:** 13:05

Sampled By: K. Tower

Lab Order Number: WW-130705

Date Received: 04/09/13

Sample Type	Sample Time	Sample Date	Comments			
A 17 A	13:05	4/9/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	154	6.0	04/09/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	04/16/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/17/13	RIA*	*
Total Iron	mg/L	0.01	0.01	04/11/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/18/13	RIA*	245.1
Boron	mg/L	BRL	0.010	04/12/13	MC	200.7
Copper	mg/L	BRL	0.003	04/12/13	MC	200.7
Nitrate-N	mg/L	1.43	0.01	04/10/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/10/13	LL	300.0
Ammonia-N *	mg/L	<0.02*	0.02	04/17/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.23	0.2	04/11/13	MC	SM4500 NH3 C
Chloride	mg/L	68.5	3.0	04/10/13	LL	300.0
Total Phosphorous (P)	mg/L	0.014	0.005	04/12/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.22	0.2	04/11/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	04/16/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.43	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.22	NA	04/30/13	MC	Calculation
Ortho Phosphorous (P)	mg/L	0.014	0.005	04/09/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	1.65	NA	04/30/13	MC	Calculation

$$TN = DON(0.22) + PON(0.01) + NH_3(0.01) + NO_3(1.43) + NO_2(0.002) =$$

$$(TN = TLN(0.23) + NO_3(1.43) + NO_2(0.002) = 1.662) \quad 1.672$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Sauri
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07687

Sample # 003

SAMPLE DESCRIPTION: WW-130705 A17

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/09/2013 @ 13:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,H	4/17/2013 23:16	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/16/2013 9:00	TV
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/16/2013 9:00	TV
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07687

Sample # 003

SAMPLE DESCRIPTION: WW-130705 A17

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/09/2013 @ 13:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Styrene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Toluene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
MTBE	<2	2	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Acetone	<10	10	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	4/17/2013 15:22	KAC
Surrogates			RANGE	SW-846 8260B	4/17/2013 15:22	KAC
Dibromofluoromethane	107		86-118%	SW-846 8260B	4/17/2013 15:22	KAC
Toluene-d8	97		88-110%	SW-846 8260B	4/17/2013 15:22	KAC
4-Bromofluorobenzene	92		86-115%	SW-846 8260B	4/17/2013 15:22	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260B	4/17/2013 15:22	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/18/2013 11:10	JRW
Mercury Digestion	Digested			SW-846 7470A	4/18/2013 10:13	JRW

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River
Project Number: A 19
Collection Date: 4/9/13
Sampled By: K Tower
Lab Order Number: WW-130706
Date Received: 04/09/13

Comments:

Sample Type	Sample Time	Sample Date	Comments			
A 19 A	14:10	4/9/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	68	6.0	04/09/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	04/16/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/17/13	RIA*	*
Total Iron	mg/L	0.02	0.01	04/11/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/18/13	RIA*	245.1
Boron	mg/L	0.015	0.010	04/12/13	MC	200.7
Copper	mg/L	BRL	0.003	04/12/13	MC	200.7
Nitrate-N	mg/L	0.84	0.01	04/10/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/10/13	LL	300.0
Ammonia-N *	mg/L	<0.02*	0.02	04/17/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.27	0.2	04/11/13	NEC*	SM4500 NH3 C
Chloride	mg/L	26.0	3.0	04/10/13	LL	300.0
Total Phosphorous (P)	mg/L	0.008	0.005	04/12/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.23	0.2	04/11/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	04/16/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.84	NA	04/30/13	NEC*	Calculation
Dissolved Organic Nitrogen	mg/L	0.23	NA	04/30/13	NEC*	Calculation
Ortho Phosphorous (P)	mg/L	0.008	0.005	04/09/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	NEC*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.04	NA	04/30/13	NEC*	Calculation
Total Dissolved Nitrogen	mg/L	1.07	NA	04/30/13	NEC*	Calculation

$$TN = DON(0.23) + PON(0.04) + NH_3(0.01) + NO_3(0.84) + NO_2(0.002) = 1.122$$

$$(TN = TLN(0.27) + NO_3(0.84) + NO_2(0.002) = 1.112)$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07687

Sample # 004

SAMPLE DESCRIPTION: WW-130706 A19

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/09/2013 @ 14:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,H	4/17/2013 23:16	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/16/2013 9:00	TV
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/16/2013 9:00	TV
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07687

Sample # 004

SAMPLE DESCRIPTION: WW-130706 A19

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/09/2013 @ 14:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Styrene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Toluene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
MTBE	<2	2	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Acetone	<10	10	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	4/17/2013 15:48	KAC
Surrogates			RANGE	SW-846 8260B	4/17/2013 15:48	KAC
Dibromofluoromethane	106		86-118%	SW-846 8260B	4/17/2013 15:48	KAC
Toluene-d8	98		88-110%	SW-846 8260B	4/17/2013 15:48	KAC
4-Bromofluorobenzene	92		86-115%	SW-846 8260B	4/17/2013 15:48	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260B	4/17/2013 15:48	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/18/2013 11:11	JRW
Mercury Digestion	Digested			SW-846 7470A	4/18/2013 10:13	JRW

6

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/9/13	0730	DW-1	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
4/9/13	1030	A13	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

KTown

Received By: Date/Time:

R. Davally 04/09/13 1545

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/9/13	1305	A17	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HN03
			1	Plastic	TOC	H2SO4
4/9/13	1410	A19	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HN03
			1	Plastic	TOC	H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, Orthophosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Kon

Pdavalley 04/09/13 1545

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Bradford

Comments:

Project Number: NA

Collection Date: 4/10/13 **Collection Time:** 8:15

Sampled By: K. Tower

Lab Order Number: WW-130717

Date Received: 04/10/13

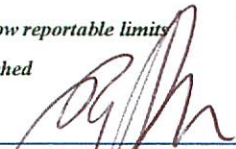
Sample Type	Sample Time	Sample Date	Comments			
Bradford A	8:15	4/10/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	42	6.0	04/15/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	04/16/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/17/13	RIA*	*
Total Iron	mg/L	2.50	0.01	04/11/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/18/13	RIA*	245.1
Boron	mg/L	0.016	0.010	04/12/13	MC	200.7
Copper	mg/L	0.003	0.003	04/12/13	MC	200.7
Nitrate-N	mg/L	0.11	0.01	04/10/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/10/13	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	04/17/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.30	0.2	04/11/13	MC	SM4500 NH3 C
Chloride	mg/L	12.8	3.0	04/10/13	LL	300.0
Total Phosphorous (P)	mg/L	0.011	0.005	04/12/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.24	0.2	04/11/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.6*	0.5	04/16/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.14	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.21	NA	04/30/13	MC	Calculation
Ortho Phosphorous (P)	mg/L	0.010	0.005	04/11/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.06	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.35	NA	04/30/13	MC	Calculation

$$TN = DON(0.21) + PON(0.06) + NH_3(0.03) + NO_3(0.11) + NO_2(0.002) = 0.412$$

$$(TN = TKLN(0.30) + NO_3(0.11) + NO_2(0.002) = 0.412)$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saafi

Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07685

Sample # 001

SAMPLE DESCRIPTION: WW-130717 BRADFORD

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/10/2013 @ 08:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,G,H	4/17/2013 23:16	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/16/2013 9:00	TV
Dissolved TOC	0.6	0.5	mg/l	EPA 415.1	4/16/2013 9:00	TV
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07685

Sample # 001

SAMPLE DESCRIPTION: WW-130717 BRADFORD

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/10/2013 @ 08:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Styrene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Toluene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
MTBE	<2	2	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Acetone	<10	10	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	4/17/2013 16:15	KAC
Surrogates			RANGE	SW-846 8260B	4/17/2013 16:15	KAC
Dibromofluoromethane	107		86-118%	SW-846 8260B	4/17/2013 16:15	KAC
Toluene-d8	95		88-110%	SW-846 8260B	4/17/2013 16:15	KAC
4-Bromofluorobenzene	93		86-115%	SW-846 8260B	4/17/2013 16:15	KAC
1,2 Dichloroethane-d4	102		80-120%	SW-846 8260B	4/17/2013 16:15	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/18/2013 11:13	JRW
Mercury Digestion	Digested			SW-846 7470A	4/18/2013 10:13	JRW

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, May 06, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: 7SR

Collection Date: 4/10/13 Collection Time: 10:00

Sampled By: K. Tower

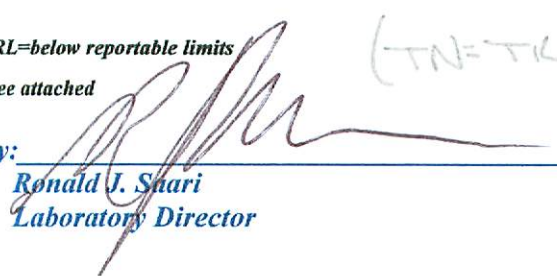
Lab Order Number: WW-130718

Date Received: 04/10/13

Sample Type	Sample Time	Sample Date	Comments			
7 SR A	10:00	4/10/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	196	6.0	04/15/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	04/16/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/17/13	RIA*	*
Total Iron	mg/L	BRL	0.01	04/11/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/18/13	RIA*	245.1
Boron	mg/L	BRL	0.010	04/11/13	MC	200.7
Copper	mg/L	BRL	0.003	04/11/13	MC	200.7
Nitrate-N	mg/L	0.10	0.01	04/10/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/10/13	LL	300.0
Ammonia-N *	mg/L	<0.02*	0.02	04/17/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.21	0.2	04/11/13	MC	SM4500 NH3 C
Chloride	mg/L	114	3.0	04/11/13	LL	300.0
Total Phosphorous (P)	mg/L	0.008	0.005	04/12/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.15	0.2	04/11/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	04/16/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.10	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.15	NA	04/30/13	MC	Calculation
Ortho Phosphorous (P)	mg/L	0.008	0.005	04/11/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.06	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.25	NA	04/30/13	MC	Calculation

BRL=below reportable limits

*see attached

By: 

Ronald J. Shari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07685

Sample # 002

SAMPLE DESCRIPTION: WW-130718 7 SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/10/2013 @ 10:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,H	4/17/2013 23:16	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/16/2013 9:00	TV
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/16/2013 9:00	TV
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07685

Sample # 002

SAMPLE DESCRIPTION: WW-130718 7 SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/10/2013 @ 10:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Styrene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Toluene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
MTBE	<2	2	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Acetone	<10	10	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	4/17/2013 16:42	KAC
Surrogates			RANGE	SW-846 8260B	4/17/2013 16:42	KAC
Dibromofluoromethane	107		86-118%	SW-846 8260B	4/17/2013 16:42	KAC
Toluene-d8	98		88-110%	SW-846 8260B	4/17/2013 16:42	KAC
4-Bromofluorobenzene	92		86-115%	SW-846 8260B	4/17/2013 16:42	KAC
1,2 Dichloroethane-d4	103		80-120%	SW-846 8260B	4/17/2013 16:42	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/18/2013 11:16	JRW
Mercury Digestion	Digested			SW-846 7470A	4/18/2013 10:13	JRW

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: GW Eel River
Project Number: 5S
Collection Date: 4/10/13
Sampled By: K. Tower
Lab Order Number: WW-130719
Date Received: 04/10/13

Comments:

Sample Type	Sample Time	Sample Date	Comments			
5 S A	12:00	4/10/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	674	6.0	04/15/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	04/16/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/17/13	RIA*	*
Total Iron	mg/L	0.37	0.01	04/11/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/18/13	RIA*	245.1
Boron	mg/L	0.013	0.010	04/12/13	MC	200.7
Copper	mg/L	BRL	0.003	04/12/13	MC	200.7
Nitrate-N	mg/L	0.39	0.01	04/10/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/10/13	LL	300.0
Ammonia-N *	mg/L	<0.02*	0.02	04/17/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.29	0.2	04/11/13	MC	SM4500 NH3 C
Chloride	mg/L	215	3.0	04/11/13	LL	300.0
Total Phosphorous (P)	mg/L	0.020	0.005	04/12/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.29	0.2	04/11/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	04/16/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.39	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.29	NA	04/30/13	MC	Calculation
Ortho Phosphorous (P)	mg/L	0.012	0.005	04/11/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.68	NA	04/30/13	MC	Calculation

$$TN = DON(0.29) + PON(0.1) + NH_3(0.01) + NO_3(0.39) + NO_2(0.002) = 0.792$$

$$TN = TLN(0.29) + NO_3(0.39) + NO_2(0.002) = 0.682$$

BRL=below reportable limits

*see attached

By:

Ronald J. Scam
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07685

Sample # 003

SAMPLE DESCRIPTION: WW-130719 5 S

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/10/2013 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,H	4/17/2013 23:16	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/16/2013 9:00	TV
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/16/2013 9:00	TV
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07685

Sample # 003

SAMPLE DESCRIPTION: WW-130719 5 S

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/10/2013 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Styrene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Toluene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
MTBE	<2	2	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Acetone	<10	10	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	4/17/2013 17:09	KAC
Surrogates			RANGE	SW-846 8260B	4/17/2013 17:09	KAC
Dibromofluoromethane	107		86-118%	SW-846 8260B	4/17/2013 17:09	KAC
Toluene-d8	98		88-110%	SW-846 8260B	4/17/2013 17:09	KAC
4-Bromofluorobenzene	91		86-115%	SW-846 8260B	4/17/2013 17:09	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260B	4/17/2013 17:09	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/18/2013 11:21	JRW
Mercury Digestion	Digested			SW-846 7470A	4/18/2013 10:13	JRW

[illegible]

1304-07685
Envirotech Laboratories, Inc.
Project: ETL1
Date/Time Sampled: 4/10/13 8:15
ID: WW-130717 BRADFORD

WG-NH3WW PK-HGWW
OM-OCCLWW MP-HG-W
OS-8260WEX ZZ-LABEL
Preservative: ZZ-MINIMUM
NONE WP-NH3W



CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 4/11/2013
Date Reported: 4/22/2013
P.O. #:
Work Order #: 1304-07685

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

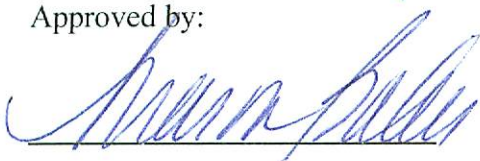
Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:



Sharon Baker
MIS / Data Reporting

enc: Chain of Custody

6

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: GW Eel River -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/10/13	0815	Bradford	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, O-Phosphate	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
4/10/13	1000	7SR	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, O-Phosphate	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

R. D. Valle 04/10/13 1250

2

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: Kim Tower (KT)

VW 130719

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/10/13	1200	SS	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
			2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Edwards 04/10/13 1250

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

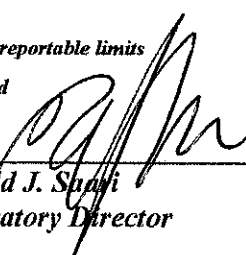
ProjectName: GW Eel River
Project Number: 2 SR
Collection Date: 04/08/13 **Collection Time:** 09:10
Sampled By: K. Tower
Lab Order Number: WW-130694
Date Received: 04/08/13

Comments:

Sample Type	Sample Time	Sample Date	Comments			
2SR A	09:10	04/08/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	41	6.0	04/09/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	04/16/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	430 MTBE*	*	04/17/13	RIA*	*
Total Iron	mg/L	BRL	0.01	04/11/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/17/13	RIA*	245.1
Boron	mg/L	BRL	0.010	04/09/13	MC	200.7
Copper	mg/L	BRL	0.003	04/09/13	MC	200.7
Nitrate-N	mg/L	1.64	0.01	04/08/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/08/13	LL	300.0
Ammonia-N *	mg/L	<0.02*	0.02	04/17/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.36	0.2	04/11/13	MC	SM4500 NH3 C
Chloride	mg/L	9.2	3.0	04/08/13	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	04/12/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.29	0.2	04/11/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	04/16/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.64	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.29	NA	04/30/13	MC	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	04/09/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.07	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	1.93	NA	04/30/13	MC	Calculation

BRL=below reportable limits

*see attached

By: 
 Ronald J. Sisti
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07686

Sample # 002

SAMPLE DESCRIPTION: WW-130694 2SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2013 @ 09:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Styrene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Toluene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2,4 Trimethylbenzene	<1	1	ug/l	SW 846 8260B	4/17/2013 12:41	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
MTBE	430	20	ug/l	SW-846 8260B	4/18/2013 10:55	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Acetone	<10	10	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Surrogates			RANGE	SW-846 8260B	4/17/2013 12:41	KAC
Dibromofluoromethane	103		86-118%	SW-846 8260B	4/17/2013 12:41	KAC
Toluene-d8	96		88-110%	SW-846 8260B	4/17/2013 12:41	KAC
4-Bromofluorobenzene	95		86-115%	SW-846 8260B	4/17/2013 12:41	KAC
1,2 Dichloroethane-d4	103		80-120%	SW-846 8260B	4/17/2013 12:41	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/17/2013 14:05	JRW
Mercury Digestion	Digested			SW-846 7470A	4/17/2013 12:51	JRW

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/11/2013

Work Order #: 1304-07686

Sample # 002

SAMPLE DESCRIPTION: WW-130694 2SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2013 @ 09:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,H	4/17/2013 23:16	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/16/2013 9:00	TV
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/16/2013 9:00	TV
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	4/17/2013 12:41	KAC



April 29, 2013

Mr. Ron Saari
Envirotech Laboratories, Inc.
8 Jan Sebastian Drive
Sandwich, MA 02563

RE: VOC Results
RIAL WO#: 1304-07686

Dear Mr. Saari:

The Quality Assurance Department at R.I. Analytical Laboratories, Inc. (RIAL) has completed its review of the VOC results of the referenced work order. This review was initiated in response to your request of April 29, 2013.

Our review found no errors or transcriptional errors in the sample's identifications, calculations, dilution or reporting forms in the sample. All Quality Assurance and Quality Control criteria were met for the analysis. The QC sets, which included a Method Blank and Laboratory Control Sample (LCS), were recovered within tolerance ranges. The sample was originally analyzed for MTBE with a result of 473 ug/L which was above the calibration range. From a second vial reanalysis was performed at a dilution with an MTBE result of 430 ug/L which confirms the original undiluted sample value. The results stand as reported.

We hope this information is helpful and should you have any other questions or seek further information, please do not hesitate to contact our Customer Service Department. We thank you for your continued business and look forward to servicing your analytical needs in the future.

Sincerely,
R.I. Analytical Laboratories, Inc.

Michael J. Hobin
Quality Assurance Manager

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: Kim Tower (KT)

WW-130693

(V)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/8/13	0730	GW-1	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, O-Phosphate	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
4/8/13	0910	2SL	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, O-Phosphate	NONE
			1	glass	O-Phosphate	
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

WW-130694

(V)

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

P. Saville 4/8/13 1535

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, April 30, 2013

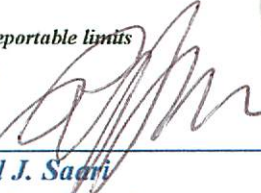
Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-12
Collection Date: 04/02/13 **Collection Time:** 1445
Sampled By: K. Tower
Lab Order Number: WW-130647
Date Received: 04/02/13

Sample Type	Sample Time	Sample Date	Comments			
S-12 A	14:45	4/2/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	41	6.0	04/04/13	KB	2540 C
Total Organic Carbon*	mg/L	1.7*	0.5	04/09/13	RIA*	SM 5310 C
Boron	mg/L	0.028	0.010	04/09/13	MC	200.7
Nitrate-N	mg/L	0.27	0.01	04/02/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/02/13	LL	300.0
Ammonia-N *	mg/L	<0.02*	0.02	04/10/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.35	0.2	04/04/13	MC	SM4500 NH3 C
Chloride	mg/L	17.9	3.0	04/02/13	LL	300.0
Total Phosphorous (P)	mg/L	0.019	0.005	04/05/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.34	0.2	04/04/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.7*	0.5	04/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.27	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.34	NA	04/30/13	MC	Calculation
Chlorophyll-a	*	8.25*	*	04/05/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.008	0.005	04/02/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.61	NA	04/30/13	MC	Calculation

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1305626
Report Date: 04/09/13

SAMPLE RESULTS

Lab ID: L1305626-01
Client ID: WW-130647
Sample Location: S-12
Matrix: Water

Date Collected: 04/02/13 14:45
Date Received: 04/03/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	8.25		mg/m3	2.00	NA	1	04/03/13 16:20	04/05/13 07:30	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-8A

Collection Date: 04/02/13 **Collection Time:** 1500

Sampled By: K. Tower

Lab Order Number: WW-130648

Date Received: 04/02/13

Sample Type	Sample Time	Sample Date	Comments			
S-8A A	15:00	4/2/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	41	6.0	04/04/13	KB	2540 C
Total Organic Carbon*	mg/L	1.7*	0.5	04/09/13	RIA*	SM 5310 C
Boron	mg/L	0.025	0.010	04/09/13	MC	200.7
Nitrate-N	mg/L	0.23	0.01	04/02/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/02/13	LL	300.0
Ammonia-N *	mg/L	<0.02*	0.02	04/10/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.38	0.2	04/04/13	MC	SM4500 NH3 C
Chloride	mg/L	17.8	3.0	04/02/13	LL	300.0
Total Phosphorous (P)	mg/L	0.023	0.005	04/05/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	<0.2	0.2	04/04/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.7*	0.5	04/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.23	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	<0.18	NA	04/30/13	MC	Calculation
Chlorophyll-a	*	8.50*	*	04/05/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.008	0.005	04/02/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.18	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.23	NA	04/30/13	MC	Calculation

$$TN = DON(0.09) + PON(0.09) + NH_3(0.01) + NO_3(0.23) + NO_2(0.002) = 0.422$$

$$(TN = TKN(0.38) + NO_3(0.23) + NO_2(0.002) = 0.612)$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1305626
Report Date: 04/09/13

SAMPLE RESULTS

Lab ID: L1305626-02
Client ID: WW-130648
Sample Location: S-8A
Matrix: Water

Date Collected: 04/02/13 15:00
Date Received: 04/03/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	8.50		mg/m3	2.00	NA	1	04/03/13 16:20	04/05/13 07:30	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-8B

Collection Date: 04/02/13 **Collection Time:** 1000

Sampled By: K. Tower

Lab Order Number: WW-130649

Date Received: 04/02/13

Sample Type	Sample Time	Sample Date	Comments			
S-8B A	10:00	4/2/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	BRL	6.0	04/04/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	04/09/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	04/09/13	MC	200.7
Nitrate-N	mg/L	<0.01	0.01	04/02/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/02/13	LL	300.0
Ammonia-N *	mg/L	0.07*	0.02	04/10/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	<0.20	0.2	04/04/13	MC	SM4500 NH3 C
Chloride	mg/L	BRL	3.0	04/02/13	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	04/05/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	<0.20	0.2	04/04/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	04/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.07	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	<0.13	NA	04/30/13	MC	Calculation
Chlorophyll-a	*	ND*	*	04/05/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	04/02/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	BRL	NA	04/30/13	MC	Calculation

$$TN = DON(0.065) + PON(0.1) + NH_3(0.07) + NO_3(0.005) + NO_2(0.002) = 0.242$$

$$(TN = TLN(0.1) + NO_3(0.005) + NO_2(0.002) = < 0.107)$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saafi
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1305626
Report Date: 04/09/13

SAMPLE RESULTS

Lab ID: L1305626-03
Client ID: WW-130649
Sample Location: S-8B
Matrix: Water

Date Collected: 04/02/13 10:00
Date Received: 04/03/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	ND		mg/m3	2.00	NA	1	04/03/13 16:20	04/05/13 07:30	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, April 29, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-5B
Collection Date: 04/02/13 **Collection Time:** 1020
Sampled By: K. Tower
Lab Order Number: WW-130650
Date Received: 04/02/13

Sample Type	Sample Time	Sample Date	Comments			
S-5B A	10:20	4/2/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	354	6.0	04/04/13	KB	2540 C
Total Organic Carbon*	mg/L	2.1*	0.5	04/09/13	RIA*	SM 5310 C
Boron	mg/L	0.047	0.010	04/09/13	MC	200.7
Nitrate-N	mg/L	0.17	0.01	04/02/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/02/13	LL	300.0
Ammonia-N *	mg/L	<0.02*	0.02	04/10/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.59	0.2	04/04/13	MC	SM4500 NH3 C
Chloride	mg/L	199	3.0	04/03/13	LL	300.0
Total Phosphorous (P)	mg/L	0.027	0.005	04/05/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.37	0.2	04/04/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.0*	0.5	04/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.17	NA	04/29/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.37	NA	04/29/13	MC	Calculation
Chlorophyll-a	*	16.4*	*	04/05/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.006	0.005	04/02/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	04/29/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.22	NA	04/29/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.54	NA	04/29/13	MC	Calculation

$$TN = DON(0.37) + PON(0.22) + NH_3(0.01) + NO_3(0.17) + NO_2(0.002) = 0.772$$

$$(TN = TKN(0.59) + NO_3(0.17) + NO_2(0.002) = 0.762)$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1305626
Report Date: 04/09/13

SAMPLE RESULTS

Lab ID: L1305626-04
Client ID: WW-130650
Sample Location: S-5B
Matrix: Water

Date Collected: 04/02/13 10:20
Date Received: 04/03/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	16.4		mg/m3	2.00	NA	1	04/03/13 16:20	04/05/13 07:30	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-4A
Collection Date: 04/02/13 **Collection Time:** 1050
Sampled By: K. Tower
Lab Order Number: WW-130651
Date Received: 04/02/13

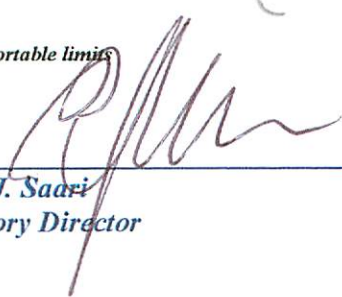
Sample Type	Sample Time	Sample Date	Comments			
S-4A A	10:50	4/2/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	52	6.0	04/04/13	KB	2540 C
Total Organic Carbon*	mg/L	2.5*	0.5	04/09/13	RIA*	SM 5310 C
Boron	mg/L	0.013	0.010	04/09/13	MC	200.7
Nitrate-N	mg/L	0.11	0.01	04/03/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/03/13	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	04/10/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.51	0.2	04/04/13	MC	SM4500 NH3 C
Chloride	mg/L	28.4	3.0	04/03/13	LL	300.0
Total Phosphorous (P)	mg/L	0.024	0.005	04/05/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.41	0.2	04/04/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.5*	0.5	04/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.14	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.38	NA	04/30/13	MC	Calculation
Chlorophyll-a	*	4.98*	*	04/05/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.007	0.005	04/02/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.1	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.52	NA	04/30/13	MC	Calculation

$$TN = DON(0.38) + PON(0.1) + NH_3(0.03) + NO_3(0.11) + NO_2(0.002) = 0.622$$

$$(TN = TKN(0.51) + NO_3(0.11) + NO_2(0.002) = 0.622)$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1305626
Report Date: 04/09/13

SAMPLE RESULTS

Lab ID: L1305626-05
Client ID: WW-130651
Sample Location: S-4A
Matrix: Water

Date Collected: 04/02/13 10:50
Date Received: 04/03/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	4.98		mg/m3	2.00	NA	1	04/03/13 16:20	04/05/13 07:30	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, May 02, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-3A

Collection Date: 04/02/13 **Collection Time:** 1105

Sampled By: K. Tower

Lab Order Number: WW-130652

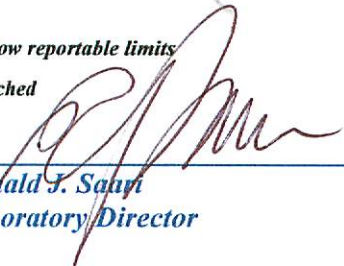
Date Received: 04/02/13

Sample Type	Sample Time	Sample Date	Comments			
S-3A A	11:05	4/2/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	72	6.0	04/04/13	KB	2540 C
Total Organic Carbon*	mg/L	1.6*	0.5	04/09/13	RIA*	SM 5310 C
Boron	mg/L	0.014	0.010	04/09/13	MC	200.7
Nitrate-N	mg/L	0.27	0.01	04/03/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/03/13	LL	300.0
Ammonia-N *	mg/L	<0.02*	0.02	04/10/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.44	0.2	04/04/13	MC	SM4500 NH3 C
Chloride	mg/L	33.3	3.0	04/03/13	LL	300.0
Total Phosphorous (P)	mg/L	0.029	0.005	04/05/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.29	0.2	04/04/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.3*	0.5	04/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.27	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.29	NA	04/30/13	MC	Calculation
Chlorophyll-a	*	11.7*	*	04/05/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.008	0.005	04/02/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.15	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.56	NA	04/30/13	MC	Calculation

$$\begin{aligned} \text{TN} &= \text{DON}(0.29) + \text{PON}(0.15) + \text{NH}_3(0.01) + \text{NO}_3(0.27) + \text{NO}_2(0.002) \\ &= 0.722 \\ (\text{TN} &= \text{TKN}(0.44) + \text{NO}_3(0.27) + \text{NO}_2(0.002) = 0.712) \end{aligned}$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Sauri
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1305626
Report Date: 04/09/13

SAMPLE RESULTS

Lab ID: L1305626-06
Client ID: WW-130652
Sample Location: S-3A
Matrix: Water

Date Collected: 04/02/13 11:05
Date Received: 04/03/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	11.7		mg/m3	2.00	NA	1	04/03/13 16:20	04/05/13 07:30	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-2C

Collection Date: 04/02/13 **Collection Time:** 1415

Sampled By: K. Tower

Lab Order Number: WW-130653

Date Received: 04/02/13

Sample Type	Sample Time	Sample Date	Comments			
S-2C A	14:15	4/2/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	60	6.0	04/04/13	KB	2540 C
Total Organic Carbon*	mg/L	1.6*	0.5	04/09/13	RIA*	SM 5310 C
Boron	mg/L	0.013	0.010	04/09/13	MC	200.7
Nitrate-N	mg/L	<0.01	0.01	04/03/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/03/13	LL	300.0
Ammonia-N *	mg/L	0.02*	0.02	04/10/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.41	0.2	04/04/13	MC	SM4500 NH3 C
Chloride	mg/L	27.3	3.0	04/03/13	LL	300.0
Total Phosphorous (P)	mg/L	0.024	0.005	04/05/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.30	0.2	04/04/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.6*	0.5	04/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	<0.02	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.28	NA	04/30/13	MC	Calculation
Chlorophyll-a	*	18.1*	*	04/05/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.009	0.005	04/02/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.11	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.28	NA	04/30/13	MC	Calculation

$$TN = DON(0.28) + PON(0.11) + NH_3(0.02) + NO_3(0.005) + NO_2(0.002) = 0.417$$

$$(TN = TN(0.41) + NO_3(0.005) + NO_2(0.002) = 0.417)$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saafi

Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1305626
Report Date: 04/09/13

SAMPLE RESULTS

Lab ID: L1305626-07
Client ID: WW-130653
Sample Location: S-2C
Matrix: Water

Date Collected: 04/02/13 14:15
Date Received: 04/03/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	18.1		mg/m3	2.00	NA	1	04/03/13 16:20	04/05/13 07:30	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, April 30, 2013

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

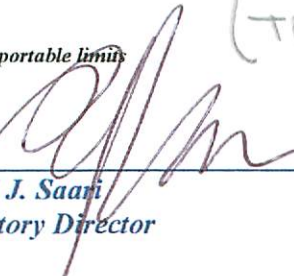
ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-6A
Collection Date: 04/02/13 **Collection Time:** 1430
Sampled By: K. Tower
Lab Order Number: WW-130654
Date Received: 04/02/13

Sample Type	Sample Time	Sample Date	Comments			
S-6A A	14:30	4/2/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	46	6.0	04/04/13	KB	2540 C
Total Organic Carbon*	mg/L	1.4*	0.5	04/09/13	RIA*	SM 5310 C
Boron	mg/L	0.014	0.010	04/09/13	MC	200.7
Nitrate-N	mg/L	0.24	0.01	04/03/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	04/03/13	LL	300.0
Ammonia-N *	mg/L	<0.02*	0.02	04/10/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.34	0.2	04/04/13	MC	SM4500 NH3 C
Chloride	mg/L	19.3	3.0	04/03/13	LL	300.0
Total Phosphorous (P)	mg/L	0.019	0.005	04/05/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.31	0.2	04/04/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.4*	0.5	04/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.24	NA	04/30/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.31	NA	04/30/13	MC	Calculation
Chlorophyll-a	*	5.19*	*	04/05/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.009	0.005	04/02/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	04/30/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	04/30/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.55	NA	04/30/13	MC	Calculation

$$TN = DON(0.31) + PON(0.03) + NH_3(0.01) + NO_3(0.24) + NO_2(0.002) = 0.592$$

$$(TN = TKLN(0.34) + NO_3(0.24) + NO_2(0.002) = 0.582)$$

BRL=below reportable limit
 *see attached

By: 
 Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1305626
Report Date: 04/09/13

SAMPLE RESULTS

Lab ID: L1305626-08
Client ID: WW-130654
Sample Location: S-6A
Matrix: Water

Date Collected: 04/02/13 14:30
Date Received: 04/03/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	5.19		mg/m3	2.00	NA	1	04/03/13 16:20	04/05/13 07:30	30, 10200H	DW



CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 4/3/2013
Date Reported: 4/10/2013
P.O. #:
Work Order #: 1304-06855

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

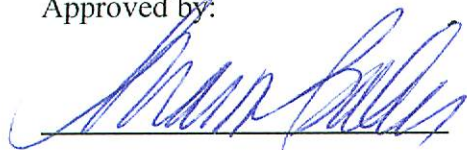
Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:



Sharon Baker
MIS / Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/3/2013

Work Order #: 1304-06855

Sample # 001

SAMPLE DESCRIPTION: WW-130647 S-12

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 14:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	1.7	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	1.7	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

Sample # 002

SAMPLE DESCRIPTION: WW-130648 S-8A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 15:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	1.7	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	1.7	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

Sample # 003

SAMPLE DESCRIPTION: WW-130649 S-8B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 10:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.07	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

Sample # 004

SAMPLE DESCRIPTION: WW-130650 S-5B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 10:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	2.1	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	2.0	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/3/2013

Work Order #: 1304-06855

Sample # 005

SAMPLE DESCRIPTION: WW-130651 S-4A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 10:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	2.5	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	2.5	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

Sample # 006

SAMPLE DESCRIPTION: WW-130652 S-3A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 11:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.02	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	1.6	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	1.3	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

Sample # 007

SAMPLE DESCRIPTION: WW-130653 S-2C

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 14:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.02	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	1.6	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	1.6	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

Sample # 008

SAMPLE DESCRIPTION: WW-130654 S-6A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 14:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	1.4	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	1.4	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

[illegible]

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
 Date Received: 4/3/2013
 Work Order #: 1304-06855

Sample # 001

SAMPLE DESCRIPTION: WW-130647 S-12

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 14:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	1.7	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	1.7	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

Sample # 002

SAMPLE DESCRIPTION: WW-130648 S-8A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 15:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	1.7	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	1.7	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

Sample # 003

SAMPLE DESCRIPTION: WW-130649 S-8B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 10:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.07	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

Sample # 004

SAMPLE DESCRIPTION: WW-130650 S-5B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 10:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	2.1	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	2.0	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
 Date Received: 4/3/2013
 Work Order #: 1304-06855

Sample # 005

SAMPLE DESCRIPTION: WW-130651 S-4A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 10:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	2.5	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	2.5	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

Sample # 006

SAMPLE DESCRIPTION: WW-130652 S-3A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 11:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.02	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	1.6	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	1.3	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

Sample # 007

SAMPLE DESCRIPTION: WW-130653 S-2C

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 14:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.02	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	1.6	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	1.6	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

Sample # 008

SAMPLE DESCRIPTION: WW-130654 S-6A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/02/2013 @ 14:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,I4/10/2013	8:18	SJC
TOC Low Level	1.4	0.5	mg/l	SM-5310B	4/9/2013 18:00	TV
Dissolved TOC	1.4	0.5	mg/l	EPA 415.1	4/9/2013 18:00	TV

CHAIN OF CUSTODY FORM						ENVIROTECH LABS, INC.		RI Analytical	
						8 Jan Sebastian Dr., Unit 12		M RI 015	
PWS:		Project Name: Plymouth Env.				Sandwich, MA 02563		Address 41 Illinois Avenue	
						(508)888-6460		Warwick, RI 02888	
Sampler:		KT				1-800-339-6460		Phone# 401-737-8500	
						FAX (508)888-6446		Fax# 401-738-1970	
Lab ID #	Date	Time	Comp	Grab	Station location	Container	Pres.	Sample type	Analysis requested
WW-130647	04/02/13	1445		X	S-12	P	H ₂ SO ₄	Surface water	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved low detection
WW-130648	04/02/13	1500		X	S-8A	P	H ₂ SO ₄	Surface water	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved low detection
WW-130649	04/02/13	1000		X	S-8B	P	H ₂ SO ₄	Surface water	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved low detection
WW-130650	04/02/13	1020		X	S-5B	P	H ₂ SO ₄	Surface water	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved low detection
WW-130651	04/02/13	1050		X	S-4A	P	H ₂ SO ₄	Surface water	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved low detection
WW-130652	04/02/13	1105		X	S-3A	P	H ₂ SO ₄	Surface water	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved low detection
								5.65	1304-06855

Relinquished: <i>[Signature]</i>		Date/Time: 04/03/13 1245	Received: <i>[Signature]</i>	TOC dissolved samples are filtered Contact lab with any exceeded MCL
Relinquished: <i>[Signature]</i>		Date/Time: 4-3-13 1800	Received: <i>[Signature]</i>	

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **Eel River SW Sampling -Plymouth MA**
Sampler: Kim Tower (KT)

NW-130647
(L)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/2/13	1445	S-12	1	1 Liter Plastic	Dissolved TKN	NONE
			1	1 Liter Plastic	TKN, NH3, TP	H2SO4
			1	1 Liter Plastic	Boron, TDS, Chloride, NO2, NO3	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Glass Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
4/2/13	1500	S-8A	1	1 Liter Plastic	Dissolved TKN	NONE
			1	1 Liter Plastic	TKN, NH3, TP	H2SO4
			1	1 Liter Plastic	Boron, TDS, Chloride, NO2, NO3	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Glass Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

NW-130648
(L)

Relinquished By: Date/Time

KT

Received By: Date/Time:

P. Lavalley 4/2/13 1550

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **Eel River SW Sampling -Plymouth MA**
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/2/13	1000	S-8B	1	1 Liter Plastic	Dissolved TKN	NONE
			1	1 Liter Plastic	TKN, NH3, TP	H2SO4
			1	1 Liter Plastic	Boron, TDS, Chloride, NO2, NO3	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Glass Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
4/2/13	1020	S-5B	1	1 Liter Plastic	Dissolved TKN	NONE
			1	1 Liter Plastic	TKN, NH3, TP	H2SO4
			1	1 Liter Plastic	Boron, TDS, Chloride, NO2, NO3	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Glass Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

Relinquished By: Date/Time

KT

Received By: Date/Time:

J. Lavalley 4/2/13 1530

6

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **Eel River SW Sampling -Plymouth MA**
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/2/13	1050	S-4A	1	1 Liter Plastic	Dissolved TKN	NONE
			1	1 Liter Plastic	TKN, NH3, TP	H2SO4
			1	1 Liter Plastic	Boron, TDS, Chloride, NO2, NO3	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Glass Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
4/2/13	1105	S-3A	1	1 Liter Plastic	Dissolved TKN	NONE
			1	1 Liter Plastic	TKN, NH3, TP	H2SO4
			1	1 Liter Plastic	Boron, TDS, Chloride, NO2, NO3	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Glass Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

Relinquished By: Date/Time

KT

Received By: Date/Time:

L. Savally 4/2/13 1550

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **Eel River SW Sampling -Plymouth MA**
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/2/13	1415	S-2C	1	1 Liter Plastic	Dissolved TKN	NONE
			1	1 Liter Plastic	TKN, NH3, TP	H2SO4
			1	1 Liter Plastic	Boron, TDS, Chloride, NO2, NO3	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Glass Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
4/2/13	1430	S-6A	1	1 Liter Plastic	Dissolved TKN	NONE
			1	1 Liter Plastic	TKN, NH3, TP	H2SO4
			1	1 Liter Plastic	Boron, TDS, Chloride, NO2, NO3	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Glass Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

Relinquished By: Date/Time

KT

Received By: Date/Time:

L. Savalley 4/2/13 1550

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Thursday, May 30, 2013

Plymouth Environmental Management
K.Towers/ 11 Lincoln St.
Plymouth, MA

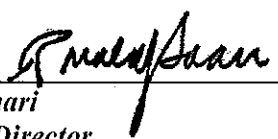
ProjectName: GW Eel River **Comments:**
Project Number: 25 R
Collection Date: 05/13/13 **Collection Time:** 13:30
Sampled By: Kim Tower
Lab Order Number: WW-130969
Date Received: 05/13/13

Sample Type	Sample Time	Sample Date	Comments			
25 R A	13:30	05/13/13	**MTBE			
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Volatile Organic Compounds*	ug/L	120**	*	05/20/13	RIA*	*

BRL=below reportable limits

*see attached

By:


Ronald J. Saari
Laboratory Director

②

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: Kim Tower (KT)

WW-130969

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
5/13/13	1330	2512	2	Glass Vial	VOC	HCL
			2	Glass Vial	VOC	HCL

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

K. Yawally 5/13/13 1425

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 5/15/2013
Date Reported: 5/21/2013
P.O. #:
Work Order #: 1305-10186

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:



Sharon Baker
MIS / Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 5/15/2013

Work Order #: 1305-10186

Sample # 001

SAMPLE DESCRIPTION: WW-130969 2SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 5/13/2013 @ 13:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Bromoform	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Bromomethane	<5	5	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Chloroethane	<5	5	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Chloroform	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Chloromethane	<5	5	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Naphthalene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 5/15/2013

Work Order #: 1305-10186

Sample # 001

SAMPLE DESCRIPTION: WW-130969 2SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 5/13/2013 @ 13:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
n-Propylbenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Styrene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Toluene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
o-Xylene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
MTBE	120	2	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Acetone	<10	10	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	5/20/2013 13:14	KAC
Surrogates			RANGE	SW-846 8260B	5/20/2013 13:14	KAC
Dibromofluoromethane	100		86-118%	SW-846 8260B	5/20/2013 13:14	KAC
Toluene-d8	97		88-110%	SW-846 8260B	5/20/2013 13:14	KAC
4-Bromofluorobenzene	91		86-115%	SW-846 8260B	5/20/2013 13:14	KAC
1,2 Dichloroethane-d4	98		80-120%	SW-846 8260B	5/20/2013 13:14	KAC

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Friday, June 07, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW

Comments:

Project Number: S-5B

Collection Date: 5/21/13 **Collection Time:** 9:10

Sampled By: K. Tower

Lab Order Number: WW-131043

Date Received: 05/21/13

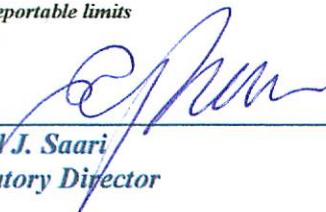
Sample Type	Sample Time	Sample Date	Comments			
S-5B A	9:10	5/21/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	138	6.0	05/24/13	KB	2540 C
Total Organic Carbon*	mg/L	2.4*	0.5	05/23/13	RIA*	SM 5310 C
Boron	mg/L	0.027	0.010	06/03/13	MC	200.7
Nitrate-N	mg/L	0.16	0.01	05/21/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	05/21/13	LL	300.0
Ammonia-N *	mg/L	0.12*	0.02	05/28/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.41	0.2	06/07/13	MC	SM4500 NH3 C
Chloride	mg/L	74.0	3.0	05/21/13	LL	300.0
Total Phosphorous (P)	mg/L	0.051	0.005	05/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.37	0.2	06/07/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.5*	0.5	05/23/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.28	NA	06/07/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.25	NA	06/07/13	RIA*	Calculation
Chlorophyll-a	*	10.7*	*	05/24/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.007	0.005	05/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	06/07/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	06/07/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.53	NA	06/07/13	RIA*	Calculation

$$TN = DON(0.25) + PON(0.1) + NH_3(0.12) + NO_3(0.16) + NO_2(0.002) = 0.632$$

$$(TN = TKN(0.41) + NO_3(0.16) + NO_2(0.002) = 0.572)$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT**Project Number:** Not Specified**Lab Number:** L1309173**Report Date:** 05/30/13**SAMPLE RESULTS****Lab ID:** L1309173-01**Client ID:** WW-131043**Sample Location:** S-5B**Matrix:** Water**Date Collected:** 05/21/13 09:10**Date Received:** 05/22/13**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	10.7		mg/m3	2.00	NA	1	05/22/13 15:05	05/24/13 06:20	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, June 07, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW

Comments:

Project Number: S-4A

Collection Date: 5/21/13 **Collection Time:** 9:30

Sampled By: K. Tower

Lab Order Number: WW-131044

Date Received: 05/21/13

Sample Type	Sample Time	Sample Date	Comments			
S-4A A	9:30	5/21/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	69	6.0	05/24/13	KB	2540 C
Total Organic Carbon*	mg/L	2.9*	0.5	05/23/13	RIA*	SM 5310 C
Boron	mg/L	0.013	0.010	06/03/13	MC	200.7
Nitrate-N	mg/L	0.10	0.01	05/21/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	05/21/13	LL	300.0
Ammonia-N *	mg/L	0.10*	0.02	05/28/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.54	0.2	06/07/13	MC	SM4500 NH3 C
Chloride	mg/L	30.3	3.0	05/21/13	LL	300.0
Total Phosphorous (P)	mg/L	0.035	0.005	05/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.41	0.2	06/07/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.9*	0.5	05/23/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.2	NA	06/07/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.31	NA	06/07/13	RIA*	Calculation
Chlorophyll-a	*	8.68*	*	05/24/13	Alpha Analytica	*
Ortho Phosphorous (P)	mg/L	0.007	0.005	05/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	06/07/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.13	NA	06/07/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.51	NA	06/07/13	RIA*	Calculation

$$TN = DON(0.31) + PON(0.13) + NH_3(0.1) + NO_3(0.1) + NO_2(0.002) = 0.642$$

$$(TN = TKW(0.54) + NO_3(0.1) + NO_2(0.002) = 0.642)$$

BRL=below reportable limits

*see attached

By:


Ronald J. Saari
Laboratory Director

Serial_No:05301312:47

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT

Lab Number: L1309173

Project Number: Not Specified

Report Date: 05/30/13

SAMPLE RESULTS

Lab ID: L1309173-02

Date Collected: 05/21/13 09:30

Client ID: WW-131044

Date Received: 05/22/13

Sample Location: S-4A

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	8.68		mg/m3	2.00	NA	1	05/22/13 15:05	05/24/13 06:20	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, June 07, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW **Comments:**
Project Number: S-3A
Collection Date: 5/21/13 **Collection Time:** 9:45
Sampled By: K. Tower
Lab Order Number: WW-131045
Date Received: 05/21/13

Sample Type	Sample Time	Sample Date	Comments			
S-3A A	9:45	5/21/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	75	6.0	05/24/13	KB	2540 C
Total Organic Carbon*	mg/L	1.9*	0.5	05/23/13	RIA*	SM 5310 C
Boron	mg/L	0.014	0.010	06/03/13	MC	200.7
Nitrate-N	mg/L	0.15	0.01	05/21/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	05/21/13	LL	300.0
Ammonia-N *	mg/L	0.05*	0.02	05/28/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.46	0.2	06/07/13	MC	SM4500 NH3 C
Chloride	mg/L	31.9	3.0	05/21/13	LL	300.0
Total Phosphorous (P)	mg/L	0.032	0.005	05/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.35	0.2	06/07/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.6*	0.5	05/23/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.2	NA	06/07/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.3	NA	06/07/13	RIA*	Calculation
Chlorophyll-a	*	12.6*	*	05/24/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	05/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	06/07/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.11	NA	06/07/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.5	NA	06/07/13	RIA*	Calculation

$$TN = DON(0.3) + PON(0.11) + NH_3(0.05) + NO_3(0.15) + NO_2(0.002) = 0.612$$

$$(TN = TKN(0.46) + NO_3(0.15) + NO_2(0.002) = 0.612)$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Serial_No:05301312:47

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT

Lab Number: L1309173

Project Number: Not Specified

Report Date: 05/30/13

SAMPLE RESULTS

Lab ID: L1309173-03

Date Collected: 05/21/13 09:45

Client ID: WW-131045

Date Received: 05/22/13

Sample Location: S-3A

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	12.6		mg/m3	2.00	NA	1	05/22/13 15:05	05/24/13 06:20	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, June 07, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW
Project Number: S-22
Collection Date: 5/21/13 **Collection Time:** 10:10
Sampled By: K. Tower
Lab Order Number: WW-131046
Date Received: 05/21/13

Comments:

Sample Type	Sample Time	Sample Date	Comments			
S-22 A	10:11	5/21/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	73	6.0	05/24/13	KB	2540 C
Total Organic Carbon*	mg/L	1.8*	0.5	05/23/13	RIA*	SM 5310 C
Boron	mg/L	0.013	0.010	06/03/13	MC	200.7
Nitrate-N	mg/L	0.21	0.01	05/21/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	05/21/13	LL	300.0
Ammonia-N *	mg/L	0.06*	0.02	05/28/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.46	0.2	06/07/13	MC	SM4500 NH3 C
Chloride	mg/L	32.6	3.0	05/21/13	LL	300.0
Total Phosphorous (P)	mg/L	0.040	0.005	05/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.44	0.2	06/07/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.7*	0.5	05/23/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.27	NA	06/07/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.38	NA	06/07/13	RIA*	Calculation
Chlorophyll-a	*	9.50*	*	05/24/13	alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.005	0.005	05/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	06/07/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	06/07/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.65	NA	06/07/13	RIA*	Calculation

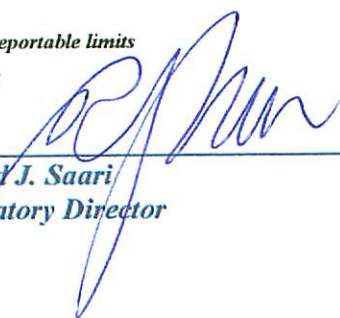
$$TN = DON(0.38) + PON(0.02) + NH_3(0.06) + NO_3(0.21) + NO_2(0.002) = 0.672$$

$$(TN = TKN(0.46) + NO_3(0.21) + NO_2(0.002) = 0.672)$$

BRL=below reportable limits

*see attached

By:


Ronald J. Saari
Laboratory Director

Serial_No:05301312:47

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT

Lab Number: L1309173

Project Number: Not Specified

Report Date: 05/30/13

SAMPLE RESULTS

Lab ID: L1309173-04

Date Collected: 05/21/13 10:10

Client ID: WW-131046

Date Received: 05/22/13

Sample Location: S-22

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	9.50		mg/m3	2.00	NA	1	05/22/13 15:05	05/24/13 06:20	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, June 07, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW
Project Number: S-8A
Collection Date: 5/21/13
Sampled By: K. Tower
Lab Order Number: WW-131047
Date Received: 05/21/13

Comments:

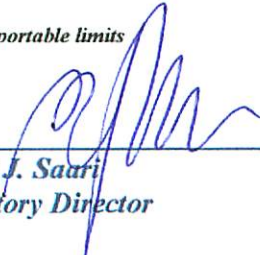
Sample Type	Sample Time	Sample Date	Comments			
S-8A A	10:25	5/21/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	61	6.0	05/24/13	KB	2540 C
Total Organic Carbon*	mg/L	2.0*	0.5	05/23/13	RIA*	SM 5310 C
Boron	mg/L	0.013	0.010	06/03/13	MC	200.7
Nitrate-N	mg/L	0.07	0.01	05/21/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	05/21/13	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	05/28/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.44	0.2	06/07/13	MC	SM4500 NH3 C
Chloride	mg/L	27.9	3.0	05/21/13	LL	300.0
Total Phosphorous (P)	mg/L	0.030	0.005	05/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.32	0.2	06/07/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.7*	0.5	05/23/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.11	NA	06/07/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.28	NA	06/07/13	RIA*	Calculation
Chlorophyll-a	*	21.6*	*	05/24/13	alpha Analytical	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	05/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	06/07/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.12	NA	06/07/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.39	NA	06/07/13	RIA*	Calculation

$$TN = DON(0.28) + PON(0.12) + NH_3(0.04) + NO_3(0.07) + NO_2(0.002) = 0.512$$

$$(TN = TKN(0.44) + NO_3(0.07) + NO_2(0.002) = 0.512)$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
Laboratory Director

Serial_No:05301312:47

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT

Lab Number: L1309173

Project Number: Not Specified

Report Date: 05/30/13

SAMPLE RESULTS

Lab ID: L1309173-05

Date Collected: 05/21/13 10:25

Client ID: WW-131047

Date Received: 05/22/13

Sample Location: S-8A

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	21.6		mg/m3	2.00	NA	1	05/22/13 15:05	05/24/13 06:20	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, June 07, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW

Comments:

Project Number: S-2C

Collection Date: 5/21/14 **Collection Time:** 10:45

Sampled By: K. Tower

Lab Order Number: WW-131048

Date Received: 05/21/13

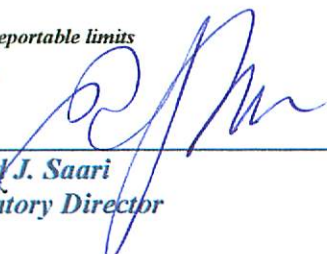
Sample Type	Sample Time	Sample Date	Comments			
S-2C A	10:45	5/21/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	62	6.0	05/24/13	KB	2540 C
Total Organic Carbon*	mg/L	2.0*	0.5	05/23/13	RIA*	SM 5310 C
Boron	mg/L	0.013	0.010	06/03/13	MC	200.7
Nitrate-N	mg/L	0.07	0.01	05/21/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	05/21/13	LL	300.0
Ammonia-N *	mg/L	0.05*	0.02	05/28/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.49	0.2	06/07/13	MC	SM4500 NH3 C
Chloride	mg/L	27.9	3.0	05/21/13	LL	300.0
Total Phosphorous (P)	mg/L	0.028	0.005	05/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.38	0.2	06/07/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.7*	0.5	05/23/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.12	NA	06/07/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.33	NA	06/07/13	RIA*	Calculation
Chlorophyll-a	*	18.9*	*	05/24/13	Alpha Analytica	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	05/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	06/07/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.11	NA	06/07/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.45	NA	06/07/13	RIA*	Calculation

$$TN = DON(0.33) + PON(0.11) + NH_3(0.05) + NO_3(0.07) + NO_2(0.002) = 0.562$$

$$(TN = TKN(0.49) + NO_3(0.07) + NO_2(0.002) = 0.562)$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
Laboratory Director

Serial_No:05301312:47

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT

Lab Number: L1309173

Project Number: Not Specified

Report Date: 05/30/13

SAMPLE RESULTS

Lab ID: L1309173-06

Date Collected: 05/21/13 10:45

Client ID: WW-131048

Date Received: 05/22/13

Sample Location: S-2C

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	18.9		mg/m3	2.00	NA	1	05/22/13 15:05	05/24/13 06:20	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, June 07, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

Project Name: Eel River SW
Project Number: S-6A
Collection Date: 5/21/14 **Collection Time:** 11:00
Sampled By: K. Tower
Lab Order Number: WW-131049
Date Received: 05/21/13

Comments:

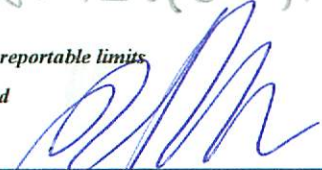
Sample Type	Sample Time	Sample Date	Comments			
S-6A A	11:00	05/21/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	58	6.0	05/24/13	KB	2540 C
Total Organic Carbon*	mg/L	2.1*	0.5	05/23/13	RIA*	SM 5310 C
Boron	mg/L	0.015	0.010	06/03/13	MC	200.7
Nitrate-N	mg/L	0.22	0.01	05/21/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	05/21/13	LL	300.0
Ammonia-N *	mg/L	0.05*	0.02	05/28/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.21	0.2	06/07/13	MC	SM4500 NH3 C
Chloride	mg/L	20.4	3.0	05/21/13	LL	300.0
Total Phosphorous (P)	mg/L	0.035	0.005	05/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	06/07/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.2*	0.5	05/23/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.27	NA	06/07/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.15	NA	06/07/13	RIA*	Calculation
Chlorophyll-a	*	4.19*	*	05/22/13	Alpha Analytica	*
Ortho Phosphorous (P)	mg/L	0.011	0.005	05/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	06/07/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.4	NA	06/07/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	<0.44	NA	06/07/13	RIA*	Calculation

$$TN = DON(0.075) + PON(0.2) + NH_3(0.05) + NO_3(0.22) + NO_2(0.002) = 0.547$$

$$(TN = TKW(0.21) + NO_3(0.22) + NO_2(0.002) = 0.432)$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Serial_No:05301312:47

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT

Lab Number: L1309173

Project Number: Not Specified

Report Date: 05/30/13

SAMPLE RESULTS

Lab ID: L1309173-07

Date Collected: 05/21/13 11:10

Client ID: WW-131049

Date Received: 05/22/13

Sample Location: S-6A

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	4.19		mg/m3	2.00	NA	1	05/22/13 15:05	05/24/13 06:20	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, June 07, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW
Project Number: S-12
Collection Date: 5/21/14 **Collection Time:** 11:30
Sampled By: K. Tower
Lab Order Number: WW-131050
Date Received: 05/21/13

Comments:

Sample Type	Sample Time	Sample Date	Comments			
S-12 A	11:30	05/21/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	51	6.0	05/24/13	KB	2540 C
Total Organic Carbon*	mg/L	3.1*	0.5	05/23/13	RIA*	SM 5310 C
Boron	mg/L	0.018	0.010	06/03/13	MC	200.7
Nitrate-N	mg/L	0.21	0.01	05/21/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	05/21/13	LL	300.0
Ammonia-N *	mg/L	0.05*	0.02	05/28/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.51	0.2	06/07/13	MC	SM4500 NH3 C
Chloride	mg/L	18.9	3.0	05/21/13	LL	300.0
Total Phosphorous (P)	mg/L	0.037	0.005	05/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	06/07/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.9*	0.5	05/23/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.26	NA	06/07/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.15	NA	06/07/13	RIA*	Calculation
Chlorophyll-a	*	5.26	*	05/24/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.016	0.005	05/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.2	NA	06/07/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.31	NA	06/07/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	<0.41	NA	06/07/13	RIA*	Calculation

$$TN = DON(0.075) + PON(0.155) + NH_3(0.05) + NO_3(0.2) + NO_2(0.002) = 0.492$$

$$(TN = TKN(0.51) + NO_3(0.21) + NO_2(0.002) = 0.722)$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT**Lab Number:** L1309173**Project Number:** Not Specified**Report Date:** 05/30/13**SAMPLE RESULTS****Lab ID:** L1309173-08**Date Collected:** 05/21/13 11:30**Client ID:** WW-131050**Date Received:** 05/22/13**Sample Location:** S-12**Field Prep:** Not Specified**Matrix:** Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	5.26		mg/m3	2.00	NA	1	05/22/13 15:05	05/24/13 06:20	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Friday, June 07, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW
Project Number: S-8B
Collection Date: 5/21/14 **Collection Time:** 11:45
Sampled By: K. Tower
Lab Order Number: WW-131051
Date Received: 05/21/13

Comments:

Sample Type	Sample Time	Sample Date	Comments			
S-8B A	11:45	05/21/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	BRL	6.0	05/24/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	05/23/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	06/03/13	MC	200.7
Nitrate-N	mg/L	BRL	0.01	05/21/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	05/21/13	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	05/28/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	06/07/13	MC	SM4500 NH3 C
Chloride	mg/L	BRL	3.0	05/21/13	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	05/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	06/07/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	05/23/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.04	NA	06/07/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.16	NA	06/07/13	RIA*	Calculation
Chlorophyll-a	*	ND*	*	05/24/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	05/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	06/07/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	06/07/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	ND	NA	06/07/13	RIA*	Calculation

$$TN = DON(0.08) + PON(0.1) + NH_3(0.04) + NO_3(0.005) + NO_2(0.002) = 0.227$$

$$TN = DON(0.1) + NO_3(0.05) + NO_2(0.002) = < 0.152$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Sauri
Laboratory Director

Serial_No:05301312:47

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1309173
Report Date: 05/30/13

SAMPLE RESULTS

Lab ID: L1309173-09
Client ID: WW-131051
Sample Location: S-8B
Matrix: Water

Date Collected: 05/21/13 11:45
Date Received: 05/22/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	05/22/13 15:05	05/24/13 06:20	30, 10200H	DM



CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 5/22/2013
Date Reported: 5/29/2013
P.O. #:
Work Order #: 1305-10708

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:



Sharon Baker
MIS / Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 5/22/2013

Work Order #: 1305-10708

Sample # 001

SAMPLE DESCRIPTION: WW-131043 S-5B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 5/21/2013 @ 09:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.12	0.02	mg/l	SM4500-NH3 B,G,I	5/28/2013 14:36	KMD
TOC Low Level	2.4	0.5	mg/l	SM-5310B	5/23/2013 11:01	TV
Dissolved TOC	2.5	0.5	mg/l	EPA 415.1	5/23/2013 11:01	TV

Sample # 002

SAMPLE DESCRIPTION: WW-131044 S-4A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 5/21/2013 @ 09:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.10	0.02	mg/l	SM4500-NH3 B,G,I	5/28/2013 14:36	KMD
TOC Low Level	2.9	0.5	mg/l	SM-5310B	5/23/2013 11:01	TV
Dissolved TOC	2.9	0.5	mg/l	EPA 415.1	5/23/2013 11:01	TV

Sample # 003

SAMPLE DESCRIPTION: WW-131045 S-3A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 5/21/2013 @ 09:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.05	0.02	mg/l	SM4500-NH3 B,G,I	5/28/2013 14:36	KMD
TOC Low Level	1.9	0.5	mg/l	SM-5310B	5/23/2013 11:01	TV
Dissolved TOC	1.6	0.5	mg/l	EPA 415.1	5/23/2013 11:01	TV

Sample # 004

SAMPLE DESCRIPTION: WW-131046 S-22

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 5/21/2013 @ 10:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.06	0.02	mg/l	SM4500-NH3 B,G,I	5/28/2013 14:36	KMD
TOC Low Level	1.8	0.5	mg/l	SM-5310B	5/23/2013 11:01	TV
Dissolved TOC	1.7	0.5	mg/l	EPA 415.1	5/23/2013 11:01	TV

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 5/22/2013

Work Order #: 1305-10708

Sample # 005

SAMPLE DESCRIPTION: WW-131047 S-8A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 5/21/2013 @ 10:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,G,I	5/28/2013 14:36	KMD
TOC Low Level	2.0	0.5	mg/l	SM-5310B	5/23/2013 11:01	TV
Dissolved TOC	1.7	0.5	mg/l	EPA 415.1	5/23/2013 11:01	TV

Sample # 006

SAMPLE DESCRIPTION: WW-131048 S-2C

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 5/21/2013 @ 10:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.05	0.02	mg/l	SM4500-NH3 B,G,I	5/28/2013 14:36	KMD
TOC Low Level	2.0	0.5	mg/l	SM-5310B	5/23/2013 11:01	TV
Dissolved TOC	1.7	0.5	mg/l	EPA 415.1	5/23/2013 11:01	TV

Sample # 007

SAMPLE DESCRIPTION: WW-131049 S-6A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 5/21/2013 @ 09:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.05	0.02	mg/l	SM4500-NH3 B,G,I	5/28/2013 14:36	KMD
TOC Low Level	2.1	0.5	mg/l	SM-5310B	5/23/2013 11:01	TV
Dissolved TOC	2.2	0.5	mg/l	EPA 415.1	5/23/2013 11:01	TV

Sample # 008

SAMPLE DESCRIPTION: WW-131050 S-12

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 5/21/2013 @ 09:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.05	0.02	mg/l	SM4500-NH3 B,G,I	5/28/2013 14:36	KMD
TOC Low Level	3.1	0.5	mg/l	SM-5310B	5/23/2013 11:01	TV
Dissolved TOC	2.9	0.5	mg/l	EPA 415.1	5/23/2013 11:01	TV

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 5/22/2013

Work Order #: 1305-10708

Sample # 009

SAMPLE DESCRIPTION: WW-131051 S-8B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 5/21/2013 @ 11:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,G,I	5/28/2013 14:36	KMD
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	5/23/2013 11:01	TV
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	5/23/2013 11:01	TV

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

WW131043

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
5/21/13	0910	S-5B	1	1 Liter Plastic	Dissolved TKN	NONE
			1	1 Liter Plastic	TKN, NH3, TP	H2SO4
			1	1 Liter Plastic	Boron, TDS, Chloride, NO2, NO3	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Glass Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
5/21/13	0930	S-4A	1	1 Liter Plastic	Dissolved TKN	NONE
			1	1 Liter Plastic	TKN, NH3, TP	H2SO4
			1	1 Liter Plastic	Boron, TDS, Chloride, NO2, NO3	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Glass Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

WW131044

Relinquished By: Date/Time

KTown

Received By: Date/Time:

Rdewally 05/21/13 1425

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, July 08, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Harbor Sampling

Comments:

Project Number: S-7

Collection Date: 6/18/13 **Collection Time:** 10:25

Sampled By: K. Tower

Lab Order Number: WW-131251

Date Received: 06/18/13

Sample Type	Sample Time	Sample Date	Comments			
S-7 Harbor A	10:25	6/18/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Nitrate-N/Nitrite-N	mg/L	BRL	0.01	07/01/13	MC	4500-NO3
Total Organic Carbon*	mg/L	0.62*	0.5	06/28/13	RIA*	SM 5310 C
Ammonia-N *	mg/L	0.10*	0.02	06/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.85	0.2	06/25/13	MC	SM4500 NH3 C
Total Phosphorous (P)	mg/L	0.056	0.005	06/25/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.32	0.2	06/25/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.56*	0.5	06/28/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.10	NA	07/08/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.22	NA	07/08/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	0.022	0.005	06/18/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.06	NA	07/08/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.53	NA	07/08/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.32	NA	07/08/13	RIA*	Calculation
E coli	/100	35	NA	06/18/13	RS	EPA 1603

$$TN = DON(0.22) + PON(0.53) + NH_3(0.10) + NO_3/NO_2(0.005) = 0.855$$

$$(TN = TKN(0.85) + NO_3/NO_2(0.005) = 0.855)$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari

Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, July 08, 2013

Plymouth Environmental Management
 K.Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: Harbor Sampling **Comments:**
Project Number: S-10
Collection Date: 6/18/13 **Collection Time:** 10:15
Sampled By: K. Tower
Lab Order Number: WW-131252
Date Received: 06/18/13

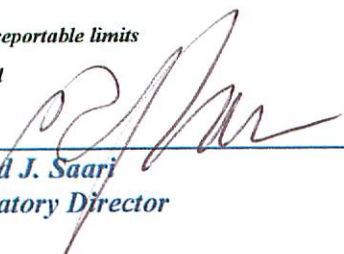
Sample Type	Sample Time	Sample Date	Comments			
S-10 Harbor A	10:15	6/18/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Nitrate-N/Nitrite-N	mg/L	BRL	0.01	07/01/13	MC	4500-NO3
Total Organic Carbon*	mg/L	0.53*	0.5	06/28/13	RIA*	SM 5310 C
Ammonia-N *	mg/L	0.06*	0.02	06/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.58	0.2	06/25/13	MC	SM4500 NH3 C
Total Phosphorous (P)	mg/L	0.043	0.005	06/25/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.52	0.2	06/25/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	06/28/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.06	NA	07/08/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.46	NA	07/08/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	0.020	0.005	06/18/13	MC	4500-P
Particulate Organic Carbon	mg/L	<0.03	NA	07/08/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.06	NA	07/08/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.52	NA	07/08/13	RIA*	Calculation
E coli	/100	10	NA	06/18/13	RS	EPA 1603

$$TN = DON(0.46) + PON(0.06) + NH_3(0.06) + NO_3/NO_2(0.005) = 0.585$$

$$(TN = TKN(0.58) + NO_3/NO_2(0.005) = 0.585)$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 6/20/2013
Date Reported: 7/1/2013
P.O. #:
Work Order #: 1306-13077

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

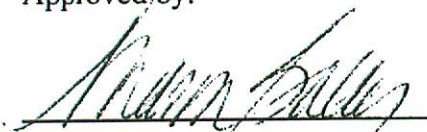
Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:



Sharon Baker
MIS / Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 6/20/2013

Work Order #: 1306-13077

Sample # 001

SAMPLE DESCRIPTION: WW-131251 S-7

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/18/2013 @ 10:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.10	0.02	mg/l	SM4500-NH3 B,G,I	6/25/2013 22:35	KTB
TOC Low Level	0.62	0.5	mg/l	SM-5310B	6/28/2013 12:54	TV
Dissolved TOC	0.56	0.5	mg/l	EPA 415.1	6/28/2013 12:54	TV

Sample # 002

SAMPLE DESCRIPTION: WW-131252 S-10

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/18/2013 @ 10:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.06	0.02	mg/l	SM4500-NH3 B,G,I	6/25/2013 22:35	KTB
TOC Low Level	0.53	0.5	mg/l	SM-5310B	6/28/2013 12:54	TV
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	6/28/2013 12:54	TV

2

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

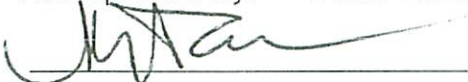
Client:

Town of Plymouth - DPW Environmental Management Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **Harbor Sampling** -Plymouth MA
Sampler: Kim Tower (KT)

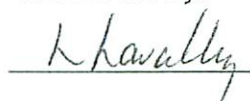
Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
WW-131251	6/18/13 1025	S-7	1	Plastic	TOC	H2SO4
		S-7	1	Plastic	NO3, NO2, Ortho,	NONE
		S-7	1	1 Liter Plastic	TKN, NH3, TP	H2SO4
		S-7	1	Plastic	Dissolved	None
		S-7	1	Plastic	e-coli	sterile
WW-131252	6/18/13 1015	S-10	1	Plastic	TOC	H2SO4
		S-10	1	Plastic	NO3, NO2, Ortho, Dissolved	NONE
		S-10	1	1 Liter Plastic	TKN, NH3, TP	H2SO4
		S-10	1	Plastic	Dissolved	None
		S-10	1	Plastic	e-coli	sterile

NOTE: Analysis needed for reporting in lowest detection possible; O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, e-coli bacteria

Relinquished By: Date/Time



Received By: Date/Time:

 6/18/13 1310

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Thursday, July 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-8B

Collection Date: 6/18/13 **Collection Time:** 8:00

Sampled By: K. Tower

Lab Order Number: WW-131253

Date Received: 06/18/13

Sample Type	Sample Time	Sample Date	Comments			
S-8B Eel River A	8:00	6/18/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	BRL	6.0	06/19/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	06/28/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	07/09/13	MC	200.7
Nitrate-N	mg/L	BRL	0.01	06/18/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/18/13	LL	300.0
Ammonia-N *	mg/L	0.09*	0.02	06/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	06/25/13	MC	SM4500 NH3 C
Chloride	mg/L	BRL	3.0	06/18/13	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	06/25/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	06/25/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	06/28/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.09	NA	07/16/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	<0.11	NA	07/16/13	MC	Calculation
Chlorophyll-a	*	ND*	*	06/20/13	ALPHA*	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	06/18/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	07/16/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	07/16/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	BRL	NA	07/16/13	MC	Calculation

$$TN = DON(0.055) + PON(0.1) + NH_3(0.09) + NO_3(0.005) + NO_2(0.002) = 0.252$$

$$(TN = TKN(0.1) + NO_3(0.005) + NO_2(0.002) = < 0.152$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1311212
Report Date: 06/24/13

SAMPLE RESULTS

Lab ID: L1311212-01
Client ID: WW-131253
Sample Location: S-8B
Matrix: Water

Date Collected: 06/18/13 08:00
Date Received: 06/19/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	ND		mg/m3	2.00	NA	1	06/19/13 18:30	06/20/13 09:00	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, July 16, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

Project Name: Eel River SW Sampling

Comments:

Project Number: S-5B

Collection Date: 6/18/13 **Collection Time:** 8:30

Sampled By: K. Tower

Lab Order Number: WW-131254

Date Received: 06/18/13

Sample Type	Sample Time	Sample Date	Comments			
S-5B Eel River A	8:30	6/18/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	121	6.0	06/19/13	KB	2540 C
Total Organic Carbon*	mg/L	3.6*	0.5	06/28/13	RIA*	SM 5310 C
Boron	mg/L	0.014	0.010	07/09/13	MC	200.7
Nitrate-N	mg/L	0.18	0.01	06/18/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/18/13	LL	300.0
Ammonia-N *	mg/L	0.16*	0.02	06/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.63	0.2	06/25/13	MC	SM4500 NH3 C
Chloride	mg/L	54.5	3.0	06/18/13	LL	300.0
Total Phosphorous (P)	mg/L	0.054	0.005	06/25/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.52	0.2	06/25/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	3.6*	0.5	06/28/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.34	NA	07/16/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.36	NA	07/16/13	MC	Calculation
Chlorophyll-a	*	10.6*	*	06/20/13	ALPHA*	*
Ortho Phosphorous (P)	mg/L	0.015	0.005	06/18/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	07/16/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.11	NA	07/16/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.7	NA	07/16/13	MC	Calculation

$$TN = DON(0.36) + PON(0.11) + NH_3(0.16) + NO_3(0.18) + NO_2(0.002) = 0.812$$

$$(TN = TKN(0.63) + NO_3(0.18) + NO_2(0.002) = 0.812)$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1311212
Report Date: 06/24/13

SAMPLE RESULTS

Lab ID: L1311212-02
Client ID: WW-131254
Sample Location: S-5B
Matrix: Water

Date Collected: 06/18/13 08:30
Date Received: 06/19/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	10.6		mg/m3	2.00	NA	1	06/19/13 18:30	06/20/13 09:00	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, July 16, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**

Project Number: S-4A

Collection Date: 6/18/13 **Collection Time:** 8:45

Sampled By: K. Tower

Lab Order Number: WW-131255

Date Received: 06/18/13

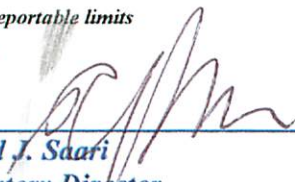
Sample Type	Sample Time	Sample Date	Comments			
S-4A Eel River A	8:45	6/18/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	82	6.0	06/19/13	KB	2540 C
Total Organic Carbon*	mg/L	4.5*	0.5	06/28/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	07/09/13	MC	200.7
Nitrate-N	mg/L	0.08	0.01	06/18/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/18/13	LL	300.0
Ammonia-N *	mg/L	0.08*	0.02	06/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.49	0.2	06/25/13	MC	SM4500 NH3 C
Chloride	mg/L	27.3	3.0	06/18/13	LL	300.0
Total Phosphorous (P)	mg/L	0.047	0.005	06/25/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.42	0.2	06/25/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	4.6*	0.5	06/28/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.16	NA	07/16/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.34	NA	07/16/13	MC	Calculation
Chlorophyll-a	*	4.91*	*	06/20/13	ALPHA*	*
Ortho Phosphorous (P)	mg/L	0.014	0.005	06/18/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	07/16/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.07	NA	07/16/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.5	NA	07/16/13	MC	Calculation

$$TN = DON(0.34) + PON(0.07) + NH_3(0.08) + NO_3(0.08) + NO_2(0.002) = 0.572$$

$$(TN = TDN(0.49) + NO_3(0.08) + NO_2(0.002) = 0.572)$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1311212
Report Date: 06/24/13

SAMPLE RESULTS

Lab ID: L1311212-03
Client ID: WW-131255
Sample Location: S-4A
Matrix: Water

Date Collected: 06/18/13 08:45
Date Received: 06/19/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	4.91		mg/m3	2.00	NA	1	06/19/13 18:30	06/20/13 09:00	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, July 16, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-3A
Collection Date: 6/18/13 **Collection Time:** 9:00
Sampled By: K. Tower
Lab Order Number: WW-131256
Date Received: 06/18/13

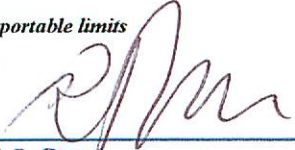
Sample Type	Sample Time	Sample Date	Comments			
S-3A Eel River A	9:00	6/18/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	73	6.0	06/19/13	KB	2540 C
Total Organic Carbon*	mg/L	3.4*	0.5	06/28/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	07/09/13	MC	200.7
Nitrate-N	mg/L	0.17	0.01	06/18/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/18/13	LL	300.0
Ammonia-N *	mg/L	0.10*	0.02	06/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.91	0.2	06/25/13	MC	SM4500 NH3 C
Chloride	mg/L	28.9	3.0	06/18/13	LL	300.0
Total Phosphorous (P)	mg/L	0.046	0.005	06/25/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.43	0.2	06/25/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	3.4*	0.5	06/28/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.27	NA	07/16/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.33	NA	07/16/13	MC	Calculation
Chlorophyll-a	*	8.49*	*	06/20/13	ALPHA*	*
Ortho Phosphorous (P)	mg/L	0.008	0.005	06/18/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	07/16/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.48	NA	07/16/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.6	NA	07/16/13	MC	Calculation

$$TN = DON (0.33) + PON (0.48) + NH_3 (0.10) + NO_3 (0.17) + NO_2 (0.002) = 1.082$$

$$(TN = TKN (0.91) + NO_3 (0.17) + NO_2 (0.002) = 1.082)$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1311212
Report Date: 06/24/13

SAMPLE RESULTS

Lab ID: L1311212-04
Client ID: WW-131256
Sample Location: S-3A
Matrix: Water

Date Collected: 06/18/13 09:00
Date Received: 06/19/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	8.49		mg/m3	2.00	NA	1	06/19/13 18:30	06/20/13 09:00	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, July 16, 2013

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

Project Name: Eel River SW Sampling **Comments:**
Project Number: S-2C
Collection Date: 6/18/13 **Collection Time:** 9:30
Sampled By: K. Tower
Lab Order Number: WW-131257
Date Received: 06/18/13

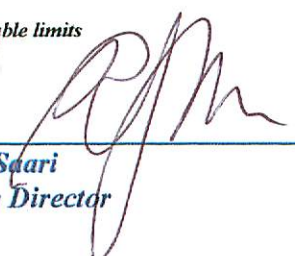
Sample Type	Sample Time	Sample Date	Comments			
S-2C Eel River A	9:30	6/18/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	59	6.0	06/19/13	KB	2540 C
Total Organic Carbon*	mg/L	2.4*	0.5	06/28/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	07/09/13	MC	200.7
Nitrate-N	mg/L	0.06	0.01	06/18/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/18/13	LL	300.0
Ammonia-N *	mg/L	0.05*	0.02	06/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.97	0.2	06/25/13	MC	SM4500 NH3 C
Chloride	mg/L	24.6	3.0	06/18/13	LL	300.0
Total Phosphorous (P)	mg/L	0.056	0.005	06/25/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.35	0.2	06/25/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.3*	0.5	06/28/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.11	NA	07/16/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.3	NA	07/16/13	RIA*	Calculation
Chlorophyll-a	*	34.7*	*	06/20/13	ALPHA*	*
Ortho Phosphorous (P)	mg/L	0.007	0.005	06/18/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	07/16/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.62	NA	07/16/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.41	NA	07/16/13	RIA*	Calculation

$$TN = DON(0.3) + PON(0.62) + NH_3(0.05) + NO_3(0.06) + NO_2(0.002) = 1.032$$

$$(TN = TLN(0.97) + NO_3(0.06) + NO_2(0.002) = 1.032)$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1311212
Report Date: 06/24/13

SAMPLE RESULTS

Lab ID: L1311212-05
Client ID: WW-131257
Sample Location: S-2C
Matrix: Water

Date Collected: 06/18/13 09:30
Date Received: 06/19/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	34.7		mg/m3	2.00	NA	1	06/19/13 18:30	06/20/13 09:00	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, July 16, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

Project Name: Eel River SW Sampling **Comments:**
Project Number: S-8A
Collection Date: 6/18/13 **Collection Time:** 11:15
Sampled By: K. Tower
Lab Order Number: WW-131258
Date Received: 06/18/13

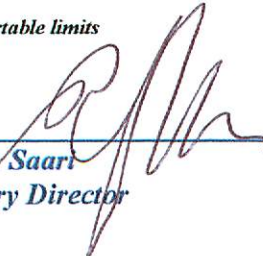
Sample Type	Sample Time	Sample Date	Comments			
S-8A Eel River A	11:15	6/18/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	67	6.0	06/19/13	KB	2540 C
Total Organic Carbon*	mg/L	2.4*	0.5	06/28/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	07/09/13	MC	200.7
Nitrate-N	mg/L	0.20	0.01	06/18/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/18/13	LL	300.0
Ammonia-N *	mg/L	0.06*	0.02	06/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.80	0.2	06/25/13	MC	SM4500 NH3 C
Chloride	mg/L	17.7	3.0	06/18/13	LL	300.0
Total Phosphorous (P)	mg/L	0.039	0.005	06/25/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.35	0.2	06/25/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.3*	0.5	06/28/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.26	NA	07/16/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.29	NA	07/16/13	MC	Calculation
Chlorophyll-a	*	5.86*	*	06/20/13	ALPHA*	*
Ortho Phosphorous (P)	mg/L	0.008	0.005	06/18/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	07/16/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.45	NA	07/16/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.55	NA	07/16/13	MC	Calculation

$$TN = DON(0.29) + PON(0.45) + NH_3(0.06) + NO_3(0.20) + NO_2(0.002) = 1.002$$

$$(TN = TLN(0.80) + NO_3(0.20) + NO_2(0.002) = 1.002)$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1311212
Report Date: 06/24/13

SAMPLE RESULTS

Lab ID: L1311212-06
Client ID: WW-131258
Sample Location: S-8A
Matrix: Water

Date Collected: 06/18/13 11:15
Date Received: 06/19/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	5.86		mg/m3	2.00	NA	1	06/19/13 18:30	06/20/13 09:00	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, July 16, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-12

Collection Date: 6/18/13 **Collection Time:** 11:30

Sampled By: K. Tower

Lab Order Number: WW-131259

Date Received: 06/18/13

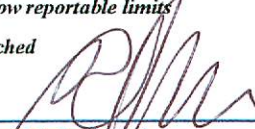
Sample Type	Sample Time	Sample Date	Comments			
S-12 Eel River A	11:30	6/18/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	56	6.0	06/19/13	KB	2540 C
Total Organic Carbon*	mg/L	2.6*	0.5	06/28/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	07/09/13	MC	200.7
Nitrate-N	mg/L	0.19	0.01	06/18/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/18/13	LL	300.0
Ammonia-N *	mg/L	0.05*	0.02	06/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.42	0.2	06/25/13	MC	SM4500 NH3 C
Chloride	mg/L	17.8	3.0	06/18/13	LL	300.0
Total Phosphorous (P)	mg/L	0.044	0.005	06/25/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.24	0.2	06/25/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.7*	0.5	06/28/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.24	NA	07/16/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.19	NA	07/16/13	MC	Calculation
Chlorophyll-a	*	6.08*	*	06/20/13	ALPHA*	*
Ortho Phosphorous (P)	mg/L	0.011	0.005	06/18/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	07/16/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.18	NA	07/16/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.43	NA	07/16/13	MC	Calculation

$$TN = DON(0.19) + PON(0.18) + NH_3(0.05) + NO_3(0.19) + NO_2(0.002) = 0.612$$

$$(TN = TKN(0.42) + NO_3(0.19) + NO_2(0.002) = 0.612)$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Sagri
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1311212
Report Date: 06/24/13

SAMPLE RESULTS

Lab ID: L1311212-07
Client ID: WW-131259
Sample Location: S-12
Matrix: Water

Date Collected: 06/18/13 11:30
Date Received: 06/19/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	6.08		mg/m3	2.00	NA	1	06/19/13 18:30	06/20/13 09:00	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, July 16, 2013

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: Eel River Surface Sampling **Comments:**
Project Number: S-6A
Collection Date: 6/18/13 **Collection Time:** 12:00
Sampled By: K. Tower
Lab Order Number: WW-131260
Date Received: 06/18/13

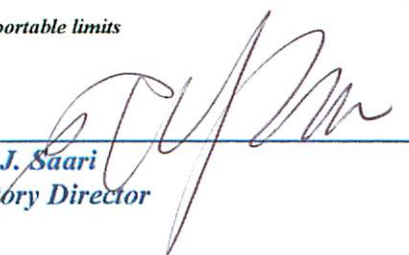
Sample Type	Sample Time	Sample Date	Comments			
S-6A Eel River A	12:00	6/18/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	61	6.0	06/19/13	KB	2540 C
Total Organic Carbon*	mg/L	2.1*	0.5	06/28/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	07/09/13	MC	200.7
Nitrate-N	mg/L	0.18	0.01	06/18/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/18/13	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	06/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.30	0.2	06/25/13	MC	SM4500 NH3 C
Chloride	mg/L	19.7	3.0	06/18/13	LL	300.0
Total Phosphorous (P)	mg/L	0.032	0.005	06/25/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.25	0.2	06/25/13	MC	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.0*	0.5	06/28/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.22	NA	07/16/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.21	NA	07/16/13	MC	Calculation
Chlorophyll-a	*	3.64*	*	06/20/13	ALPHA*	*
Ortho Phosphorous (P)	mg/L	0.010	0.005	06/18/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	07/16/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.05	NA	07/16/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.43	NA	07/16/13	MC	Calculation

$$TN = DON(0.21) + PON(0.05) + NH_3(0.04) + NO_3(0.18) + NO_2(0.002) = 0.482$$

$$(TN = TKN(0.30) + NO_3(0.18) + NO_2(0.002) = 0.482)$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1311212
Report Date: 06/24/13

SAMPLE RESULTS

Lab ID: L1311212-08
Client ID: WW-131260
Sample Location: S-6A
Matrix: Water

Date Collected: 06/18/13 12:00
Date Received: 06/19/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	3.64		mg/m3	2.00	NA	1	06/19/13 18:30	06/20/13 09:00	30, 10200H	DM



CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 6/20/2013
Date Reported: 7/1/2013
P.O. #:
Work Order #: 1306-13078

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

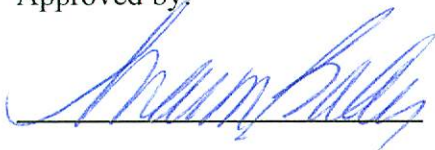
Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:



Sharon Baker
MIS / Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 6/20/2013

Work Order #: 1306-13078

Sample # 001

SAMPLE DESCRIPTION: WW-131253 S-8B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/18/2013 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.09	0.02	mg/l	SM4500-NH3 B,G,I	6/25/2013 22:35	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	6/28/2013 12:54	TV
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	6/28/2013 12:54	TV

Sample # 002

SAMPLE DESCRIPTION: WW-131254 S-5B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/18/2013 @ 08:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.16	0.02	mg/l	SM4500-NH3 B,G,I	6/25/2013 22:35	KTB
TOC Low Level	3.6	0.5	mg/l	SM-5310B	6/28/2013 12:54	TV
Dissolved TOC	3.6	0.5	mg/l	EPA 415.1	6/28/2013 12:54	TV

Sample # 003

SAMPLE DESCRIPTION: WW-131255 S-4A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/18/2013 @ 08:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.08	0.02	mg/l	SM4500-NH3 B,G,I	6/25/2013 22:35	KTB
TOC Low Level	4.5	0.5	mg/l	SM-5310B	6/28/2013 12:54	TV
Dissolved TOC	4.6	0.5	mg/l	EPA 415.1	6/28/2013 12:54	TV

Sample # 004

SAMPLE DESCRIPTION: WW-131256 S-3A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/18/2013 @ 09:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.10	0.02	mg/l	SM4500-NH3 B,G,I	6/25/2013 22:35	KTB
TOC Low Level	3.4	0.5	mg/l	SM-5310B	6/28/2013 12:54	TV
Dissolved TOC	3.4	0.5	mg/l	EPA 415.1	6/28/2013 12:54	TV

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 6/20/2013

Work Order #: 1306-13078

Sample # 005

SAMPLE DESCRIPTION: WW-131257 S-2C

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/18/2013 @ 09:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.05	0.02	mg/l	SM4500-NH3 B,G,I	6/25/2013 22:35	KTB
TOC Low Level	2.4	0.5	mg/l	SM-5310B	6/28/2013 12:54	TV
Dissolved TOC	2.3	0.5	mg/l	EPA 415.1	6/28/2013 12:54	TV

Sample # 006

SAMPLE DESCRIPTION: WW-131258 S-8A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/18/2013 @ 11:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.06	0.02	mg/l	SM4500-NH3 B,G,I	6/25/2013 22:35	KTB
TOC Low Level	2.4	0.5	mg/l	SM-5310B	6/28/2013 12:54	TV
Dissolved TOC	2.3	0.5	mg/l	EPA 415.1	6/28/2013 12:54	TV

Sample # 007

SAMPLE DESCRIPTION: WW-131259 S-12

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/18/2013 @ 11:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.05	0.02	mg/l	SM4500-NH3 B,G,I	6/25/2013 22:35	KTB
TOC Low Level	2.6	0.5	mg/l	SM-5310B	6/28/2013 12:54	TV
Dissolved TOC	2.7	0.5	mg/l	EPA 415.1	6/28/2013 12:54	TV

Sample # 008

SAMPLE DESCRIPTION: WW-131260 S-6A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/18/2013 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,G,I	6/25/2013 22:35	KTB
TOC Low Level	2.1	0.5	mg/l	SM-5310B	6/28/2013 12:54	TV
Dissolved TOC	2.0	0.5	mg/l	EPA 415.1	6/28/2013 12:54	TV

6

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **Eel River SW Sampling -Plymouth MA**
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
6/18/13	0800	S-8B	1	1 Liter Plastic	Dissolved Chloride TKN,	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	1 Liter Plastic	Boron,	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
6/18/13	0830	S-5B	1	1 Liter Plastic	Dissolved Chloride TKN,	NONE
			1	1 Liter Plastic	TKN, NH3, TP TDS, NO2, NO3	H2SO4
			1	1 Liter Plastic	Boron,	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

S. Lavalley 6/18/13 1310

6

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
6/18/13	0845	S-4A	1	1 Liter Plastic	Dissolved Chloride TKN,	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	1 Liter Plastic	Boron,	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
6/18/13	0900	S-3A	1	1 Liter Plastic	Dissolved Chloride TKN,	NONE
			1	1 Liter Plastic	TKN, NH3, TP TDS, NO2, NO3	H2SO4
			1	1 Liter Plastic	Boron,	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

K. Hawley 6/18/13 1310

6

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
NW-131257	6/18/13 0930	S-2C	1	1 Liter Plastic	Dissolved Chloride TKN,	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	1 Liter Plastic	Boron,	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
NW-131258	6/18/13 1125	S-8A	1	1 Liter Plastic	Dissolved Chloride TKN,	NONE
			1	1 Liter Plastic	TKN, NH3, TP TDS, NO2, NO3	H2SO4
			1	1 Liter Plastic	Boron,	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

L. Savally 6/18/13 1310

6

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 / 508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
6/18/13	1130	S-12	1	1 Liter Plastic	Dissolved Chloride TKN,	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	1 Liter Plastic	Boron,	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
6/18/13	1200	S-6A	1	1 Liter Plastic	Dissolved Chloride TKN,	NONE
			1	1 Liter Plastic	TKN, NH3, TP TDS, NO2, NO3	H2SO4
			1	1 Liter Plastic	Boron,	NONE
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Y. Gwally 6/18/13 1310

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

Project Name: Harbor Sampling

Comments:

Project Number:

Collection Date: 08/20/13 **Collection Time:** 11:25

Sampled By: K Tower

Lab Order Number: WW-131968

Date Received: 08/20/13

Sample Type	Sample Time	Sample Date	Comments			
S-7 A	11:25	08/20/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Nitrate-N/Nitrite-N	mg/L	BRL	0.01	08/20/13	MC	4500-NO3
E-coli	/100 ml	95	0/100 ml	08/20/13	MC	9213 D
Total Organic Carbon*	mg/L	0.51*	0.5	08/26/13	RIA*	SM 5310 C
Ammonia-N *	mg/L	0.04*	0.02	08/26/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.44	0.2	09/03/13	KB	SM4500 NH3 C
Total Phosphorous (P)	mg/L	0.060	0.005	08/27/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.43	0.2	09/03/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	BRL	0.5	08/26/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	<0.04	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.39	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	0.010	0.005	08/20/13	MC	4500-P
Particulate Organic Carbon	mg/L	<0.51	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.43	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.39) + PON(0.01) + NH_3(0.04) + NO_3/NO_2(0.005) = 0.445$$

$$TN = TKN(0.44) + NO_3/NO_2(0.005) = 0.445$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Shari
Laboratory Director

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

Project Name: Harbor Sampling

Comments:

Project Number:

Collection Date: 08/20/13 Collection Time: 11:10

Sampled By: K Tower

Lab Order Number: WW-131969

Date Received: 08/20/13

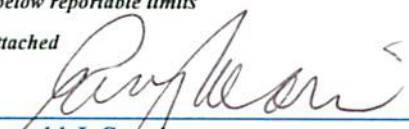
Sample Type	Sample Time	Sample Date	Comments			
S-10 A	11:10	08/20/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Nitrate-N/Nitrite-N	mg/L	BRL	0.01	08/20/13	MC	4500-NO3
E-coli	/100 ml	<5	0/100 ml	08/20/13	MC	9213 D
Total Organic Carbon*	mg/L	<0.5*	0.5	08/26/13	MC	SM 5310 C
Ammonia-N *	mg/L	0.04*	0.02	08/26/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.34	0.2	09/03/13	KB	SM4500 NH3 C
Total Phosphorous (P)	mg/L	0.013	0.005	08/27/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.31	0.2	09/03/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	08/26/13	MC	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.04	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.27	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	0.007	0.005	08/20/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.31	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.27) + PON(0.03) + NH_3(0.04) + NO_3/NO_2(0.005) = 0.345$$

$$TN = TKN(0.34) + NO_3/NO_2(0.005) = 0.345$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Sauri
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 8/22/2013

Work Order #: 1308-18059

Sample # 001

SAMPLE DESCRIPTION: WW-131968 S-7

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 8/20/2013 @ 11:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,G,I	8/26/2013 9:23	SJC
TOC Low Level	0.51	0.5	mg/l	SM-5310B	8/26/2013 15:30	SJC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	8/26/2013 15:30	SJC

Sample # 002

SAMPLE DESCRIPTION: WW-131969 S-10

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 8/20/2013 @ 11:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.04	mg/l	SM4500-NH3 B,G,I	8/26/2013 9:23	SJC
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	8/26/2013 15:30	SJC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	8/26/2013 15:30	SJC



Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **Harbor Sampling -Plymouth MA**
Sampler: Kim Tower (KT)

WW131968

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
8/20/13	1125	S-7	1	Plastic	TOC	H2SO4
		S-7	1	1 Liter Plastic	NO3, NO2, Ortho, TKN, NH3, TP	H2SO4
		S-7	1	Plastic	Dissolved	None
		S-7	1	Plastic	e-coli	sterile 95
WW131969	8/20/13	S-10	1	Plastic	TOC	H2SO4
		S-10	1	1 Liter Plastic	NO3, NO2, Ortho, TKN, NH3, TP	H2SO4
		S-10	1	Plastic	Dissolved	None
		S-10	1	Plastic	e-coli	sterile < 5

NOTE: Analysis needed for reporting in lowest detection possible; O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, e-coli bacteria

Relinquished By: Date/Time

Kim Tower 8/20/13

Received By:

Date/Time:

[Signature] 8/20/13 1615

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
 K.Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: Eel River SW **Comments:**
Project Number: S-4A
Collection Date: 08/29/13 **Collection Time:** 10:50
Sampled By: K Tower
Lab Order Number: WW-132069
Date Received: 08/29/13

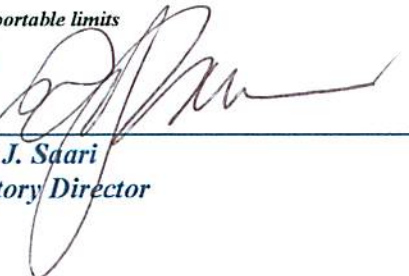
Sample Type	Sample Time	Sample Date	Comments			
S-4A A	10:50	08/29/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	69	6.0	09/05/13	KB	2540 C
Total Organic Carbon*	mg/L	1.7*	0.5	09/09/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	09/20/13	MC	200.7
Nitrate-N	mg/L	0.27	0.01	08/29/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/29/13	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	09/05/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.40	0.2	09/03/13	KB	SM4500 NH3 C
Chloride	mg/L	29.6	3.0	08/29/13	LL	300.0
Total Phosphorous (P)	mg/L	0.033	0.005	09/04/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.34	0.2	09/03/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.0*	0.5	09/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.3	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.31	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	5.60*	*	09/01/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.006	0.005	08/30/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.06	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.61	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.31) + PON(0.06) + NH_3(0.03) + NO_3(0.27) + NO_2(0.002) = 0.672$$

$$TN = TKN(0.40) + NO_3(0.27) + NO_2(0.002) = 0.672$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1316934
Report Date: 09/05/13

SAMPLE RESULTS

Lab ID: L1316934-01
Client ID: WW-132069
Sample Location: S-4A
Matrix: Water

Date Collected: 08/29/13 10:50
Date Received: 08/30/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	5.60		mg/m3	2.00	NA	1	08/30/13 19:00	09/01/13 14:30	30, 10200H	JT



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW

Comments:

Project Number: S-3A

Collection Date: 08/29/13 **Collection Time:** 11:10

Sampled By: K Tower

Lab Order Number: WW-132070

Date Received: 08/29/13

Sample Type	Sample Time	Sample Date	Comments			
S-3A A	11:10	08/29/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	76	6.0	09/05/13	KB	2540 C
Total Organic Carbon*	mg/L	1.6*	0.5	09/04/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	09/20/13	MC	200.7
Nitrate-N	mg/L	0.16	0.01	08/29/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/29/13	LL	300.0
Ammonia-N *	mg/L	0.05*	0.02	09/05/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.37	0.2	09/03/13	KB	SM4500 NH3 C
Chloride	mg/L	31.5	3.0	08/29/13	LL	300.0
Total Phosphorous (P)	mg/L	0.051	0.005	09/04/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.33	0.2	09/03/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.5*	0.5	09/04/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.21	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.28	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	7.91*	*	09/01/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.009	0.005	08/30/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.04	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.49	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.28) + PON(0.04) + NH_3(0.05) + NO_3(0.16) + NO_2(0.002) = 0.532$$

$$TN = TKN(0.37) + NO_3(0.16) + NO_2(0.002) = 0.532$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saafi

Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1316934
Report Date: 09/05/13

SAMPLE RESULTS

Lab ID: L1316934-02
Client ID: WW-132070
Sample Location: S-3A
Matrix: Water

Date Collected: 08/29/13 11:10
Date Received: 08/30/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	7.91		mg/m3	2.00	NA	1	08/30/13 19:00	09/01/13 14:30	30, 10200H	JT



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW

Comments:

Project Number: S-8B

Collection Date: 08/29/13 **Collection Time:** 10:00

Sampled By: K Tower

Lab Order Number: WW-132071

Date Received: 08/29/13

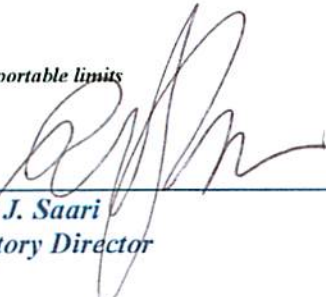
Sample Type	Sample Time	Sample Date	Comments			
S-8B A	10:00	08/29/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	BRL	6.0	09/05/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	09/05/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	09/20/13	MC	200.7
Nitrate-N	mg/L	BRL	0.01	08/29/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/29/13	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	09/05/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	09/03/13	KB	SM4500 NH3 C
Chloride	mg/L	BRL	3.0	08/29/13	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	09/04/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	09/03/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	09/05/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.04	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.2	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	ND*	*	09/01/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	08/30/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.2	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	BRL	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.1) + PON(0.1) + NH_3(0.04) + NO_3(0.005) + NO_2(0.002) = 0.247$$

$$TN = TKN(0.1) + NO_3(0.005) + NO_2(0.002) = < 0.107$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1316934
Report Date: 09/05/13

SAMPLE RESULTS

Lab ID: L1316934-03
Client ID: WW-132071
Sample Location: S-8B
Matrix: Water

Date Collected: 08/29/13 10:00
Date Received: 08/30/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	08/30/13 19:00	09/01/13 14:30	30, 10200H	JT



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW

Comments:

Project Number: S-5B

Collection Date: 08/29/13 **Collection Time:** 10:30

Sampled By: K Tower

Lab Order Number: WW-132072

Date Received: 08/29/13

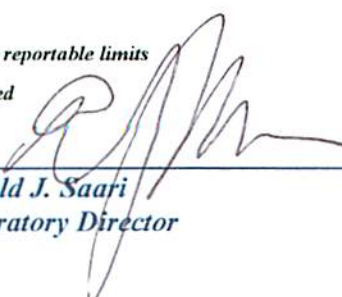
Sample Type	Sample Time	Sample Date	Comments			
S-5B A	10:30	08/29/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	97	6.0	09/05/13	KB	2540 C
Total Organic Carbon*	mg/L	2.0*	0.5	09/04/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	09/20/13	MC	200.7
Nitrate-N	mg/L	0.09	0.01	08/29/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/29/13	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	09/05/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.36	0.2	09/03/13	KB	SM4500 NH3 C
Chloride	mg/L	48.3	3.0	08/29/13	LL	300.0
Total Phosphorous (P)	mg/L	0.041	0.005	09/04/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.31	0.2	09/03/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.7*	0.5	09/04/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.12	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.28	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	5.29*	*	09/01/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.012	0.005	08/30/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.05	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.4	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.28) + PON(0.05) + NH_3(0.03) + NO_3(0.09) + NO_2(0.002) = 0.452$$

$$TN = TLN(0.36) + NO_3(0.09) + NO_2(0.002) = 0.452$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1316934
Report Date: 09/05/13

SAMPLE RESULTS

Lab ID: L1316934-04
Client ID: WW-132072
Sample Location: S-5B
Matrix: Water

Date Collected: 08/29/13 10:30
Date Received: 08/30/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	5.29		mg/m3	2.00	NA	1	08/30/13 19:00	09/01/13 14:30	30, 10200H	JT



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW **Comments:**
Project Number: S-12
Collection Date: 8/29/13 **Collection Time:** 12:20
Sampled By: K. Tower
Lab Order Number: WW-132073
Date Received: 08/29/13

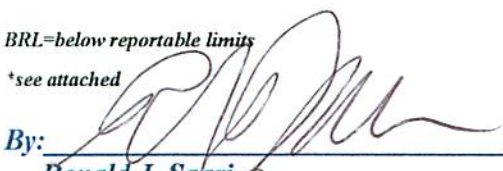
Sample Type	Sample Time	Sample Date	Comments			
S-12 A						
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	61	6.0	09/05/13	KB	2540 C
Total Organic Carbon*	mg/L	2.8*	0.5	09/04/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	09/20/13	MC	200.7
Nitrate-N	mg/L	0.21	0.01	08/29/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/29/13	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	09/05/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.37	0.2	09/03/13	KB	SM4500 NH3 C
Chloride	mg/L	19.2	3.0	08/29/13	LL	300.0
Total Phosphorous (P)	mg/L	0.042	0.005	09/04/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.36	0.2	09/03/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.5*	0.5	09/04/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.25	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.32	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	6.31*	*	09/01/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.007	0.005	08/30/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.57	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.32) + PON(0.01) + NH_3(0.04) + NO_3(0.21) + NO_2(0.002) = 0.582$$

$$TN = TKN(0.37) + NO_3(0.21) + NO_2(0.002) = 0.582$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1316934
Report Date: 09/05/13

SAMPLE RESULTS

Lab ID: L1316934-05
Client ID: WW-132073
Sample Location: S-12
Matrix: Water

Date Collected: 08/29/13 12:20
Date Received: 08/30/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	6.31		mg/m3	2.00	NA	1	08/30/13 19:00	09/01/13 14:30	30, 10200H	JT



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: Eel River SW **Comments:**
Project Number: S-8A
Collection Date: 8/29/13 **Collection Time:** 12:40
Sampled By: K. Tower
Lab Order Number: WW-132074
Date Received: 08/29/13

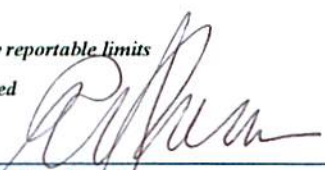
Sample Type	Sample Time	Sample Date	Comments			
S-8A A						
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	49	6.0	09/05/13	KB	2540 C
Total Organic Carbon*	mg/L	2.7*	0.5	09/04/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	09/20/13	MC	200.7
Nitrate-N	mg/L	0.21	0.01	08/29/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/29/13	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	09/05/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.40	0.2	09/03/13	KB	SM4500 NH3 C
Chloride	mg/L	19.5	3.0	08/29/13	LL	300.0
Total Phosphorous (P)	mg/L	0.036	0.005	09/04/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.35	0.2	09/03/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.4*	0.5	09/04/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.25	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.31	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	5.06*	*	09/01/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.007	0.005	08/30/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.05	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.56	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.31) + PON(0.05) + NH_3(0.04) + NO_3(0.21) + NO_2(0.002) = 0.612$$

$$TN = TKW(0.40) + NO_3(0.21) + NO_2(0.002) = 0.612$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1316934
Report Date: 09/05/13

SAMPLE RESULTS

Lab ID: L1316934-06
Client ID: WW-132074
Sample Location: S-8A
Matrix: Water

Date Collected: 08/29/13 12:40
Date Received: 08/30/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	5.06		mg/m3	2.00	NA	1	08/30/13 19:00	09/01/13 14:30	30, 10200H	JT



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW

Comments:

Project Number: S-2C

Collection Date: 8/29/13 **Collection Time:** 11:30

Sampled By: K. Tower

Lab Order Number: WW-132075

Date Received: 08/29/13

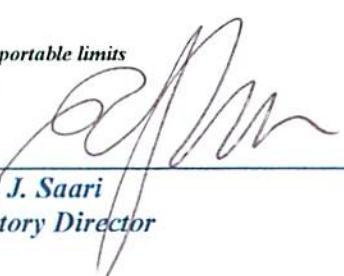
Sample Type	Sample Time	Sample Date	Comments			
S-2C A						
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	56	6.0	09/05/13	KB	2540 C
Total Organic Carbon*	mg/L	1.7*	0.5	09/04/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	09/20/13	MC	200.7
Nitrate-N	mg/L	0.07	0.01	08/30/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/30/13	LL	300.0
Ammonia-N *	mg/L	0.09*	0.02	09/05/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.40	0.2	09/03/13	KB	SM4500 NH3 C
Chloride	mg/L	27.9	3.0	08/30/13	LL	300.0
Total Phosphorous (P)	mg/L	0.054	0.005	09/04/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.28	0.2	09/03/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.4*	0.5	09/04/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.16	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.19	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	26.0*	*	09/01/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.005	0.005	08/30/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.12	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.35	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.19) + PON(0.12) + NH_3(0.09) + NO_3(0.07) + NO_2(0.002) = 0.472$$

$$TN = TLN(0.40) + NO_3(0.07) + NO_2(0.002) = 0.472$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1316934
Report Date: 09/05/13

SAMPLE RESULTS

Lab ID: L1316934-07
Client ID: WW-132075
Sample Location: S-2C
Matrix: Water

Date Collected: 08/29/13 11:30
Date Received: 08/30/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	26.0		mg/m3	2.00	NA	1	08/30/13 19:00	09/01/13 14:30	30, 10200H	JT



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW **Comments:**
Project Number: S-6A
Collection Date: 8/29/13 **Collection Time:** 12:00
Sampled By: K. Tower
Lab Order Number: WW-132076
Date Received: 08/29/13

Sample Type	Sample Time	Sample Date	Comments			
S-6A A						
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	54	6.0	09/05/13	KB	2540 C
Total Organic Carbon*	mg/L	1.9*	0.5	09/04/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	09/20/13	MC	200.7
Nitrate-N	mg/L	0.22	0.01	08/30/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/30/13	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	09/05/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	09/09/13	KB	SM4500 NH3 C
Chloride	mg/L	21.2	3.0	08/30/13	LL	300.0
Total Phosphorous (P)	mg/L	0.033	0.005	09/04/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	09/09/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.7*	0.5	09/04/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.25	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.17	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	2.76*	*	09/01/13	Alpah Analytical	*
Ortho Phosphorous (P)	mg/L	0.009	0.005	08/30/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.2	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	<0.42	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.085) + PON(0.1) + NH_3(0.03) + NO_3(0.22) + NO_2(0.002) = 0.437$$

$$TN = TKN(0.1) + NO_3(0.22) + NO_2(0.002) = 0.322$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1316934
Report Date: 09/05/13

SAMPLE RESULTS

Lab ID: L1316934-08
Client ID: WW-132076
Sample Location: S-6A
Matrix: Water

Date Collected: 08/29/13 12:00
Date Received: 08/30/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	2.76		mg/m3	2.00	NA	1	08/30/13 19:00	09/01/13 14:30	30, 10200H	JT



R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 8/30/2013

Work Order #: 1308-18722

Sample # 001

SAMPLE DESCRIPTION: WW-132069 S-4A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 8/29/2013 @ 10:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,G,I	9/5/2013 21:25	KTB
TOC Low Level	1.7	0.5	mg/l	SM-5310B	9/9/2013 15:00	SJC
Dissolved TOC	2.0	0.5	mg/l	EPA 415.1	9/9/2013 15:00	SJC

Sample # 002

SAMPLE DESCRIPTION: WW-132070 S-3A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 8/29/2013 @ 11:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.05	0.02	mg/l	SM4500-NH3 B,G,I	9/5/2013 21:25	KTB
TOC Low Level	1.6	0.5	mg/l	SM-5310B	9/4/2013 10:00	SJC
Dissolved TOC	1.5	0.5	mg/l	EPA 415.1	9/4/2013 10:00	SJC

Sample # 003

SAMPLE DESCRIPTION: WW-132071 S-8B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 8/29/2013 @ 10:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,G,I	9/5/2013 21:25	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	9/5/2013 13:36	SJC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	9/5/2013 13:36	SJC

Sample # 004

SAMPLE DESCRIPTION: WW-132072 S-5B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 8/29/2013 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,G,I	9/5/2013 21:25	KTB
TOC Low Level	2.0	0.5	mg/l	SM-5310B	9/4/2013 10:00	SJC
Dissolved TOC	1.7	0.5	mg/l	EPA 415.1	9/4/2013 10:00	SJC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 8/30/2013

Work Order #: 1308-18722

Sample # 005

SAMPLE DESCRIPTION: WW-132073 S-12

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 8/29/2013 @ 12:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,G,I	9/5/2013 21:25	KTB
TOC Low Level	2.8	0.5	mg/l	SM-5310B	9/4/2013 10:00	SJC
Dissolved TOC	2.5	0.5	mg/l	EPA 415.1	9/4/2013 10:00	SJC

Sample # 006

SAMPLE DESCRIPTION: WW-132074 S-8A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 8/29/2013 @ 12:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,G,I	9/5/2013 21:25	KTB
TOC Low Level	2.7	0.5	mg/l	SM-5310B	9/4/2013 10:00	SJC
Dissolved TOC	2.4	0.5	mg/l	EPA 415.1	9/4/2013 10:00	SJC

Sample # 007

SAMPLE DESCRIPTION: WW-132075 S-2C

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 8/29/2013 @ 11:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.09	0.02	mg/l	SM4500-NH3 B,G,I	9/5/2013 21:25	KTB
TOC Low Level	1.7	0.5	mg/l	SM-5310B	9/4/2013 10:00	SJC
Dissolved TOC	1.4	0.5	mg/l	EPA 415.1	9/4/2013 10:00	SJC

Sample # 008

SAMPLE DESCRIPTION: WW-132076 S-6A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 8/29/2013 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,G,I	9/5/2013 21:25	KTB
TOC Low Level	1.9	0.5	mg/l	SM-5310B	9/4/2013 10:00	SJC
Dissolved TOC	1.7	0.5	mg/l	EPA 415.1	9/4/2013 10:00	SJC

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Repeated Sample for NO3 =
0.19

Project Number: S-8B

Collection Date: 10/03/13 Collection Time: 09:45

Sampled By: K Tower

Lab Order Number: WW-132479

Date Received: 10/03/13

Sample Type	Sample Time	Sample Date	Comments			
S-8B A	09:45	10/03/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	11	6.0	10/03/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	10/09/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/15/13	MC	200.7
Nitrate-N	mg/L	0.20	0.01	10/04/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/04/13	LL	300.0
Ammonia-N *	mg/L	0.10*	0.02	10/11/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.38	0.2	10/10/13	KB	SM4500 NH3 C
Chloride	mg/L	BRL	3.0	10/04/13	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	10/10/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/10/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	10/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.3	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.2	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	ND*	*	10/07/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	10/03/13	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.18	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	<0.40	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.1) + PON(0.09) + NH_3(0.10) + NO_3(0.20) + NO_2(0.002) = 0.492$$

$$TN = TKW(0.38) + NO_3(0.20) + NO_2(0.002) = 0.582$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saafi
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1319790
Report Date: 10/10/13

SAMPLE RESULTS

Lab ID: L1319790-01
Client ID: WW-132479
Sample Location: S-8B
Matrix: Water

Date Collected: 10/03/13 09:45
Date Received: 10/04/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	10/04/13 13:40	10/07/13 09:05	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-5B

Collection Date: 10/03/13 Collection Time: 10:10

Sampled By: K Tower

Lab Order Number: WW-132480

Date Received: 10/03/13

Sample Type	Sample Time	Sample Date	Comments			
S-5B A	10:10	10/03/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	105	6.0	10/03/13	KB	2540 C
Total Organic Carbon*	mg/L	1.4*	0.5	10/09/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/15/13	MC	200.7
Nitrate-N	mg/L	0.17	0.01	10/04/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/04/13	LL	300.0
Ammonia-N *	mg/L	0.07*	0.02	10/11/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.48	0.2	10/10/13	KB	SM4500 NH3 C
Chloride	mg/L	45.4	3.0	10/04/13	LL	300.0
Total Phosphorous (P)	mg/L	0.029	0.005	10/10/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.45	0.2	10/10/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.2*	0.5	10/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.24	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.38	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	8.36*	*	10/07/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.010	0.005	10/03/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.2	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.62	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.38) + PON(0.03) + NH_3(0.07) + NO_3(0.17) + NO_2(0.002) = 0.652$$

$$TN = TKN(0.48) + NO_3(0.17) + NO_2(0.002) = 0.652$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1319790
Report Date: 10/10/13

SAMPLE RESULTS

Lab ID: L1319790-02
Client ID: WW-132480
Sample Location: S-5B
Matrix: Water

Date Collected: 10/03/13 10:10
Date Received: 10/04/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	8.36		mg/m3	2.00	NA	1	10/04/13 13:40	10/07/13 09:05	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-4A
Collection Date: 10/03/13 **Collection Time:** 10:45
Sampled By: K Tower
Lab Order Number: WW-132481
Date Received: 10/03/13

Sample Type	Sample Time	Sample Date	Comments			
S-4A A	10:45	10/03/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	84	6.0	10/03/13	KB	2540 C
Total Organic Carbon*	mg/L	1.5*	0.5	10/09/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/15/13	MC	200.7
Nitrate-N	mg/L	0.09	0.01	10/04/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/04/13	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	10/11/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.41	0.2	10/10/13	KB	SM4500 NH3 C
Chloride	mg/L	29.6	3.0	10/04/13	LL	300.0
Total Phosphorous (P)	mg/L	0.021	0.005	10/10/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.39	0.2	10/10/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.2*	0.5	10/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.13	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.35	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	ND*	*	10/07/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.008	0.005	10/03/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.48	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.35) + PON(0.02) + NH_3(0.04) + NO_3(0.09) + NO_2(0.002) = 0.502$$

$$TN = TKN(0.41) + NO_3(0.09) + NO_2(0.002) = 0.502$$

BRL=below reportable limits

*see attached

By:

Ronald J. Sqari

Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1319790
Report Date: 10/10/13

SAMPLE RESULTS

Lab ID: L1319790-03
Client ID: WW-132481
Sample Location: S-4A
Matrix: Water

Date Collected: 10/03/13 10:45
Date Received: 10/04/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	ND		mg/m3	2.00	NA	1	10/04/13 13:40	10/07/13 09:05	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-3A

Collection Date: 10/03/13 **Collection Time:** 11:00

Sampled By: K Tower

Lab Order Number: WW-132482

Date Received: 10/03/13

Sample Type	Sample Time	Sample Date	Comments			
S-3A A	11:00	10/03/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	85	6.0	10/03/13	KB	2540 C
Total Organic Carbon*	mg/L	1.3*	0.5	10/09/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/15/13	MC	200.7
Nitrate-N	mg/L	0.16	0.01	10/04/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/04/13	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	10/11/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.41	0.2	10/10/13	KB	SM4500 NH3 C
Chloride	mg/L	31.5	3.0	10/04/13	LL	300.0
Total Phosphorous (P)	mg/L	0.28	0.005	10/10/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.33	0.2	10/10/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.3*	0.5	10/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.2	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.29	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	4.91*	*	10/07/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.012	0.005	10/03/13	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.08	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.49	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.29) + PON(0.08) + NH_4(0.04) + NO_3(0.16) + NO_2(0.002) = 0.572$$

$$TN = TKN(0.41) + NO_3(0.16) + NO_2(0.002) = 0.572$$

BRL=below reportable limit

*see attached

By:

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1319790
Report Date: 10/10/13

SAMPLE RESULTS

Lab ID: L1319790-04
Client ID: WW-132482
Sample Location: S-3A
Matrix: Water

Date Collected: 10/03/13 11:00
Date Received: 10/04/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	4.91		mg/m3	2.00	NA	1	10/04/13 13:40	10/07/13 09:05	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

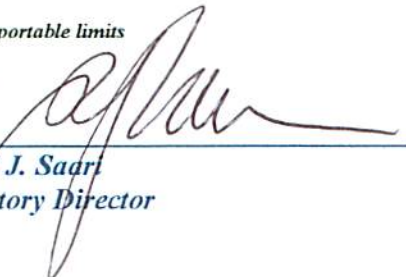
ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-2C
Collection Date: 10/03/13 **Collection Time:** 11:30
Sampled By: K Tower
Lab Order Number: WW-132483
Date Received: 10/03/13

Sample Type	Sample Time	Sample Date	Comments			
S-2C A	11:30	10/03/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	83	6.0	10/03/13	KB	2540 C
Total Organic Carbon*	mg/L	1.3*	0.5	10/08/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/15/13	MC	200.7
Nitrate-N	mg/L	0.09	0.01	10/04/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/04/13	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	10/11/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.44	0.2	10/10/13	KB	SM4500 NH3 C
Chloride	mg/L	27.9	3.0	10/04/13	LL	300.0
Total Phosphorous (P)	mg/L	0.018	0.005	10/10/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.35	0.2	10/10/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.2*	0.5	10/09/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.12	NA	11/18/13	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.32	NA	11/18/13	LL	Calculation
Chlorophyll-a	*	10.5*	*	10/07/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.005	0.005	10/03/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	11/18/13	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.09	NA	11/18/13	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.44	NA	11/18/13	LL	Calculation

$$TN = DON(0.32) + PON(0.09) + NH_3(0.03) + NO_3(0.09) + NO_2(0.002) = 0.532$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1319790
Report Date: 10/10/13

SAMPLE RESULTS

Lab ID: L1319790-05
Client ID: WW-132483
Sample Location: S-2C
Matrix: Water

Date Collected: 10/03/13 11:30
Date Received: 10/04/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	10.5		mg/m3	2.00	NA	1	10/04/13 13:40	10/07/13 09:05	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
 K.Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-6A
Collection Date: 10/03/13 **Collection Time:** 12:00
Sampled By: K Tower
Lab Order Number: WW-132484
Date Received: 10/03/13

Sample Type	Sample Time	Sample Date	Comments			
S-6A A	12:00	10/03/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	68	6.0	10/03/13	KB	2540 C
Total Organic Carbon*	mg/L	1.4*	0.5	10/08/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/15/13	MC	200.7
Nitrate-N	mg/L	0.29	0.01	10/04/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/04/13	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	10/11/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.36	0.2	10/10/13	KB	SM4500 NH3 C
Chloride	mg/L	21.0	3.0	10/04/13	LL	300.0
Total Phosphorous (P)	mg/L	0.019	0.005	10/10/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.32	0.2	10/10/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.2*	0.5	10/09/13	MC	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.32	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.29	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	2.79*	*	10/07/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.010	0.005	10/03/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.2	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.04	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.61	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.29) + PON(0.04) + NH_3(0.03) + NO_3(0.29) + NO_2(0.002) = 0.652$$

$$TN = TLN(0.36) + NO_3(0.29) + NO_2(0.002) = 0.652$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1319790
Report Date: 10/10/13

SAMPLE RESULTS

Lab ID: L1319790-06
Client ID: WW-132484
Sample Location: S-6A
Matrix: Water

Date Collected: 10/03/13 12:00
Date Received: 10/04/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	2.79		mg/m3	2.00	NA	1	10/04/13 13:40	10/07/13 09:05	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
 K.Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-12
Collection Date: 10/03/13 **Collection Time:** 12:20
Sampled By: K Tower
Lab Order Number: WW-132485
Date Received: 10/03/13

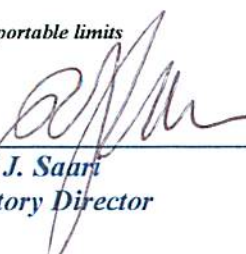
Sample Type	Sample Time	Sample Date	Comments			
S-12 A	12:20	10/03/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	64	6.0	10/03/13	KB	2540 C
Total Organic Carbon*	mg/L	2.1*	0.5	10/08/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/15/13	MC	200.7
Nitrate-N	mg/L	0.25	0.01	10/04/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/04/13	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	10/11/13	MC	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.53	0.2	10/10/13	KB	SM4500 NH3 C
Chloride	mg/L	19.0	3.0	10/04/13	LL	300.0
Total Phosphorous (P)	mg/L	0.020	0.005	10/10/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.30	0.2	10/10/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.7*	0.5	10/08/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.28	NA	11/18/13	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.27	NA	11/18/13	MC	Calculation
Chlorophyll-a	*	ND*	*	10/07/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.008	0.005	10/03/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.4	NA	11/18/13	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.23	NA	11/18/13	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.55	NA	11/18/13	MC	Calculation

$$TN = DON(0.27) + PON(0.23) + NH_3(0.03) + NO_3(0.25) + NO_2(0.002) = 0.782$$

$$TN = TKN(0.53) + NO_3(0.25) + NO_2(0.002) = 0.782$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Sauri
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1319790
Report Date: 10/10/13

SAMPLE RESULTS

Lab ID: L1319790-07
Client ID: WW-132485
Sample Location: S-12
Matrix: Water

Date Collected: 10/03/13 12:20
Date Received: 10/04/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	10/04/13 13:40	10/07/13 09:05	30, 10200H	DM



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-8A
Collection Date: 10/03/13 **Collection Time:** 12:40
Sampled By: K Tower
Lab Order Number: WW-132486
Date Received: 10/03/13

Sample Type	Sample Time	Sample Date	Comments			
S-8A A	12:40	10/03/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	57	6.0	10/03/13	KB	2540 C
Total Organic Carbon*	mg/L	2.1*	0.5	10/08/13	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/15/13	MC	200.7
Nitrate-N	mg/L	0.25	0.01	10/04/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/04/13	LL	300.0
Ammonia-N *	mg/L	0.02*	0.02	10/11/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.41	0.2	10/10/13	KB	SM4500 NH3 C
Chloride	mg/L	19.0	3.0	10/04/13	LL	300.0
Total Phosphorous (P)	mg/L	0.021	0.005	10/10/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/10/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.6*	0.5	10/10/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.27	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.18	NA	11/18/13	RIA*	Calculation
Chlorophyll-a	*	5.60*	*	10/07/13	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.007	0.005	10/03/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.5	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.41	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	<0.45	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.09) + PON(0.1) + NH_3(0.02) + NO_3(0.25) + NO_2(0.002) = 0.462$$

$$TN = TKN(0.41) + NO_3(0.25) + NO_2(0.002) = 0.662$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1319790
Report Date: 10/10/13

SAMPLE RESULTS

Lab ID: L1319790-08
Client ID: WW-132486
Sample Location: S-8A
Matrix: Water

Date Collected: 10/03/13 12:40
Date Received: 10/04/13
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	5.60		mg/m3	2.00	NA	1	10/04/13 13:40	10/07/13 09:05	30, 10200H	DM



R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/4/2013

Work Order #: 1310-21567

Sample # 001

SAMPLE DESCRIPTION: WW-132479 S-8B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/03/2013 @ 09:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.10	0.02	mg/l	SM4500-NH3 B,G,I	10/11/2013 15:38	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	10/9/2013 9:11	SJC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	10/9/2013 9:11	SJC

Unfiltered sample was filtered by laboratory. Dissolved results reflect the Laboratory filtration; these

Dissolved results are less than TOC.

JAD 10/16/13

Sample # 002

SAMPLE DESCRIPTION: WW-132480 S-5B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/03/2013 @ 10:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.07	0.02	mg/l	SM4500-NH3 B,G,I	10/11/2013 15:38	KTB
TOC Low Level	1.4	0.5	mg/l	SM-5310B	10/9/2013 9:11	SJC
Dissolved TOC	1.2	0.5	mg/l	EPA 415.1	10/9/2013 18:01	SJC

Sample # 003

SAMPLE DESCRIPTION: WW-132481 S-4A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/03/2013 @ 10:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,G,I	10/11/2013 15:38	KTB
TOC Low Level	1.5	0.5	mg/l	SM-5310B	10/9/2013 9:11	SJC
Dissolved TOC	1.2	0.5	mg/l	EPA 415.1	10/9/2013 18:49	SJC

Sample # 004

SAMPLE DESCRIPTION: WW-132482 S-3A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/03/2013 @ 11:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,G,I	10/11/2013 15:38	KTB
TOC Low Level	1.3	0.5	mg/l	SM-5310B	10/9/2013 9:11	SJC
Dissolved TOC	1.3	0.5	mg/l	EPA 415.1	10/9/2013 9:11	SJC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/4/2013

Work Order #: 1310-21567

Sample # 005

SAMPLE DESCRIPTION: WW-132483 S-2C

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/03/2013 @ 11:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,G,I	10/11/2013 15:38	KTB
TOC Low Level	1.3	0.5	mg/l	SM-5310B	10/8/2013 8:00	SJC
Dissolved TOC	1.2	0.5	mg/l	EPA 415.1	10/9/2013 19:36	SJC

Sample # 006

SAMPLE DESCRIPTION: WW-132484 S-6A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/03/2013 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,G,I	10/11/2013 15:38	KTB
TOC Low Level	1.4	0.5	mg/l	SM-5310B	10/8/2013 8:00	SJC
Dissolved TOC	1.2	0.5	mg/l	EPA 415.1	10/9/2013 20:23	SJC

Sample # 007

SAMPLE DESCRIPTION: WW-132485 S-12

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/03/2013 @ 12:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,G,I	10/11/2013 15:38	KTB
TOC Low Level	2.1	0.5	mg/l	SM-5310B	10/8/2013 8:00	SJC
Dissolved TOC	1.7	0.5	mg/l	EPA 415.1	10/9/2013 21:10	SJC

Sample # 008

SAMPLE DESCRIPTION: WW-132486 S-8A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/03/2013 @ 12:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.02	0.02	mg/l	SM4500-NH3 B,G,I	10/11/2013 15:38	KTB
TOC Low Level	2.1	0.5	mg/l	SM-5310B	10/8/2013 8:00	SJC
Dissolved TOC	1.6	0.5	mg/l	EPA 415.1	10/10/2013 9:16	SJC

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

uw132479

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/3/13	0945	S-8B	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
10/3/13	1010	S-5B	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

uw132480

(L)

(V)

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Navarro 10/13/13 1545

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

ww132481

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/3/13	1015	S-4A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
10/8/13	1100	S-3A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

ww132482

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

R Newall 10/03/13 1545

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

W132483

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/3/13	1130	S-2C	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
10/3/13	1200	S-6A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

W132484

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Estuaries 10/03/13 1545

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

W132485

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/3/13	1220	S-12	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
10/3/13	1240	S-8A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

W132486

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Blawieles 10/03/13 1545

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River **Comments:**
Project Number: DW-1
Collection Date: 10/21/13 **Collection Time:** 08:00
Sampled By: KT
Lab Order Number: WW-132659
Date Received: 10/21/13

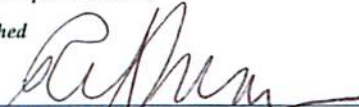
Sample Type	Sample Time	Sample Date	Comments			
DW-1 A	08:00	10/21/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	44	6.0	10/24/13	KB	2540 C
Total Organic Carbon*	mg/L	0.86*	0.5	10/24/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/23/13	RIA*	*
Total Iron	mg/L	BRL	0.01	10/30/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/29/13	RIA*	245.1
Boron	mg/L	0.035	0.010	10/31/13	MC	200.7
Copper	mg/L	BRL	0.003	10/31/13	MC	200.7
Nitrate-N	mg/L	1.18	0.01	10/22/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/22/13	LL	300.0
Ammonia-N *	mg/L	<0.02*	0.02	10/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/31/13	KB	SM4500 NH3 C
Chloride	mg/L	12.9	3.0	10/22/13	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	10/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/31/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.86*	0.5	10/24/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.18	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.2	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	10/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	1.18	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.1) + PON(0.1) + NH_3(0.01) + NO_3(1.18) + NO_2(0.002) = 1.392$$

$$TN = TKN(0.1) + NO_3(1.18) + NO_2(0.002) = 1.282$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 10/22/2013
Date Reported: 10/29/2013
P.O. #:
Work Order #: 1310-22801

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

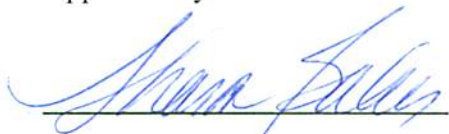
Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:



Sharon Baker
MIS / Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/22/2013

Work Order #: 1310-22801

Sample # 001

SAMPLE DESCRIPTION: WW-132559 DW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2013 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,I	10/25/2013 19:06	KTB
TOC Low Level	0.86	0.5	mg/l	SM-5310B	10/24/2013 12:00	SJC
Dissolved TOC	0.86	0.5	mg/l	EPA 415.1	10/24/2013 12:00	SJC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	10/23/2013 15:12	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/22/2013

Work Order #: 1310-22801

Sample # 001

SAMPLE DESCRIPTION: WW-132559 DW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2013 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	10/23/2013 15:12	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/23/2013 15:12	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	10/23/2013 15:12	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	10/23/2013 15:12	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	10/23/2013 15:12	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	10/23/2013 15:12	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	10/23/2013 15:12	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	10/23/2013 15:12	KAC
Surrogates			RANGE	SW-846 8260C	10/23/2013 15:12	KAC
Dibromofluoromethane	103		86-118%	SW-846 8260C	10/23/2013 15:12	KAC
Toluene-d8	104		88-110%	SW-846 8260C	10/23/2013 15:12	KAC
4-Bromofluorobenzene	96		86-115%	SW-846 8260C	10/23/2013 15:12	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260C	10/23/2013 15:12	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/29/2013 13:12	JRW
Mercury Digestion				EPA 245.1	10/29/2013 7:42	PJC

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River **Comments:**
Project Number: A 19
Collection Date: 10/21/13 **Collection Time:** 09:25
Sampled By: KT
Lab Order Number: WW-132660
Date Received: 10/21/13

Sample Type	Sample Time	Sample Date	Comments			
A 19 A	09:25	10/21/13	**Chloroform			
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	64	6.0	10/24/13	KB	2540 C
Total Organic Carbon*	mg/L	0.70*	0.5	10/24/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	1**	*	10/23/13	RIA*	*
Total Iron	mg/L	0.09	0.01	10/30/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/29/13	RIA*	245.1
Boron	mg/L	0.026	0.010	10/31/13	MC	200.7
Copper	mg/L	BRL	0.003	10/31/13	MC	200.7
Nitrate-N	mg/L	0.73	0.01	10/22/13	LL	300.0
Nitrite-N	mg/L	<0.004	0.004	10/22/13	LL	300.0
Ammonia-N *	mg/L	0.05*	0.02	10/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.29	0.2	10/31/13	KB	SM4500 NH3 C
Chloride	mg/L	21.8	3.0	10/22/13	LL	300.0
Total Phosphorous (P)	mg/L	0.043	0.005	10/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.26	0.2	10/31/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.72*	0.5	10/24/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.78	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.21	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	0.007	0.005	10/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.99	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.21) + PON(0.03) + NH_3(0.05) + NO_3(0.73) + NO_2(0.002) = 1.022$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/22/2013

Work Order #: 1310-22801

Sample # 002

SAMPLE DESCRIPTION: WW-132660 A19

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2013 @ 09:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.05	0.02	mg/l	SM4500-NH3 B,G,I	10/25/2013 19:06	KTB
TOC Low Level	0.70	0.5	mg/l	SM-5310B	10/24/2013 12:00	SJC
Dissolved TOC	0.72	0.5	mg/l	EPA 415.1	10/24/2013 12:00	SJC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Chloroform	1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	10/23/2013 15:39	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/22/2013

Work Order #: 1310-22801

Sample # 002

SAMPLE DESCRIPTION: WW-132660 A19

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2013 @ 09:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	10/23/2013 15:39	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/23/2013 15:39	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	10/23/2013 15:39	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	10/23/2013 15:39	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	10/23/2013 15:39	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	10/23/2013 15:39	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	10/23/2013 15:39	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	10/23/2013 15:39	KAC
Surrogates			RANGE	SW-846 8260C	10/23/2013 15:39	KAC
Dibromofluoromethane	103		86-118%	SW-846 8260C	10/23/2013 15:39	KAC
Toluene-d8	103		88-110%	SW-846 8260C	10/23/2013 15:39	KAC
4-Bromofluorobenzene	95		86-115%	SW-846 8260C	10/23/2013 15:39	KAC
1,2 Dichloroethane-d4	100		80-120%	SW-846 8260C	10/23/2013 15:39	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/29/2013 13:19	JRW
Mercury Digestion				EPA 245.1	10/29/2013 7:42	PJC

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River **Comments:**
Project Number: 2 SR
Collection Date: 10/21/13 **Collection Time:** 10:30
Sampled By: KT
Lab Order Number: WW-132661
Date Received: 10/21/13

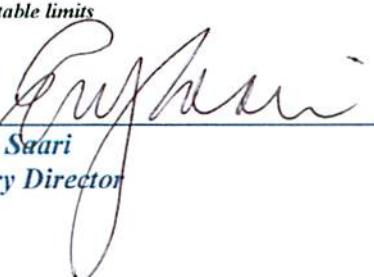
Sample Type	Sample Time	Sample Date	Comments			
2 SR A	10:30	10/21/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	44	6.0	10/24/13	KB	2540 C
Total Organic Carbon*	mg/L	0.84*	0.5	10/24/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/23/13	RIA*	*
Total Iron	mg/L	BRL	0.01	10/30/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/29/13	RIA*	245.1
Boron	mg/L	0.021	0.010	10/31/13	MC	200.7
Copper	mg/L	BRL	0.003	10/31/13	MC	200.7
Nitrate-N	mg/L	1.17	0.01	10/22/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/22/13	LL	300.0
Ammonia-N *	mg/L	0.13*	0.02	10/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.27	0.2	10/31/13	KB	SM4500 NH3 C
Chloride	mg/L	13.2	3.0	10/22/13	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	10/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.25	0.2	10/31/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.89*	0.5	10/24/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.3	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.12	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	10/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	1.42	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.12) + PON(0.02) + NH_3(0.13) + NO_3(1.17) + NO_2(0.002) = 1.442$$

$$TN = TKW(0.27) + NO_3(1.17) + NO_2(0.002) = 1.442$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Seuri
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/22/2013

Work Order #: 1310-22801

Sample # 003

SAMPLE DESCRIPTION: WW-132661 2SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2013 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.13	0.02	mg/l	SM4500-NH3 B,G,I	10/25/2013 19:06	KTB
TOC Low Level	0.84	0.5	mg/l	SM-5310B	10/24/2013 12:00	SJC
Dissolved TOC	0.89	0.5	mg/l	EPA 415.1	10/24/2013 12:00	SJC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	10/23/2013 16:07	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/22/2013

Work Order #: 1310-22801

Sample # 003

SAMPLE DESCRIPTION: WW-132661 2SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2013 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	10/23/2013 16:07	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/23/2013 16:07	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	10/23/2013 16:07	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	10/23/2013 16:07	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	10/23/2013 16:07	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	10/23/2013 16:07	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	10/23/2013 16:07	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	10/23/2013 16:07	KAC
Surrogates			RANGE	SW-846 8260C	10/23/2013 16:07	KAC
Dibromofluoromethane	103		86-118%	SW-846 8260C	10/23/2013 16:07	KAC
Toluene-d8	103		88-110%	SW-846 8260C	10/23/2013 16:07	KAC
4-Bromofluorobenzene	95		86-115%	SW-846 8260C	10/23/2013 16:07	KAC
1,2 Dichloroethane-d4	100		80-120%	SW-846 8260C	10/23/2013 16:07	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/29/2013 13:22	JRW
Mercury Digestion				EPA 245.1	10/29/2013 7:42	PJC

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: 2 DR

Collection Date: 10/21/13 **Collection Time:** 11:10

Sampled By: KT

Lab Order Number: WW-132662

Date Received: 10/21/13

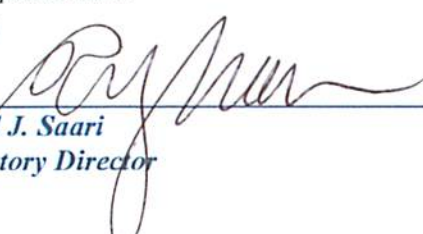
Sample Type	Sample Time	Sample Date	Comments			
2 DR A	11:10	10/21/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	142	6.0	10/24/13	KB	2540 C
Total Organic Carbon*	mg/L	1.3*	0.5	10/24/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/23/13	RIA*	*
Total Iron	mg/L	11.2	0.01	10/30/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/29/13	RIA*	245.1
Boron	mg/L	0.047	0.010	10/31/13	MC	200.7
Copper	mg/L	BRL	0.003	10/31/13	MC	200.7
Nitrate-N	mg/L	0.08	0.01	10/22/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/22/13	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	10/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.30	0.2	10/31/13	KB	SM4500 NH3 C
Chloride	mg/L	73.8	3.0	10/22/13	LL	300.0
Total Phosphorous (P)	mg/L	0.042	0.005	10/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.27	0.2	10/31/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.2*	0.5	10/24/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.12	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.23	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	10/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.35	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.23) + PON(0.03) + NH_3(0.04) + NO_3(0.08) + NO_2(0.002) = 0.382$$

$$TN = TKN(0.30) + NO_3(0.08) + NO_2(0.002) = 0.382$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/22/2013

Work Order #: 1310-22801

Sample # 004

SAMPLE DESCRIPTION: WW-132662 2DR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2013 @ 11:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,G,I	10/25/2013 19:06	KTB
TOC Low Level	1.3	0.5	mg/l	SM-5310B	10/24/2013 12:00	SJC
Dissolved TOC	1.2	0.5	mg/l	EPA 415.1	10/24/2013 12:00	SJC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	10/23/2013 16:35	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/22/2013

Work Order #: 1310-22801

Sample # 004

SAMPLE DESCRIPTION: WW-132662 2DR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2013 @ 11:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	10/23/2013 16:35	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/23/2013 16:35	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	10/23/2013 16:35	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	10/23/2013 16:35	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	10/23/2013 16:35	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	10/23/2013 16:35	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	10/23/2013 16:35	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	10/23/2013 16:35	KAC
Surrogates			RANGE	SW-846 8260C	10/23/2013 16:35	KAC
Dibromofluoromethane	103		86-118%	SW-846 8260C	10/23/2013 16:35	KAC
Toluene-d8	100		88-110%	SW-846 8260C	10/23/2013 16:35	KAC
4-Bromofluorobenzene	95		86-115%	SW-846 8260C	10/23/2013 16:35	KAC
1,2 Dichloroethane-d4	99		80-120%	SW-846 8260C	10/23/2013 16:35	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/29/2013 13:25	JRW
Mercury Digestion				EPA 245.1	10/29/2013 7:42	PJC

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: 7 SR

Collection Date: 10/21/13 **Collection Time:** 12:55

Sampled By: KT

Lab Order Number: WW-132663

Date Received: 10/21/13

Sample Type	Sample Time	Sample Date	Comments			
7 SR A	12:55	10/21/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	247	6.0	10/24/13	KB	2540 C
Total Organic Carbon*	mg/L	0.64*	0.5	10/24/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/23/13	RIA*	*
Total Iron	mg/L	BRL	0.01	10/30/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/29/13	RIA*	245.1
Boron	mg/L	0.018	0.010	10/31/13	MC	200.7
Copper	mg/L	BRL	0.003	10/31/13	MC	200.7
Nitrate-N	mg/L	0.11	0.01	10/22/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/22/13	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	10/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.31	0.2	10/31/13	KB	SM4500 NH3 C
Chloride	mg/L	145	3.0	10/23/13	LL	300.0
Total Phosphorous (P)	mg/L	0.012	0.005	10/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.28	0.2	10/31/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.67*	0.5	10/24/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.14	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.25	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	10/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.39	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.25) + PON(0.03) + NH_3(0.03) + NO_3(0.11) + NO_2(0.002) = 0.422$$

$$TN = TKN(0.31) + NO_3(0.11) + NO_2(0.002) = 0.422$$

BRL=below reportable limits

*see attached

By:


Ronald J. Sqari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/22/2013

Work Order #: 1310-22801

Sample # 005

SAMPLE DESCRIPTION: WW-132663 7SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2013 @ 12:55

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,G,I	10/25/2013 19:06	KTB
TOC Low Level	0.64	0.5	mg/l	SM-5310B	10/24/2013 12:00	SJC
Dissolved TOC	0.67	0.5	mg/l	EPA 415.1	10/24/2013 12:00	SJC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	10/23/2013 17:03	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/22/2013

Work Order #: 1310-22801

Sample # 005

SAMPLE DESCRIPTION: WW-132663 7SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2013 @ 12:55

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	10/23/2013 17:03	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/23/2013 17:03	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	10/23/2013 17:03	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	10/23/2013 17:03	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	10/23/2013 17:03	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	10/23/2013 17:03	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	10/23/2013 17:03	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	10/23/2013 17:03	KAC
Surrogates			RANGE	SW-846 8260C	10/23/2013 17:03	KAC
Dibromofluoromethane	103		86-118%	SW-846 8260C	10/23/2013 17:03	KAC
Toluene-d8	105		88-110%	SW-846 8260C	10/23/2013 17:03	KAC
4-Bromofluorobenzene	95		86-115%	SW-846 8260C	10/23/2013 17:03	KAC
1,2 Dichloroethane-d4	100		80-120%	SW-846 8260C	10/23/2013 17:03	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/29/2013 13:28	JRW
Mercury Digestion				EPA 245.1	10/29/2013 7:42	PJC

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: GW Eel River -Plymouth MA
Sampler: Kim Tower (KT)

WW-132659
(V)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/21/13	0800	DW-1	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
10/21/13	0925	A19	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

JW-132660
(O)

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

L. Lavelly 10/21/13 1620

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us

Project Name: **GW Eel River -Plymouth MA**

Sampler: Kim Tower (KT)

WW-132661

(9)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/21/13	1030	2512	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
10/21/13	1110	2512	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

WW-132662

(V)

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

J. Saville 10/21/13 1620

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: GW Eel River -Plymouth MA
Sampler: Kim Tower (KT)

WW-132663

(V)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10-21-13	1255	752	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
			2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

J. Saville 10/21/13 1620

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: GW Eel River **Comments:**
Project Number: Bradford
Collection Date: 10/22/13 **Collection Time:** 8:00
Sampled By: K. Tower
Lab Order Number: WW-132675
Date Received: 10/22/13

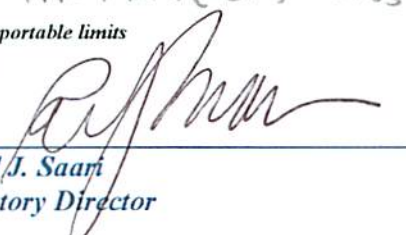
Sample Type	Sample Time	Sample Date	Comments			
Bradford A						
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	36	6.0	10/24/13	KB	2540 C
Total Organic Carbon*	mg/L	0.67*	0.5	10/24/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/24/13	RIA*	*
Total Iron	mg/L	3.19	0.01	10/30/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/30/13	RIA*	245.1
Boron	mg/L	0.030	0.010	10/31/13	MC	200.7
Copper	mg/L	BRL	0.003	10/31/13	MC	200.7
Nitrate-N	mg/L	0.08	0.01	10/22/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/22/13	LL	300.0
Ammonia-N *	mg/L	0.07*	0.02	10/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/31/13	KB	SM4500 NH3 C
Chloride	mg/L	11.6	3.0	10/22/13	LL	300.0
Total Phosphorous (P)	mg/L	0.009	0.005	10/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/31/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.71*	0.5	10/24/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.15	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.13	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	10/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	<0.28	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.065) + PON(0.1) + NH_3(0.07) + NO_3(0.08) + NO_2(0.002) = 0.317$$

$$TN = TKN(0.1) + NO_3(0.08) + NO_2(0.002) = 0.182$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 10/23/2013
Date Reported: 10/30/2013
P.O. #:
Work Order #: 1310-22887

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI-033, MA-RI015, CT-PH-0508, ME-RI015
NH-253700 A & B, USDA S-41844

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:



Sharon Baker
MIS / Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2013

Work Order #: 1310-22887

Sample # 001

SAMPLE DESCRIPTION: WW132675 BRADFORD

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2013 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.07	0.02	mg/l	SM4500-NH3 B,G,I	10/25/2013 19:06	KTB
TOC Low Level	0.67	0.5	mg/l	SM-5310B	10/24/2013 12:00	SJC
Dissolved TOC	0.71	0.5	mg/l	EPA 415.1	10/24/2013 12:00	SJC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	10/24/2013 14:20	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2013

Work Order #: 1310-22887

Sample # 001

SAMPLE DESCRIPTION: WW132675 BRADFORD

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2013 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	10/24/2013 14:20	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/24/2013 14:20	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	10/24/2013 14:20	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	10/24/2013 14:20	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	10/24/2013 14:20	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	10/24/2013 14:20	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	10/24/2013 14:20	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	10/24/2013 14:20	KAC
Surrogates			RANGE	SW-846 8260C	10/24/2013 14:20	KAC
Dibromofluoromethane	102		86-118%	SW-846 8260C	10/24/2013 14:20	KAC
Toluene-d8	101		88-110%	SW-846 8260C	10/24/2013 14:20	KAC
4-Bromofluorobenzene	95		86-115%	SW-846 8260C	10/24/2013 14:20	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260C	10/24/2013 14:20	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/30/2013 11:33	JRW
Mercury Digestion				EPA 245.1	10/30/2013 10:50	JL

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: GW Eel River **Comments:**
Project Number: A-15
Collection Date: 10/22/13 **Collection Time:** 10:10
Sampled By: K. Tower
Lab Order Number: WW-132676
Date Received: 10/22/13

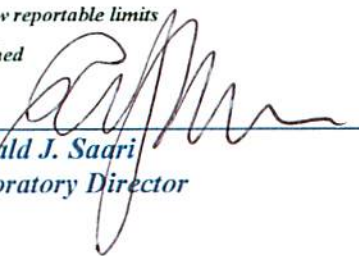
Sample Type	Sample Time	Sample Date	Comments			
A15 A						
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	146	6.0	10/24/13	KB	2540 C
Total Organic Carbon*	mg/L	0.57*	0.5	10/24/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/24/13	RIA*	*
Total Iron	mg/L	0.02	0.01	10/30/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/30/13	RIA*	245.1
Boron	mg/L	0.029	0.010	10/31/13	MC	200.7
Copper	mg/L	BRL	0.003	10/31/13	MC	200.7
Nitrate-N	mg/L	1.36	0.01	10/22/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/22/13	LL	300.0
Ammonia-N *	mg/L	0.06*	0.02	10/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.19	0.2	10/31/13	KB	SM4500 NH3 C
Chloride	mg/L	55.0	3.0	10/22/13	LL	300.0
Total Phosphorous (P)	mg/L	0.038	0.005	10/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.17	0.2	10/31/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.58*	0.5	10/24/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.42	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.11	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	0.034	0.005	10/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	1.53	NA	11/18/13	RIA*	Calculation

$$TN = DON (0.11) + PON (0.02) + NH_3 (0.06) + NO_3 (1.36) + NO_2 (0.002) = 1.552$$

$$TN = TLN (0.19) + NO_3 (1.36) + NO_2 (0.002) = 1.552$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2013

Work Order #: 1310-22887

Sample # 002

SAMPLE DESCRIPTION: WW132675 A15

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2013 @ 10:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.06	0.02	mg/l	SM4500-NH3 B,G,I	10/25/2013 19:06	KTB
TOC Low Level	0.57	0.5	mg/l	SM-5310B	10/24/2013 12:00	SJC
Dissolved TOC	0.58	0.5	mg/l	EPA 415.1	10/24/2013 12:00	SJC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	10/24/2013 14:48	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
 Date Received: 10/23/2013
 Work Order #: 1310-22887

Sample # 002

SAMPLE DESCRIPTION: WW132675 A15

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2013 @ 10:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	10/24/2013 14:48	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/24/2013 14:48	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	10/24/2013 14:48	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	10/24/2013 14:48	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	10/24/2013 14:48	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	10/24/2013 14:48	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	10/24/2013 14:48	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	10/24/2013 14:48	KAC
Surrogates			RANGE	SW-846 8260C	10/24/2013 14:48	KAC
Dibromofluoromethane	102		86-118%	SW-846 8260C	10/24/2013 14:48	KAC
Toluene-d8	102		88-110%	SW-846 8260C	10/24/2013 14:48	KAC
4-Bromofluorobenzene	95		86-115%	SW-846 8260C	10/24/2013 14:48	KAC
1,2 Dichloroethane-d4	100		80-120%	SW-846 8260C	10/24/2013 14:48	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/30/2013 11:37	JRW
Mercury Digestion				EPA 245.1	10/30/2013 10:50	JL

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

Project Name: GW Eel River
Project Number: A-21-A
Collection Date: 10/22/13
Sampled By: K Tower
Lab Order Number: WW-132677
Date Received: 10/22/13

Comments:

Note: Property owner utilized PVC cement to secure well casing prior to sampling

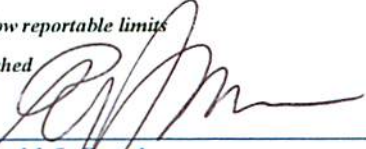
Sample Type	Sample Time	Sample Date	Comments			
A-21-A A			**Acetone, ***MEK			
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	66	6.0	10/24/13	KB	2540 C
Total Organic Carbon*	mg/L	2.5*	0.5	10/24/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	250**, 230***	*	10/24/13	RIA*	*
Total Iron	mg/L	2.44	0.01	10/30/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/30/13	RIA*	245.1
Boron	mg/L	0.030	0.010	10/31/13	MC	200.7
Copper	mg/L	BRL	0.003	10/31/13	MC	200.7
Nitrate-N	mg/L	0.07	0.01	10/22/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/22/13	LL	300.0
Ammonia-N *	mg/L	0.26*	0.02	10/25/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.55	0.2	10/31/13	KB	SM4500 NH3 C
Chloride	mg/L	28.8	3.0	10/22/13	LL	300.0
Total Phosphorous (P)	mg/L	0.058	0.005	10/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.52	0.2	10/31/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.4*	0.5	10/24/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.33	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.26	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	0.020	0.005	10/22/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.59	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.26) + PON(0.03) + NH_3(0.26) + NO_3(0.07) + NO_2(0.002) = 0.622$$

$$TN = TKN(0.55) + NO_3(0.07) + NO_2(0.002) = 0.622$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2013

Work Order #: 1310-22887

Sample # 003

SAMPLE DESCRIPTION: WW132677 A-21-A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2013 @ 11:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.26	0.02	mg/l	SM4500-NH3 B,G,I	10/25/2013 19:06	KTB
TOC Low Level	2.5	0.5	mg/l	SM-5310B	10/24/2013 12:00	SJC
Dissolved TOC	2.4	0.5	mg/l	EPA 415.1	10/24/2013 12:00	SJC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	10/24/2013 15:15	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2013

Work Order #: 1310-22887

Sample # 003

SAMPLE DESCRIPTION: WW132677 A-21-A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2013 @ 11:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	10/24/2013 15:15	KAC
Acetone	250	10	ug/l	SW-846 8260C	10/24/2013 15:15	KAC
2-Butanone(MEK)	230	10	ug/l	SW-846 8260B	10/24/2013 15:15	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	10/24/2013 15:15	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	10/24/2013 15:15	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	10/24/2013 15:15	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	10/24/2013 15:15	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	10/24/2013 15:15	KAC
Surrogates			RANGE	SW-846 8260C	10/24/2013 15:15	KAC
Dibromofluoromethane	102		86-118%	SW-846 8260C	10/24/2013 15:15	KAC
Toluene-d8	100		88-110%	SW-846 8260C	10/24/2013 15:15	KAC
4-Bromofluorobenzene	96		86-115%	SW-846 8260C	10/24/2013 15:15	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260C	10/24/2013 15:15	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/30/2013 11:40	JRW
Mercury Digestion				EPA 245.1	10/30/2013 10:50	JL

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River **Comments:**
Project Number: 5S
Collection Date: 10/22/13 **Collection Time:** 13:00
Sampled By: K. Tower
Lab Order Number: WW-132678
Date Received: 10/22/13

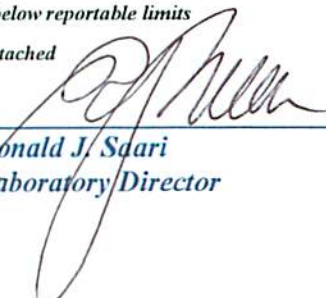
Sample Type	Sample Time	Sample Date	Comments			
5S A			**Chloroform			
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Kjeldhal Nitrogen	mg/L	0.29	0.6	10/31/13	KB	SM4500 NH3 C
Total Dissolved Solids	mg/L	1,033	6.0	10/24/13	KB	2540 C
Total Organic Carbon*	mg/L	0.61*	0.5	10/24/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	3**	*	10/24/13	RIA*	*
Total Iron	mg/L	0.08	0.01	10/30/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/30/13	RIA*	245.1'
Boron	mg/L	0.027	0.010	10/31/13	MC	200.7
Copper	mg/L	BRL	0.003	10/31/13	MC	200.7
Nitrate-N	mg/L	0.42	0.01	10/22/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/22/13	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	10/25/13	RIA*	SM4500 NH3 C
Chloride	mg/L	321	3.0	10/23/13	LL	300.0
Total Phosphorous (P)	mg/L	0.016	0.005	10/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.21	0.2	10/31/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.67*	0.5	10/24/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.45	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.18	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	10/22/13	RIA*	4500-P
Particulate Organic Carbon	mg/L	ND	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.08	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.63	NA	11/18/13	RIA*	Calculation

$$TN = DON (0.18) + PON (0.08) + NH_3 (0.03) + NO_3 (0.42) + NO_2 (0.002) = 0.712$$

$$TN = TKN (0.29) + NO_3 (0.42) + NO_2 (0.002) = 0.712$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Sqari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2013

Work Order #: 1310-22887

Sample # 004

SAMPLE DESCRIPTION: WW132678 5S

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2013 @ 13:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,G,I	10/25/2013 19:06	KTB
TOC Low Level	0.61	0.5	mg/l	SM-5310B	10/24/2013 12:00	SJC
Dissolved TOC	0.67	0.5	mg/l	EPA 415.1	10/24/2013 12:00	SJC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Chloroform	3	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	10/24/2013 15:42	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2013

Work Order #: 1310-22887

Sample # 004

SAMPLE DESCRIPTION: WW132678 5S

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2013 @ 13:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	10/24/2013 15:42	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/24/2013 15:42	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	10/24/2013 15:42	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	10/24/2013 15:42	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	10/24/2013 15:42	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	10/24/2013 15:42	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	10/24/2013 15:42	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	10/24/2013 15:42	KAC
Surrogates			RANGE	SW-846 8260C	10/24/2013 15:42	KAC
Dibromofluoromethane	102		86-118%	SW-846 8260C	10/24/2013 15:42	KAC
Toluene-d8	102		88-110%	SW-846 8260C	10/24/2013 15:42	KAC
4-Bromofluorobenzene	96		86-115%	SW-846 8260C	10/24/2013 15:42	KAC
1,2 Dichloroethane-d4	102		80-120%	SW-846 8260C	10/24/2013 15:42	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/30/2013 11:42	JRW
Mercury Digestion				EPA 245.1	10/30/2013 10:50	JL

2

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: GW Eel River -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/22/13	0800	Bradford	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
10/22/13	1010	A15	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Blair 10/22/13 1610

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: GW Eel River -Plymouth MA
Sampler: Kim Tower (KT)

W132677

W132678

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/22/13	1140	A-21-A	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
10/22/13	1300	SS	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

P. Nolasco 10/22/13 1610

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management
 K.Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: GW Eel River-Plymouth **Comments:**
Project Number: GW-1
Collection Date: 10/23/13 **Collection Time:** 0800
Sampled By: K. Tower
Lab Order Number: WW-132688
Date Received: 10/23/13

Sample Type	Sample Time	Sample Date	Comments			
GW-1 A	0800	10/23/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	BRL	6.0	10/24/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	10/29/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/28/13	RIA*	*
Total Iron	mg/L	BRL	0.01	10/30/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/30/13	RIA*	245.1
Boron	mg/L	BRL	0.010	10/31/13	MC	200.7
Copper	mg/L	BRL	0.003	10/31/13	MC	200.7
Nitrate-N	mg/L	BRL	0.01	10/24/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/24/13	LL	300.0
Ammonia-N *	mg/L	0.02*	0.02	11/01/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/31/13	KB	SM4500 NH3 C
Chloride	mg/L	BRL	3.0	10/24/13	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	10/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/31/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	10/29/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	<0.03	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.18	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	10/24/13	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.09) + PON(0.1) + NH_3(0.02) + NO_3(0.005) + NO_2(0.002) = 0.217$$

$$TN = TKN(0.1) + NO_3(0.005) + NO_2(0.002) = 0.107$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/25/2013

Work Order #: 1310-23124

Sample # 001

SAMPLE DESCRIPTION: WW132688 GW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/23/2013 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.02	0.02	mg/l	SM4500-NH3 B,G,I	11/1/2013 11:11	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	10/29/2013 18:00	SJC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	10/29/2013 18:00	SJC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	10/28/2013 12:26	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/25/2013

Work Order #: 1310-23124

Sample # 001

SAMPLE DESCRIPTION: WW132688 GW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/23/2013 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	10/28/2013 12:26	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/28/2013 12:26	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	10/28/2013 12:26	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	10/28/2013 12:26	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	10/28/2013 12:26	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	10/28/2013 12:26	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	10/28/2013 12:26	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	10/28/2013 12:26	KAC
Surrogates			RANGE	SW-846 8260C	10/28/2013 12:26	KAC
Dibromofluoromethane	101		86-118%	SW-846 8260C	10/28/2013 12:26	KAC
Toluene-d8	104		88-110%	SW-846 8260C	10/28/2013 12:26	KAC
4-Bromofluorobenzene	96		86-115%	SW-846 8260C	10/28/2013 12:26	KAC
1,2 Dichloroethane-d4	100		80-120%	SW-846 8260C	10/28/2013 12:26	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/30/2013 12:00	JRW
Mercury Digestion				EPA 245.1	10/30/2013 10:50	JL

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River-Plymouth **Comments:**
Project Number: A13
Collection Date: 10/23/13 **Collection Time:** 0940
Sampled By: K. Tower
Lab Order Number: WW-132689
Date Received: 10/23/13

Sample Type	Sample Time	Sample Date	Comments			
A13 A	0940	10/23/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	261	6.0	10/24/13	KB	2540 C
Total Organic Carbon*	mg/L	1.8*	0.5	10/29/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/28/13	RIA*	*
Total Iron	mg/L	1.35	0.01	10/30/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/30/13	RIA*	245.1
Boron	mg/L	0.013	0.010	10/31/13	MC	200.7
Copper	mg/L	0.009	0.003	10/31/13	MC	200.7
Nitrate-N	mg/L	0.17	0.01	10/24/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/24/13	LL	300.0
Ammonia-N *	mg/L	0.10*	0.02	11/01/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.41	0.2	10/31/13	KB	SM4500 NH3 C
Chloride	mg/L	157	3.0	10/24/13	LL	300.0
Total Phosphorous (P)	mg/L	0.019	0.005	10/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.29	0.2	10/31/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.7*	0.5	10/29/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.27	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.19	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	0.010	0.005	10/24/13	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.12	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.46	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.19) + PON(0.12) + NH_3(0.10) + NO_3(0.17) + NO_2(0.002) = 0.582$$

$$TN = TKLN(0.41) + NO_3(0.17) + NO_2(0.002) = 0.582$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/25/2013

Work Order #: 1310-23124

Sample # 002

SAMPLE DESCRIPTION: WW132689 A13

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/23/2013 @ 09:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.10	0.02	mg/l	SM4500-NH3 B,G,I	11/1/2013 11:11	KTB
TOC Low Level	1.8	0.5	mg/l	SM-5310B	10/29/2013 18:00	SJC
Dissolved TOC	1.7	0.5	mg/l	EPA 415.1	10/29/2013 18:00	SJC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	10/28/2013 12:54	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
 Date Received: 10/25/2013
 Work Order #: 1310-23124

Sample # 002

SAMPLE DESCRIPTION: WW132689 A13

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/23/2013 @ 09:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	10/28/2013 12:54	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/28/2013 12:54	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	10/28/2013 12:54	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	10/28/2013 12:54	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	10/28/2013 12:54	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	10/28/2013 12:54	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	10/28/2013 12:54	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	10/28/2013 12:54	KAC
Surrogates			RANGE	SW-846 8260C	10/28/2013 12:54	KAC
Dibromofluoromethane	102		86-118%	SW-846 8260C	10/28/2013 12:54	KAC
Toluene-d8	102		88-110%	SW-846 8260C	10/28/2013 12:54	KAC
4-Bromofluorobenzene	95		86-115%	SW-846 8260C	10/28/2013 12:54	KAC
1,2 Dichloroethane-d4	102		80-120%	SW-846 8260C	10/28/2013 12:54	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/30/2013 12:02	JRW
Mercury Digestion				EPA 245.1	10/30/2013 10:50	JL

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, November 18, 2013

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River-Plymouth **Comments:**
Project Number: A17
Collection Date: 10/23/13 **Collection Time:** 1205
Sampled By: K. Tower
Lab Order Number: WW-132690
Date Received: 10/23/13

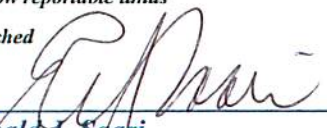
Sample Type	Sample Time	Sample Date	Comments			
A17 A	1205	10/23/13				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	185	6.0	10/24/13	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	10/29/13	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/28/13	RIA*	*
Total Iron	mg/L	0.02	0.01	10/30/13	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/30/13	RIA*	245.1
Boron	mg/L	0.011	0.010	10/31/13	MC	200.7
Copper	mg/L	BRL	0.003	10/31/13	MC	200.7
Nitrate-N	mg/L	3.32	0.01	10/24/13	LL	300.0
Nitrite-N	mg/L	BRL	0.004	10/24/13	LL	300.0
Ammonia-N *	mg/L	0.02*	0.02	11/01/13	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.22	0.2	10/31/13	KB	SM4500 NH3 C
Chloride	mg/L	83.6	3.0	10/24/13	LL	300.0
Total Phosphorous (P)	mg/L	0.011	0.005	10/24/13	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.21	0.2	10/31/13	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	10/29/13	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	3.34	NA	11/18/13	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.19	NA	11/18/13	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	0.009	0.005	10/24/13	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	11/18/13	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	11/18/13	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	3.53	NA	11/18/13	RIA*	Calculation

$$TN = DON(0.19) + PON(0.01) + NH_3(0.02) + NO_3(3.32) + NO_2(0.002) = 3.542$$

$$TN = TKN(0.22) + NO_3(3.32) + NO_2(0.002) = 3.542$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/25/2013

Work Order #: 1310-23124

Sample # 003

SAMPLE DESCRIPTION: WW132690 A17

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/23/2013 @ 12:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.02	0.02	mg/l	SM4500-NH3 B,G,I	11/1/2013 11:11	KTB
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	10/29/2013 18:00	SJC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	10/29/2013 18:00	SJC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	10/28/2013 13:22	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/25/2013

Work Order #: 1310-23124

Sample # 003

SAMPLE DESCRIPTION: WW132690 A17

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/23/2013 @ 12:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260B	10/28/2013 13:22	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/28/2013 13:22	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260B	10/28/2013 13:22	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260B	10/28/2013 13:22	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260B	10/28/2013 13:22	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260B	10/28/2013 13:22	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260B	10/28/2013 13:22	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260B	10/28/2013 13:22	KAC
Surrogates			RANGE	SW-846 8260C	10/28/2013 13:22	KAC
Dibromofluoromethane	102		86-118%	SW-846 8260C	10/28/2013 13:22	KAC
Toluene-d8	101		88-110%	SW-846 8260C	10/28/2013 13:22	KAC
4-Bromofluorobenzene	97		86-115%	SW-846 8260C	10/28/2013 13:22	KAC
1,2 Dichloroethane-d4	97		80-120%	SW-846 8260C	10/28/2013 13:22	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/30/2013 12:03	JRW
Mercury Digestion				EPA 245.1	10/30/2013 10:50	JL

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: GW Eel River -Plymouth MA
Sampler: Kim Tower (KT)

WW-132688
①

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/23/13	0800	GW-1	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
10/23/13	0940	A13	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

WW132689
②

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower 10/23/13 1610

Received By:

Date/Time:



Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: Kim Tower (KT)

10/23/13 1205 A17
132690
©

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/23/13	1205	A17	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO ₃
			1	Plastic	TOC	H2SO4
			2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO ₃
			1	Plastic	TOC	H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower 10/23/13 1610

Received By: Date/Time:



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

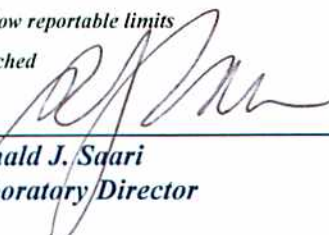
ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-8A
Collection Date: 4/1/14 **Collection Time:** 12:20
Sampled By: Kim Tower
Lab Order Number: WW-141063
Date Received: 04/01/14

Sample Type	Sample Time	Sample Date	Comments			
S-8A A	12:20	4/1/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	60	6.0	04/08/14	KB	2540 C
Total Organic Carbon*	mg/L	1.2*	0.5	04/07/14	RIA*	SM 5310 C
Boron	mg/L	0.013	0.010	04/15/14	MC	200.7
Nitrate-N	mg/L	0.33	0.01	04/02/14	LL	300.0
Nitrite-N	mg/L	ND	0.004	04/02/14	LL	300.0
Ammonia-N *	mg/L	BRL*	0.02	04/10/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.28	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	16.6	3.0	04/02/14	LL	300.0
Total Phosphorous (P)	mg/L	0.017	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.26	0.2	04/10/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.0*	0.5	04/07/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.33	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.26	NA	05/19/14	LL	Calculation
Chlorophyll-a	*	9.62*	*	04/03/14	Alpha Analytica	*
Ortho Phosphorous (P)	mg/L	0.006	0.005	04/01/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.2	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.59	NA	05/19/14	LL	Calculation

$$TN = DON(0.26) + PON(0.02) + NH_3(0.01) + NO_3(0.33) + NO_2(0.002) = 0.622$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Sqari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

SAMPLE RESULTS

Lab ID: L1406812-08
Client ID: WW-141063
Sample Location: S-8A
Matrix: Water

Date Collected: 04/01/14 12:20
Date Received: 04/02/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	9.62		mg/m3	2.00	NA	1	04/02/14 14:15	04/03/14 10:45	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW Sampling
Project Number: S-8B
Collection Date: 4/1/14 Collection Time: 9:45
Sampled By: Kim Tower
Lab Order Number: WW-141056
Date Received: 04/01/14

Comments:

Sample Type	Sample Time	Sample Date	Comments			
S-8B A	9:45	4/1/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	BRL	6.0	04/08/14	KB	2540 C
Total Organic Carbon*	mg/L	BRL*	0.5	04/07/14	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	04/15/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	04/02/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/02/14	LL	300.0
Ammonia-N *	mg/L	0.037*	0.02	04/10/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	BRL	3.0	04/02/14	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	BRL*	0.5	04/07/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.037	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.2	NA	05/19/14	LL	Calculation
Chlorophyll-a	*	ND*	*	04/03/14	Alpha Analytica	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	04/01/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.2	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	05/19/14	LL	Calculation

$$TN = DON(0.1) + PON(0.1) + NH_3(0.037) + NO_3(0.005) + NO_2(0.002) = 0.244$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

SAMPLE RESULTS

Lab ID: L1406812-01
Client ID: WW-141056
Sample Location: S-8B
Matrix: Water

Date Collected: 04/01/14 09:45
Date Received: 04/02/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	04/02/14 14:15	04/03/14 10:45	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-5B

Collection Date: 4/1/14 **Collection Time:** 10:10

Sampled By: Kim Tower

Lab Order Number: WW-141057

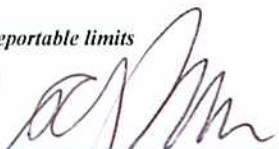
Date Received: 04/01/14

Sample Type	Sample Time	Sample Date	Comments			
S-5B A	10:10	4/1/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	371	6.0	04/08/14	KB	2540 C
Total Organic Carbon*	mg/L	3.9*	0.5	04/07/14	RIA*	SM 5310 C
Boron	mg/L	0.052	0.010	04/15/14	MC	200.7
Nitrate-N	mg/L	0.24	0.01	04/01/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/01/14	LL	300.0
Ammonia-N *	mg/L	0.081*	0.02	04/10/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.40	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	191	3.0	04/02/14	LL	300.0
Total Phosphorous (P)	mg/L	0.023	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.38	0.2	04/10/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	3.9*	0.5	04/07/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.32	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.30	NA	05/19/14	LL	Calculation
Chlorophyll-a	*	8.91*	*	04/03/14	Alpha Analytica	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	04/01/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.62	NA	05/19/14	LL	Calculation

$$TN = DON(0.30) + PON(0.02) + NH_3(0.081) + NO_3(0.24) + NO_2(0.002) = 0.643$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

SAMPLE RESULTS

Lab ID: L1406812-02
Client ID: WW-141057
Sample Location: S-5B
Matrix: Water

Date Collected: 04/01/14 10:10
Date Received: 04/02/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	8.91		mg/m3	2.00	NA	1	04/02/14 14:15	04/03/14 10:45	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

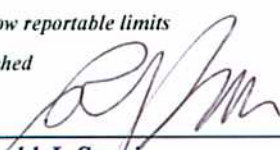
ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-4A
Collection Date: 4/1/14 **Collection Time:** 10:30
Sampled By: Kim Tower
Lab Order Number: WW-141058
Date Received: 04/01/14

Sample Type	Sample Time	Sample Date	Comments			
S-4A A	10:30	4/1/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	69	6.0	04/08/14	KB	2540 C
Total Organic Carbon*	mg/L	4.5*	0.5	04/07/14	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	04/15/14	MC	200.7
Nitrate-N	mg/L	0.20	0.01	04/01/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/01/14	LL	300.0
Ammonia-N *	mg/L	0.038*	0.02	04/10/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.37	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	25.0	3.0	04/01/14	LL	300.0
Total Phosphorous (P)	mg/L	0.024	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.35	0.2	04/10/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	4.3*	0.5	04/07/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.24	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.31	NA	05/19/14	LL	Calculation
Chlorophyll-a	*	7.84*	*	04/03/14	Alpha Analytica	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	04/01/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.2	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.55	NA	05/19/14	LL	Calculation

$$TN = DON(0.31) + PON(0.02) + NH_3(0.038) + NO_3(0.20) + NO_2(0.002) = 0.57$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

SAMPLE RESULTS

Lab ID: L1406812-03
Client ID: WW-141058
Sample Location: S-4A
Matrix: Water

Date Collected: 04/01/14 10:30
Date Received: 04/02/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	7.84		mg/m3	2.00	NA	1	04/02/14 14:15	04/03/14 10:45	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW Sampling
Project Number: S-3A
Collection Date: 4/1/14 **Collection Time:** 11:00
Sampled By: Kim Tower
Lab Order Number: WW-141059
Date Received: 04/01/14

Comments:

Sample Type	Sample Time	Sample Date	Comments			
S-3A A	11:00	4/1/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	80	6.0	04/08/14	KB	2540 C
Total Organic Carbon*	mg/L	1.2*	0.5	04/07/14	RIA*	SM 5310 C
Boron	mg/L	0.012	0.010	04/15/14	MC	200.7
Nitrate-N	mg/L	0.28	0.01	04/01/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/01/14	LL	300.0
Ammonia-N *	mg/L	0.032*	0.02	04/10/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.28	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	30.4	3.0	04/01/14	LL	300.0
Total Phosphorous (P)	mg/L	0.027	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.27	0.2	04/10/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.1*	0.5	04/07/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.31	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.24	NA	05/19/14	LL	Calculation
Chlorophyll-a	*	3.12*	*	04/03/14	Alpha Analytica	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	04/01/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.55	NA	05/19/14	LL	Calculation

$$TN = DON(0.24) + PON(0.01) + NH_3(0.032) + NO_3(0.28) + NO_2(0.002) = 0.564$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

SAMPLE RESULTS

Lab ID: L1406812-04
Client ID: WW-141059
Sample Location: S-3A
Matrix: Water

Date Collected: 04/01/14 11:00
Date Received: 04/02/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	3.12		mg/m3	2.00	NA	1	04/02/14 14:15	04/03/14 10:45	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-2C

Collection Date: 4/1/14 **Collection Time:** 11:25

Sampled By: Kim Tower

Lab Order Number: WW-141060

Date Received: 04/01/14

Sample Type		Sample Time	Sample Date	Comments		
S-2C	A	11:25	4/1/14			
Parameters		Units	Test Results	Reportable Limits	Date Analyzed	Analyst Method
Total Dissolved Solids		mg/L	61	6.0	04/08/14	KB 2540 C
Total Organic Carbon*		mg/L	1.0*	0.5	04/07/14	RIA* SM 5310 C
Boron		mg/L	0.011	0.010	04/15/14	MC 200.7
Nitrate-N		mg/L	0.20	0.01	04/01/14	LL 300.0
Nitrite-N		mg/L	BRL	0.004	04/01/14	LL 300.0
Ammonia-N *		mg/L	0.032*	0.02	04/10/14	RIA* SM4500 NH3 C
Total Kjeldhal Nitrogen		mg/L	0.28	0.2	04/10/14	KB SM4500 NH3 C
Chloride		mg/L	26.8	3.0	04/01/14	LL 300.0
Total Phosphorous (P)		mg/L	0.022	0.005	04/11/14	MC 4500-P
Dissolved Kjeldhal Nitrogen		mg/L	BRL	0.2	04/10/14	KB SM4500 NH3 C
Dissolved Total Organic Carbon		mg/L	0.98*	0.5	04/07/14	RIA* EPA 415.1
Dissolved Inorganic Nitrogen		mg/L	0.23	NA	05/19/14	LL Calculation
Dissolved Organic Nitrogen		mg/L	<0.2	NA	05/19/14	LL Calculation
Chlorophyll-a		*	16.6*	*	04/03/14	Alpha Analytica *
Ortho Phosphorous (P)		mg/L	BRL	0.005	04/01/14	MC 4500-P
Particulate Organic Carbon		mg/L	0.02	NA	05/19/14	LL SM 5310 C
Particulate Organic Nitrogen		mg/L	<0.08	NA	05/19/14	LL Calculation
Total Dissolved Nitrogen		mg/L	<0.40	NA	05/19/14	LL Calculation

$$TN = DON(0.1) + PON(0.04) + NH_3(0.032) + NO_3(0.20) + NO_2(0.002) = 0.374$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

SAMPLE RESULTS

Lab ID: L1406812-05
Client ID: WW-141060
Sample Location: S-2C
Matrix: Water

Date Collected: 04/01/14 11:25
Date Received: 04/02/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	16.6		mg/m3	2.00	NA	1	04/02/14 14:15	04/03/14 10:45	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-6A

Collection Date: 4/1/14 **Collection Time:** 11:55

Sampled By: Kim Tower

Lab Order Number: WW-141061

Date Received: 04/01/14

Sample Type	Sample Time	Sample Date	Comments			
S-6A A	11:55	4/1/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	54	6.0	04/08/14	KB	2540 C
Total Organic Carbon*	mg/L	1.2*	0.5	04/07/14	RIA*	SM 5310 C
Boron	mg/L	0.012	0.010	04/15/14	MC	200.7
Nitrate-N	mg/L	0.32	0.01	04/01/14	LL	300.0
Nitrite-N	mg/L	ND	0.004	04/01/14	LL	300.0
Ammonia-N *	mg/L	0.024*	0.02	04/10/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.25	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	18.3	3.0	04/01/14	LL	300.0
Total Phosphorous (P)	mg/L	0.013	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.24	0.2	04/10/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.0*	0.5	04/07/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.34	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.22	NA	05/19/14	LL	Calculation
Chlorophyll-a	*	2.59*	*	04/03/14	Alpha Analytica	*
Ortho Phosphorous (P)	mg/L	0.009	0.005	04/01/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.2	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.56	NA	05/19/14	LL	Calculation

$$TN = DON (0.22) + PON (0.01) + NH_3 (0.024) + NO_3 (0.32) + NO_2 (0.002) = 0.576$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

SAMPLE RESULTS

Lab ID: L1406812-06
Client ID: WW-141061
Sample Location: S-6A
Matrix: Water

Date Collected: 04/01/14 11:55
Date Received: 04/02/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	2.59		mg/m3	2.00	NA	1	04/02/14 14:15	04/03/14 10:45	30, 10200H	DW



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management

K.Towers/ 11 Lincoln St.

Plymouth, MA

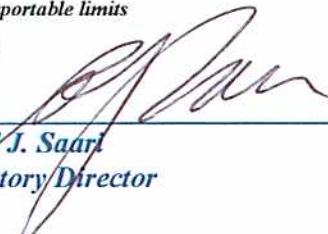
ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-12
Collection Date: 4/1/14 **Collection Time:** 12:05
Sampled By: Kim Tower
Lab Order Number: WW-141062
Date Received: 04/01/14

Sample Type	Sample Time	Sample Date	Comments			
S-12 A	12:05	4/1/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	46	6.0	04/08/14	KB	2540 C
Total Organic Carbon*	mg/L	1.3*	0.5	04/07/14	RIA*	SM 5310 C
Boron	mg/L	0.013	0.010	04/15/14	MC	200.7
Nitrate-N	mg/L	0.33	0.01	04/01/14	LL	300.0
Nitrite-N	mg/L	ND	0.004	04/01/14	LL	300.0
Ammonia-N *	mg/L	0.024*	0.02	04/10/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	16.5	3.0	04/01/14	LL	300.0
Total Phosphorous (P)	mg/L	0.017	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.2*	0.5	04/07/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.35	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.2	NA	05/19/14	LL	Calculation
Chlorophyll-a	*	6.16*	*	04/03/14	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.014	0.005	04/01/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.53	NA	05/19/14	LL	Calculation

$$TN = DON(0.1) + PON(0.1) + NH_3(0.024) + NO_3(0.33) + NO_2(0.002) = 0.556$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

SAMPLE RESULTS

Lab ID: L1406812-07
Client ID: WW-141062
Sample Location: S-12
Matrix: Water

Date Collected: 04/01/14 12:05
Date Received: 04/02/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	6.16		mg/m3	2.00	NA	1	04/02/14 14:15	04/03/14 10:45	30, 10200H	DW



R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/3/2014

Work Order #: 1404-07086

Sample # 001

SAMPLE DESCRIPTION: WW-141056 S-8B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/01/2014 @ 09:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.037	0.02	mg/l	SM4500-NH3 B,G,I	4/10/2014 17:12	EVH
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/7/2014 7:30	EC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/7/2014 7:30	EC

Sample # 002

SAMPLE DESCRIPTION: WW-141057 S-5B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/01/2014 @ 10:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.081	0.02	mg/l	SM4500-NH3 B,G,I	4/10/2014 17:12	EVH
TOC Low Level	3.9	0.5	mg/l	SM-5310B	4/7/2014 7:30	EC
Dissolved TOC	3.9	0.5	mg/l	EPA 415.1	4/7/2014 7:30	EC

Sample # 003

SAMPLE DESCRIPTION: WW-141058 S-4A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/01/2014 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.038	0.02	mg/l	SM4500-NH3 B,G,I	4/10/2014 17:12	EVH
TOC Low Level	4.5	0.5	mg/l	SM-5310B	4/7/2014 7:30	EC
Dissolved TOC	4.3	0.5	mg/l	EPA 415.1	4/7/2014 7:30	EC

Sample # 004

SAMPLE DESCRIPTION: WW-141059 S-3A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/01/2014 @ 11:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.032	0.02	mg/l	SM4500-NH3 B,G,I	4/10/2014 17:12	EVH
TOC Low Level	1.2	0.5	mg/l	SM-5310B	4/7/2014 7:30	EC
Dissolved TOC	1.1	0.5	mg/l	EPA 415.1	4/7/2014 7:30	EC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/3/2014

Work Order #: 1404-07086

Sample # 005

SAMPLE DESCRIPTION: WW-141060 S-2C

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/01/2014 @ 11:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.032	0.02	mg/l	SM4500-NH3 B,G,I	4/10/2014 17:12	EVH
TOC Low Level	1.0	0.5	mg/l	SM-5310B	4/7/2014 7:30	EC
Dissolved TOC	0.98	0.5	mg/l	EPA 415.1	4/7/2014 7:30	EC

Sample # 006

SAMPLE DESCRIPTION: WW-141061 S-6A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/01/2014 @ 11:55

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.024	0.02	mg/l	SM4500-NH3 B,G,I	4/10/2014 17:12	EVH
TOC Low Level	1.2	0.5	mg/l	SM-5310B	4/7/2014 7:30	EC
Dissolved TOC	1.0	0.5	mg/l	EPA 415.1	4/7/2014 7:30	EC

Sample # 007

SAMPLE DESCRIPTION: WW-141062 S-12

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/01/2014 @ 12:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.024	0.02	mg/l	SM4500-NH3 B,G,I	4/10/2014 17:12	EVH
TOC Low Level	1.3	0.5	mg/l	SM-5310B	4/7/2014 7:30	EC
Dissolved TOC	1.2	0.5	mg/l	EPA 415.1	4/7/2014 7:30	EC

Sample # 008

SAMPLE DESCRIPTION: WW-141063 S-8A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/01/2014 @ 12:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,G,I	4/10/2014 17:12	EVH
TOC Low Level	1.2	0.5	mg/l	SM-5310B	4/7/2014 7:30	EC
Dissolved TOC	1.0	0.5	mg/l	EPA 415.1	4/7/2014 7:30	EC

[illegible]

[illegible]

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 4/3/2014
Date Reported: 4/10/2014
P.O. #:
Work Order #: 1404-07086

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI LAI0033, MA M-RI015, CT PH-0508, ME RI00015
NH 253700 2537, NY 11726

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:

 for

Sharon Baker
MIS / Data Reporting
enc: Chain of Custody

INORGANICS & MISCELLANEOUS



ANALYTICAL REPORT

Lab Number:	L1406812
Client:	Envirotech Laboratories, Inc. 8 Jan Sebastian Drive Unit 12 Sandwich, MA 02563
ATTN:	Ron Saari
Phone:	(800) 339-6460
Project Name:	PLYMOUTH ENVIRONMENTAL MGMNT
Project Number:	Not Specified
Report Date:	04/08/14

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1406812-01	WW-141056	S-8B	04/01/14 09:45
L1406812-02	WW-141057	S-5B	04/01/14 10:10
L1406812-03	WW-141058	S-4A	04/01/14 10:30
L1406812-04	WW-141059	S-3A	04/01/14 11:00
L1406812-05	WW-141060	S-2C	04/01/14 11:25
L1406812-06	WW-141061	S-6A	04/01/14 11:55
L1406812-07	WW-141062	S-12	04/01/14 12:05
L1406812-08	WW-141063	S-8A	04/01/14 12:20

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

Case Narrative (continued)

Sample Receipt

L1406812-01 through -08 were received in inappropriate containers for the Chlorophyll A analysis.

Chlorophyll A

L1406812-01 through -08 were analyzed with the method required holding time exceeded. The results are reported at the client's request.

A laboratory duplicate could not be performed due to insufficient sample volume available for analysis.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Kelly Stenstrom

Title: Technical Director/Representative

Date: 04/08/14

Project Name: PLYMOUTH ENVIRONMENTAL MGMN

Lab Number: L1406812

Project Number: Not Specified

Report Date: 04/08/14

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analysis
General Chemistry - Westborough Lab for sample(s): 01-08 Batch: WG679749-1										
Chlorophyll A	ND		mg/m3	2.00	NA	1	04/02/14 14:15	04/03/14 10:45	30, 10200H	DW



Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1406812-01A	Amber 1000ml unpreserved	A	N/A	3.4	Y	Absent	CHLORO-A(1)
L1406812-02A	Amber 1000ml unpreserved	A	N/A	3.4	Y	Absent	CHLORO-A(1)
L1406812-03A	Amber 1000ml unpreserved	A	N/A	3.4	Y	Absent	CHLORO-A(1)
L1406812-04A	Amber 1000ml unpreserved	A	N/A	3.4	Y	Absent	CHLORO-A(1)
L1406812-05A	Amber 1000ml unpreserved	A	N/A	3.4	Y	Absent	CHLORO-A(1)
L1406812-06A	Amber 1000ml unpreserved	A	N/A	3.4	Y	Absent	CHLORO-A(1)
L1406812-07A	Amber 1000ml unpreserved	A	N/A	3.4	Y	Absent	CHLORO-A(1)
L1406812-08A	Amber 1000ml unpreserved	A	N/A	3.4	Y	Absent	CHLORO-A(1)

*Values in parentheses indicate holding time in days



Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCS D	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.
---	--

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

A	- Spectra identified as "Aldol Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
G	- The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The lower value for the two columns has been reported due to obvious interference.

Report Format: Data Usability Report



Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

Data Qualifiers

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT
Project Number: Not Specified

Lab Number: L1406812
Report Date: 04/08/14

REFERENCES

- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

Last revised December 11, 2013

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility

EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

EPA 8330A/B: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT.

EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 625: 4-Chloroaniline, 4-Methylphenol.

SM4500: Soil: Total Phosphorus, TKN, NO₂, NO₃.

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Ti; **EPA 200.7:** Ba, Be, Ca, Cd, Cr, Cu, Na; **EPA 245.1:** Mercury; **EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO₃-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

EPA 332: Perchlorate.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.

Non-Potable Water

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Ti, Zn;

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, Ti, V, Zn;

EPA 245.1, SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH₃-BH, EPA 350.1: Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO₃-F,**

EPA 353.2: Nitrate-N, **SM4500NH₃-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4,**

SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

2

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/1/14	0945	S-8B	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
			1	1 Liter	Low NH3	H2SO4
4/1/14	1010	S-5B	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
			1	1 Liter	Low NH3	H2SO4

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Elawa ✓ 04/01/14 1310

12

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

4/1/14 1030 S-4A

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/1/14	1030	S-4A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
			1	1 Liter	Low NH3	H2SO4
4/1/14	1100	S-3A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
			1	1 Liter	Low NH3	H2SO4

4/1/14 1100 S-3A

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

W. L. L. L. 04/01/14 1316

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

lw-141060

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/1/14	1125	S-2C	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
			1	1 Liter	Low NH3	H2SO4
4/1/14	1155	S-6A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
			1	1 Liter	Low NH3	H2SO4

lw-141061

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Polawally 04/01/14 1310

①

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

W-141022

W-141023

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/1/14	1205	S-12	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
			1	1 Liter	Low NH3	H2SO4
4/1/14	1220	S-8A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, NH3, TP, TDS, NO2, NO3	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
			1	1 Liter	Low NH3	H2SO4

Relinquished By: Date/Time

John Tun

Received By: Date/Time:

R. Lavalley 04/01/14/310

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River **Comments:**
Project Number: A-19
Collection Date: 04/07/14 **Collection Time:** 09:30
Sampled By: K Tower
Lab Order Number: WW-141165
Date Received: 04/07/14

Sample Type	Sample Time	Sample Date	Comments			
A-19 A	09:30	04/07/14	**Chloroform			
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	68	6.0	04/08/14	KB	2540 C
Total Organic Carbon*	mg/L	BRL*	0.5	04/15/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	1**	*	04/11/14	RIA*	*
Total Iron	mg/L	0.13	0.01	04/17/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/10/14	RIA*	245.1
Boron	mg/L	0.012	0.010	04/15/14	MC	200.7
Copper	mg/L	BRL	0.003	04/15/14	MC	200.7
Nitrate-N	mg/L	1.05	0.01	04/07/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/07/14	LL	300.0
Ammonia-N *	mg/L	BRL*	0.02	04/14/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	22.9	3.0	04/07/14	LL	300.0
Total Phosphorous (P)	mg/L	0.016	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	BRL*	0.5	04/15/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.05	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.2	NA	05/19/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	0.006	0.005	04/08/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<1.25	NA	05/19/14	LL	Calculation

$$TN = DON(0.1) + PON(0.1) + NH_3(0.01) + NO_3(1.05) + NO_2(0.002) = 1.262$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/8/2014

Work Order #: 1404-07384

Sample # 001

SAMPLE DESCRIPTION: WW-141165 A19

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/07/2014 @ 09:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,H	4/14/2014 16:25	DM
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/15/2014 15:30	EC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/15/2014 15:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Chloroform	1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/11/2014 16:10	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/8/2014

Work Order #: 1404-07384

Sample # 001

SAMPLE DESCRIPTION: WW-141165 A19

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/07/2014 @ 09:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Styrene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Toluene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
MTBE	<2	2	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Acetone	<10	10	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	4/11/2014 16:10	KAC
Surrogates			RANGE	SW-846 8260C	4/11/2014 16:10	KAC
Dibromofluoromethane	101		86-118%	SW-846 8260C	4/11/2014 16:10	KAC
Toluene-d8	96		88-110%	SW-846 8260C	4/11/2014 16:10	KAC
4-Bromofluorobenzene	101		86-115%	SW-846 8260C	4/11/2014 16:10	KAC
1,2 Dichloroethane-d4	100		80-120%	SW-846 8260C	4/11/2014 16:10	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/10/2014 8:06	JRW
Mercury Digestion				EPA 245.1	4/10/2014 7:09	JRW

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: 2SR

Collection Date: 04/07/14 Collection Time: 10:25

Sampled By: K Tower

Lab Order Number: WW-141166

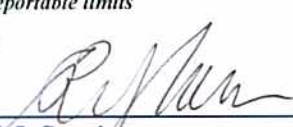
Date Received: 04/07/14

Sample Type	Sample Time	Sample Date	Comments			
2SR A	10:25	04/07/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	31	6.0	04/08/14	KB	2540 C
Total Organic Carbon*	mg/L	BRL*	0.5	04/15/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/11/14	RIA*	*
Total Iron	mg/L	0.10	0.01	04/17/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/10/14	RIA*	245.1
Boron	mg/L	BRL	0.010	04/15/14	MC	200.7
Copper	mg/L	BRL	0.003	04/15/14	MC	200.7
Nitrate-N	mg/L	0.51	0.01	04/07/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/07/14	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	04/14/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	5.2	3.0	04/07/14	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	04/17/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	BRL*	0.5	04/15/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.55	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.2	NA	05/19/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	04/08/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.71	NA	05/19/14	LL	Calculation

$$TN = DON (0.1) + PON (0.1) + NH_3 (0.04) + NO_3 (0.51) + NO_2 (0.002) = 0.752$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/8/2014

Work Order #: 1404-07384

Sample # 002

SAMPLE DESCRIPTION: WW-141166 2SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/07/2014 @ 10:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,H	4/14/2014 16:25	DM
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/15/2014 15:30	EC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/15/2014 15:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/11/2014 16:38	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/8/2014

Work Order #: 1404-07384

Sample # 002

SAMPLE DESCRIPTION: WW-141166 2SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/07/2014 @ 10:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Styrene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Toluene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
MTBE	<2	2	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Acetone	<10	10	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	4/11/2014 16:38	KAC
Surrogates			RANGE	SW-846 8260C	4/11/2014 16:38	KAC
Dibromofluoromethane	102		86-118%	SW-846 8260C	4/11/2014 16:38	KAC
Toluene-d8	97		88-110%	SW-846 8260C	4/11/2014 16:38	KAC
4-Bromofluorobenzene	102		86-115%	SW-846 8260C	4/11/2014 16:38	KAC
1,2 Dichloroethane-d4	100		80-120%	SW-846 8260C	4/11/2014 16:38	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/10/2014 8:15	JRW
Mercury Digestion				EPA 245.1	4/10/2014 7:09	JRW

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: 2DR

Collection Date: 04/07/14 **Collection Time:** 11:00

Sampled By: K Tower

Lab Order Number: WW-141167

Date Received: 04/07/14

Sample Type	Sample Time	Sample Date	Comments			
2DR A	11:00	04/07/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	89	6.0	04/08/14	KB	2540 C
Total Organic Carbon*	mg/L	1.6*	0.5	04/15/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/11/14	RIA*	*
Total Iron	mg/L	7.18	0.01	04/18/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/10/14	RIA*	245.1
Boron	mg/L	0.030	0.010	04/15/14	MC	200.7
Copper	mg/L	BRL	0.003	04/15/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	04/07/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/07/14	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	04/14/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	19.4	3.0	04/07/14	LL	300.0
Total Phosphorous (P)	mg/L	0.062	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.3*	0.5	04/15/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.04	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.2	NA	05/19/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	0.031	0.005	04/08/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	ND	NA	05/19/14	LL	Calculation

$$TN = DON(0.1) + PON(0.1) + NH_3(0.04) + NO_3(0.005) + NO_2(0.002) = 0.247$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari

Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/8/2014

Work Order #: 1404-07384

Sample # 003

SAMPLE DESCRIPTION: WW-141167 2DR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/07/2014 @ 11:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,H	4/14/2014 16:25	DM
TOC Low Level	1.6	0.5	mg/l	SM-5310B	4/15/2014 15:30	EC
Dissolved TOC	1.3	0.5	mg/l	EPA 415.1	4/15/2014 15:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/11/2014 17:06	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/8/2014

Work Order #: 1404-07384

Sample # 003

SAMPLE DESCRIPTION: WW-141167 2DR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/07/2014 @ 11:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Styrene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Toluene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
MTBE	<2	2	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Acetone	<10	10	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	4/11/2014 17:06	KAC
Surrogates			RANGE	SW-846 8260C	4/11/2014 17:06	KAC
Dibromofluoromethane	101		86-118%	SW-846 8260C	4/11/2014 17:06	KAC
Toluene-d8	94		88-110%	SW-846 8260C	4/11/2014 17:06	KAC
4-Bromofluorobenzene	99		86-115%	SW-846 8260C	4/11/2014 17:06	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260C	4/11/2014 17:06	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/10/2014 8:16	JRW
Mercury Digestion				EPA 245.1	4/10/2014 7:09	JRW

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management

K.Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: A21-A

Collection Date: 04/07/14 **Collection Time:** 12:15

Sampled By: K Tower

Lab Order Number: WW-141168

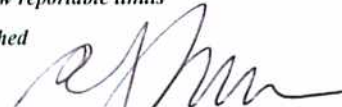
Date Received: 04/07/14

Sample Type	Sample Time	Sample Date	Comments			
A21-A A	12:15	04/07/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	74	6.0	04/08/14	KB	2540 C
Total Organic Carbon*	mg/L	0.66*	0.5	04/15/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/11/14	RIA*	*
Total Iron	mg/L	1.96	0.01	04/17/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/10/14	RIA*	245.1
Boron	mg/L	0.012	0.010	04/15/14	MC	200.7
Copper	mg/L	BRL	0.003	04/15/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	04/07/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/07/14	LL	300.0
Ammonia-N *	mg/L	0.12*	0.02	04/14/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.38	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	23.7	3.0	04/07/14	LL	300.0
Total Phosphorous (P)	mg/L	0.027	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.25	0.2	04/10/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.64*	0.5	04/15/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.12	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.13	NA	05/19/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	0.016	0.005	04/08/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.02	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.13	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.25	NA	05/19/14	LL	Calculation

$$TN = DON(0.13) + PON(0.13) + NH_3(0.12) + NO_3(0.005) + NO_2(0.002) = 0.387$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/8/2014

Work Order #: 1404-07384

Sample # 004

SAMPLE DESCRIPTION: WW-141168 A21-A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/07/2014 @ 12:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.12	0.02	mg/l	SM4500-NH3 B,H	4/14/2014 16:25	DM
TOC Low Level	0.66	0.5	mg/l	SM-5310B	4/15/2014 15:30	EC
Dissolved TOC	0.64	0.5	mg/l	EPA 415.1	4/15/2014 15:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/11/2014 17:34	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/8/2014

Work Order #: 1404-07384

Sample # 004

SAMPLE DESCRIPTION: WW-141168 A21-A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/07/2014 @ 12:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Styrene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Toluene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
MTBE	<2	2	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Acetone	<10	10	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	4/11/2014 17:34	KAC
Surrogates			RANGE	SW-846 8260C	4/11/2014 17:34	KAC
Dibromofluoromethane	102		86-118%	SW-846 8260C	4/11/2014 17:34	KAC
Toluene-d8	96		88-110%	SW-846 8260C	4/11/2014 17:34	KAC
4-Bromofluorobenzene	100		86-115%	SW-846 8260C	4/11/2014 17:34	KAC
1,2 Dichloroethane-d4	100		80-120%	SW-846 8260C	4/11/2014 17:34	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/10/2014 8:18	JRW
Mercury Digestion				EPA 245.1	4/10/2014 7:09	JRW

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management
 K.Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: GW Eel River **Comments:**
Project Number: A15
Collection Date: 04/07/14 **Collection Time:** 14:20
Sampled By: K Tower
Lab Order Number: WW-141169
Date Received: 04/07/14

Sample Type	Sample Time	Sample Date	Comments			
A15 A	14:20	04/07/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	159	6.0	04/11/14	KB	2540 C
Total Organic Carbon*	mg/L	BRL*	0.5	04/15/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/11/14	RIA*	*
Total Iron	mg/L	BRL	0.01	04/17/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/10/14	RIA*	245.1
Boron	mg/L	0.011	0.010	04/15/14	MC	200.7
Copper	mg/L	BRL	0.003	04/15/14	MC	200.7
Nitrate-N	mg/L	1.27	0.01	04/08/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/08/14	LL	300.0
Ammonia-N *	mg/L	BRL*	0.02	04/14/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	55.6	3.0	04/08/14	LL	300.0
Total Phosphorous (P)	mg/L	0.041	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	BRL*	0.5	04/15/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.27	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.2	NA	05/19/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	0.039	0.005	04/08/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	1.27	NA	05/19/14	LL	Calculation

$$TN = DON (0.1) + PON (0.1) + NH_3 (0.01) + NO_3 (1.27) + NO_2 (0.002) = 1.482$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/8/2014

Work Order #: 1404-07384

Sample # 005

SAMPLE DESCRIPTION: WW-141169 A15

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/07/2014 @ 14:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,H	4/14/2014 16:25	DM
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/15/2014 15:30	EC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/15/2014 15:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/11/2014 18:02	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/8/2014

Work Order #: 1404-07384

Sample # 005

SAMPLE DESCRIPTION: WW-141169 A15

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/07/2014 @ 14:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Styrene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Toluene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
MTBE	<2	2	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Acetone	<10	10	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	4/11/2014 18:02	KAC
Surrogates			RANGE	SW-846 8260C	4/11/2014 18:02	KAC
Dibromofluoromethane	101		86-118%	SW-846 8260C	4/11/2014 18:02	KAC
Toluene-d8	99		88-110%	SW-846 8260C	4/11/2014 18:02	KAC
4-Bromofluorobenzene	100		86-115%	SW-846 8260C	4/11/2014 18:02	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260C	4/11/2014 18:02	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/10/2014 8:19	JRW
Mercury Digestion				EPA 245.1	4/10/2014 7:09	JRW

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: DW-1

Collection Date: 04/07/14 **Collection Time:** 15:45

Sampled By: K Tower

Lab Order Number: WW-141170

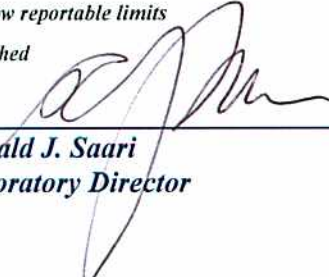
Date Received: 04/07/14

Sample Type	Sample Time	Sample Date	Comments			
DW-1 A	15:45	04/07/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	154	6.0	04/11/14	KB	2540 C
Total Organic Carbon*	mg/L	BRL*	0.5	04/15/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/11/14	RIA*	*
Total Iron	mg/L	BRL	0.01	04/17/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/10/14	RIA*	245.1
Boron	mg/L	0.011	0.010	04/15/14	MC	200.7
Copper	mg/L	BRL	0.003	04/15/14	MC	200.7
Nitrate-N	mg/L	1.27	0.01	04/08/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/08/14	LL	300.0
Ammonia-N *	mg/L	0.02*	0.02	04/14/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	55.4	3.0	04/08/14	LL	300.0
Total Phosphorous (P)	mg/L	0.039	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	BRL*	0.5	04/15/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.29	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.2	NA	05/19/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	0.037	0.005	04/08/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	1.27	NA	05/19/14	LL	Calculation

$$TN = DON(0.1) + PON(0.1) + NH_3(0.02) + NO_3(1.27) + NO_2(0.002) = 1.492$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/8/2014

Work Order #: 1404-07384

Sample # 006

SAMPLE DESCRIPTION: WW-141170 DW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/07/2014 @ 15:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.02	0.02	mg/l	SM4500-NH3 B,H	4/14/2014 16:25	DM
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/15/2014 15:30	EC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/15/2014 15:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/11/2014 18:31	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/8/2014

Work Order #: 1404-07384

Sample # 006

SAMPLE DESCRIPTION: WW-141170 DW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/07/2014 @ 15:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Styrene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Toluene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
MTBE	<2	2	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Acetone	<10	10	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	4/11/2014 18:31	KAC
Surrogates			RANGE	SW-846 8260C	4/11/2014 18:31	KAC
Dibromofluoromethane	102		86-118%	SW-846 8260C	4/11/2014 18:31	KAC
Toluene-d8	99		88-110%	SW-846 8260C	4/11/2014 18:31	KAC
4-Bromofluorobenzene	101		86-115%	SW-846 8260C	4/11/2014 18:31	KAC
1,2 Dichloroethane-d4	103		80-120%	SW-846 8260C	4/11/2014 18:31	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/10/2014 8:21	JRW
Mercury Digestion				EPA 245.1	4/10/2014 7:09	JRW

CHAIN OF CUSTODY FORM

ENVIROTECH LABS, INC.

8 Jan Sebastian Dr., Unit 12

RI Analytical

M RI 015

PWS:

Project Name: Plymouth Env.

Sandwich, MA 02563

Address

41 Illinois Avenue
Warwick, RI 02888

(508)888-6460

Sampler:

KT

1-800-339-6460

Phone#

401-737-8500

FAX (508)888-6446

Fax#

401-738-1970

Lab ID #	Date	Time	Comp	Grab	Station location	Container	Pres.	Sample type	Analysis requested
WW-141165	04/07/14	0930		X	A19	P	H ₂ SO ₄	Groundwater	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved
						P	HNO ₃		Mercury
						2 VOA	HCl		EPA 8260 Extended
WW-141166	04/07/14	1025		X	2SR	P	H ₂ SO ₄	Groundwater	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved
						P	HNO ₃		Mercury
						2 VOA	HCl		EPA 8260 Extended
WW-141167	04/07/14	1100		X	2DR	P	H ₂ SO ₄	Groundwater	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved
						P	HNO ₃		Mercury
						2 VOA	HCl		EPA 8260 Extended
WW-141168	04/07/14	1215		X	A21-A	P	H ₂ SO ₄	Groundwater	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved
						P	HNO ₃		Mercury
						2 VOA	HCl		EPA 8260 Extended
									1404-57387

Relinquished:

Date/Time

04/08/14 1215

Received:

Anthony

Relinquished:

Date/Time

4-8-14 1635

Received:

P. Inoi

TOC dissolved samples are filtered

Contact lab with any exceeded MCL

1.6°C
on ice

112

[illegible]

**Laboratory:**

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody**Client:**

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: GW Eel River -Plymouth MA
Sampler: Kim Tower (KT)

WW-141165

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/7/14	0930	A19	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
4/7/14	1025	252	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

WW-141166

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Rhonda 04/07/14

**Laboratory:**

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody**Client:**

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: GW Eel River -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/7/14	1100	2DR	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
4/7/14	1215	A21-A	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time

Reverdy 04/07/14

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: GW Eel River -Plymouth MA
Sampler: Kim Tower (KT)

NW-141169

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/7/14	1420	A15	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
4/7/14	1545	DW-1	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

NW-141170

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

R. Nivalley 02/07/14

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River
Project Number: GW-1
Collection Date: 04/08/14
Sampled By: K Tower
Lab Order Number: WW-141180
Date Received: 04/08/14

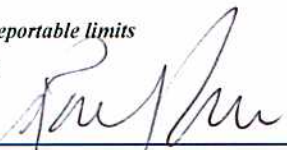
Comments:

Sample Type	Sample Time	Sample Date	Comments			
GW-1 A	07:45	04/08/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	BRL	6.0	04/11/14	KB	2540 C
Total Organic Carbon*	mg/L	BRL*	0.5	04/15/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/14/14	RIA*	*
Total Iron	mg/L	BRL	0.01	04/17/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/11/14	RIA*	245.1
Boron	mg/L	BRL	0.010	04/15/14	MC	200.7
Copper	mg/L	BRL	0.003	04/15/14	MC	200.7
Nitrate-N	mg/L	0.07	0.01	04/09/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/09/14	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	04/14/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/10/14	KB	SM4500 NH3 C
Chloride	mg/L	BRL	3.0	04/09/14	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	04/14/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	BRL*	0.5	04/15/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.11	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.2	NA	05/19/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	04/08/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.27	NA	05/19/14	LL	Calculation

$$TN = DON(0.1) + PON(0.1) + NH_3(0.04) + NO_3(0.07) + NO_2(0.002) = 0.312$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
 Date Received: 4/9/2014
 Work Order #: 1404-07519

Sample # 001

SAMPLE DESCRIPTION: WW-141180 GW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2014 @ 07:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.04	0.02	mg/l	SM4500-NH3 B,H	4/14/2014 16:25	DM
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/15/2014 15:30	EC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/15/2014 15:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/14/2014 13:09	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/9/2014

Work Order #: 1404-07519

Sample # 001

SAMPLE DESCRIPTION: WW-141180 GW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2014 @ 07:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Styrene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Toluene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
MTBE	<2	2	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Acetone	<10	10	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	4/14/2014 13:09	KAC
Surrogates			RANGE	SW-846 8260C	4/14/2014 13:09	KAC
Dibromofluoromethane	101		86-118%	SW-846 8260C	4/14/2014 13:09	KAC
Toluene-d8	99		88-110%	SW-846 8260C	4/14/2014 13:09	KAC
4-Bromofluorobenzene	100		86-115%	SW-846 8260C	4/14/2014 13:09	KAC
1,2 Dichloroethane-d4	98		80-120%	SW-846 8260C	4/14/2014 13:09	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/11/2014 12:21	PJC
Mercury Digestion				EPA 245.1	4/11/2014 9:36	PJC

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

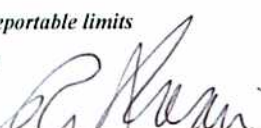
ProjectName: GW Eel River **Comments:**
Project Number: BRADFORD
Collection Date: 04/08/14 **Collection Time:** 08:00
Sampled By: K Tower
Lab Order Number: WW-141181
Date Received: 04/08/14

Sample Type	Sample Time	Sample Date	Comments			
BRADFORD A	08:00	04/08/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	47	6.0	04/11/14	KB	2540 C
Total Organic Carbon*	mg/L	BRL*	0.5	04/15/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/14/14	RIA*	*
Total Iron	mg/L	2.89	0.01	04/17/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/11/14	RIA*	245.1
Boron	mg/L	0.016	0.010	04/15/14	MC	200.7
Copper	mg/L	BRL	0.003	04/15/14	MC	200.7
Nitrate-N	mg/L	0.10	0.01	04/09/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/09/14	LL	300.0
Ammonia-N *	mg/L	0.05*	0.02	04/14/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/14/14	KB	SM4500 NH3 C
Chloride	mg/L	11.9	3.0	04/09/14	LL	300.0
Total Phosphorous (P)	mg/L	0.012	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	04/14/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	BRL*	0.5	04/15/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.15	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.15	NA	05/19/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	0.009	0.005	04/08/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.30	NA	05/19/14	LL	Calculation

$$TN = PON(0.075) + PON(0.1) + NH_3(0.05) + NO_3(0.10) + NO_2(0.002) = 0.327$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
 Date Received: 4/9/2014
 Work Order #: 1404-07519

Sample # 002

SAMPLE DESCRIPTION: WW-141181 BRADFORD

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2014 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.05	0.02	mg/l	SM4500-NH3 B,H	4/14/2014 16:25	DM
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/16/2014 11:00	EC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/16/2014 11:00	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/14/2014 13:37	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/9/2014

Work Order #: 1404-07519

Sample # 002

SAMPLE DESCRIPTION: WW-141181 BRADFORD

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2014 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Styrene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Toluene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
MTBE	<2	2	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Acetone	<10	10	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	4/14/2014 13:37	KAC
Surrogates			RANGE	SW-846 8260C	4/14/2014 13:37	KAC
Dibromofluoromethane	101		86-118%	SW-846 8260C	4/14/2014 13:37	KAC
Toluene-d8	96		88-110%	SW-846 8260C	4/14/2014 13:37	KAC
4-Bromofluorobenzene	100		86-115%	SW-846 8260C	4/14/2014 13:37	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260C	4/14/2014 13:37	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/11/2014 12:26	PJC
Mercury Digestion				EPA 245.1	4/11/2014 9:36	PJC

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River

Comments:

Project Number: A17

Collection Date: 04/08/14 **Collection Time:** 11:50

Sampled By: K Tower

Lab Order Number: WW-141182

Date Received: 04/08/14

Sample Type	Sample Time	Sample Date	Comments			
A17 A	11:50	04/08/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	222	6.0	04/11/14	KB	2540 C
Total Organic Carbon*	mg/L	BRL*	0.5	04/15/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/14/14	RIA*	*
Total Iron	mg/L	0.01	0.01	04/17/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/11/14	RIA*	245.1
Boron	mg/L	0.030	0.010	04/15/14	MC	200.7
Copper	mg/L	BRL	0.003	04/15/14	MC	200.7
Nitrate-N	mg/L	1.64	0.01	04/09/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/09/14	LL	300.0
Ammonia-N *	mg/L	BRL*	0.02	04/14/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/14/14	KB	SM4500 NH3 C
Chloride	mg/L	98.1	3.0	04/09/14	LL	300.0
Total Phosphorous (P)	mg/L	0.010	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	04/14/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	BRL*	0.5	04/15/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.64	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.2	NA	05/19/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	0.008	0.005	04/08/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	1.64	NA	05/19/14	LL	Calculation

$$TN = DON(0.1) + PON(0.1) + NH_3(0.01) + NO_3(1.64) + NO_2(0.002) = 1.852$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/9/2014

Work Order #: 1404-07519

Sample # 003

SAMPLE DESCRIPTION: WW-141182 A17

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2014 @ 11:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,H	4/14/2014 16:25	DM
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/15/2014 15:30	EC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/15/2014 15:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/14/2014 14:05	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/9/2014

Work Order #: 1404-07519

Sample # 003

SAMPLE DESCRIPTION: WW-141182 A17

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2014 @ 11:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Styrene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Toluene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
MTBE	<2	2	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Acetone	<10	10	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	4/14/2014 14:05	KAC
Surrogates			RANGE	SW-846 8260C	4/14/2014 14:05	KAC
Dibromofluoromethane	100		86-118%	SW-846 8260C	4/14/2014 14:05	KAC
Toluene-d8	98		88-110%	SW-846 8260C	4/14/2014 14:05	KAC
4-Bromofluorobenzene	100		86-115%	SW-846 8260C	4/14/2014 14:05	KAC
1,2 Dichloroethane-d4	99		80-120%	SW-846 8260C	4/14/2014 14:05	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/11/2014 12:29	PJC
Mercury Digestion				EPA 245.1	4/11/2014 9:36	PJC

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River
Project Number: A13
Collection Date: 04/08/14
Sampled By: K Tower
Lab Order Number: WW-141183
Date Received: 04/08/14

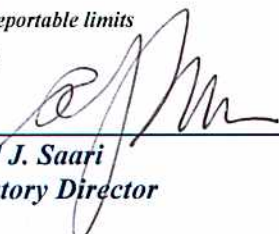
Comments:

Sample Type	Sample Time	Sample Date	Comments			
A13 A	13:50	04/08/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	269	6.0	04/11/14	KB	2540 C
Total Organic Carbon*	mg/L	1.6*	0.5	04/15/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/14/14	RIA*	*
Total Iron	mg/L	2.34	0.01	04/17/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/11/14	RIA*	245.1
Boron	mg/L	0.026	0.010	04/15/14	MC	200.7
Copper	mg/L	BRL	0.003	04/15/14	MC	200.7
Nitrate-N	mg/L	0.32	0.01	04/09/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/09/14	LL	300.0
Ammonia-N *	mg/L	0.14*	0.02	04/14/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.37	0.2	04/14/14	KB	SM4500 NH3 C
Chloride	mg/L	155	3.0	04/09/14	LL	300.0
Total Phosphorous (P)	mg/L	0.015	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.34	0.2	04/14/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.2*	0.5	04/15/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.46	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.2	NA	05/19/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	0.012	0.005	04/08/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.4	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.66	NA	05/19/14	LL	Calculation

$$TN = DON(0.2) + PON(0.03) + NH_3(0.14) + NO_3(0.32) + NO_2(0.002) = 0.692$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/9/2014

Work Order #: 1404-07519

Sample # 004

SAMPLE DESCRIPTION: WW-141183 A13

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2014 @ 13:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.14	0.02	mg/l	SM4500-NH3 B,H	4/14/2014 16:25	DM
TOC Low Level	1.6	0.5	mg/l	SM-5310B	4/15/2014 15:30	EC
Dissolved TOC	1.2	0.5	mg/l	EPA 415.1	4/15/2014 15:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/14/2014 14:34	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/9/2014

Work Order #: 1404-07519

Sample # 004

SAMPLE DESCRIPTION: WW-141183 A13

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2014 @ 13:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Styrene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Toluene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
MTBE	<2	2	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Acetone	<10	10	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	4/14/2014 14:34	KAC
Surrogates			RANGE	SW-846 8260C	4/14/2014 14:34	KAC
Dibromofluoromethane	102		86-118%	SW-846 8260C	4/14/2014 14:34	KAC
Toluene-d8	95		88-110%	SW-846 8260C	4/14/2014 14:34	KAC
4-Bromofluorobenzene	99		86-115%	SW-846 8260C	4/14/2014 14:34	KAC
1,2 Dichloroethane-d4	99		80-120%	SW-846 8260C	4/14/2014 14:34	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/11/2014 12:33	PJC
Mercury Digestion				EPA 245.1	4/11/2014 9:36	PJC

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Monday, May 19, 2014

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

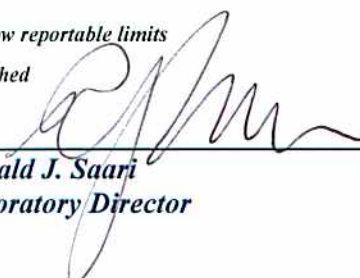
ProjectName: GW Eel River **Comments:**
Project Number: 7SR
Collection Date: 04/08/14 **Collection Time:** 15:20
Sampled By: K Tower
Lab Order Number: WW-141184
Date Received: 04/08/14

Sample Type	Sample Time	Sample Date	Comments			
7SR A	15:20	04/08/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	299	6.0	04/11/14	KB	2540 C
Total Organic Carbon*	mg/L	BRL	0.5	04/15/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	04/14/14	RIA*	*
Total Iron	mg/L	0.02	0.01	04/17/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	04/11/14	RIA*	245.1
Boron	mg/L	0.015	0.010	04/15/14	MC	200.7
Copper	mg/L	BRL	0.003	04/15/14	MC	200.7
Nitrate-N	mg/L	0.07	0.01	04/09/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	04/09/14	LL	300.0
Ammonia-N *	mg/L	ND*	0.02	04/14/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	04/14/14	KB	SM4500 NH3 C
Chloride	mg/L	171	3.0	04/09/14	LL	300.0
Total Phosphorous (P)	mg/L	0.005	0.005	04/11/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	04/14/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	BRL*	0.5	04/15/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.07	NA	05/19/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.2	NA	05/19/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	0.005	0.005	04/08/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	05/19/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	05/19/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.27	NA	05/19/14	LL	Calculation

$$TN = DON(0.1) + PON(0.1) + NH_3(0.01) + NO_3(0.07) + NO_2(0.002) = 0.282$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/9/2014

Work Order #: 1404-07519

Sample # 005

SAMPLE DESCRIPTION: WW-141184 7SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2014 @ 15:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.02	0.02	mg/l	SM4500-NH3 B,H	4/14/2014 16:25	DM
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	4/15/2014 15:30	EC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	4/15/2014 15:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260B	4/14/2014 15:02	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 4/9/2014

Work Order #: 1404-07519

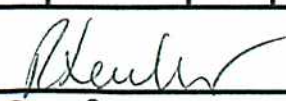
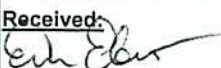
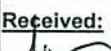
Sample # 005

SAMPLE DESCRIPTION: WW-141184 7SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 4/08/2014 @ 15:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Styrene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Toluene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
MTBE	<2	2	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Acetone	<10	10	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
cis-1,3-Dichloropropene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
trans-1,3-Dichloropropylene	<1	1	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	4/14/2014 15:02	KAC
Surrogates			RANGE	SW-846 8260C	4/14/2014 15:02	KAC
Dibromofluoromethane	102		86-118%	SW-846 8260C	4/14/2014 15:02	KAC
Toluene-d8	99		88-110%	SW-846 8260C	4/14/2014 15:02	KAC
4-Bromofluorobenzene	101		86-115%	SW-846 8260C	4/14/2014 15:02	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260C	4/14/2014 15:02	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	4/11/2014 12:38	PJC
Mercury Digestion				EPA 245.1	4/11/2014 9:36	PJC

CHAIN OF CUSTODY FORM						ENVIROTECH LABS, INC.		RI Analytical	
PWS: Project Name: Plymouth Env. 8 Jan Sebastian Dr., Unit 12 Sandwich, MA 02563 (508)888-6460						Address		41 Illinois Avenue Warwick, RI 02888	
Sampler: KT 1-800-339-6460 FAX (508)888-6446						Phone#		401-737-8500	
						Fax#		401-738-1970	
Lab ID #	Date	Time	Comp	Grab	Station location	Container	Pres.	Sample type	Analysis requested
WW-141180	04/08/14	0745		X	GW-1	P	H ₂ SO ₄	Groundwater	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved
						P	HNO ₃		Mercury
						2 VOA	HCl		EPA 8260 Extended
WW-141181	04/08/14	0800		X	Bradford	P	H ₂ SO ₄	Groundwater	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved
						P	HNO ₃		Mercury
						2 VOA	HCl		EPA 8260 Extended
WW-141182	04/08/14	1150		X	A17	P	H ₂ SO ₄	Groundwater	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved
						P	HNO ₃		Mercury
						2 VOA	HCl		EPA 8260 Extended
WW-141183	04/08/14	1350		X	A-13	P	H ₂ SO ₄	Groundwater	Ammonia-N (0.02 mdl)
						P	H ₂ SO ₄		TOC total low detection
						P	H ₂ SO ₄		TOC dissolved
						P	HNO ₃		Mercury
						2 VOA	HCl		EPA 8260 Extended
									1424-07579
Relinquished: 					Date/Time: 04/09/14 1500	Received: 		TOC dissolved samples are filtered 3.0µ 1/2 Contact lab with any exceeded MCL	
Relinquished: 					Date/Time: 4/9/14 1910	Received: 			

[illegible]

**Laboratory:**

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody**Client:**

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: GW Eel River -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/8/14	0745	GW-1	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
4/8/14	0800	Bradford	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Edwards 04/08/14 1610

**Laboratory:**

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody**Client:**

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: GW Eel River -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/8/14	1150	A17	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4
4/8/14	1350	A13	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO3
			1	Plastic	TOC	H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Edawally 04/08/14 1610

②

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: Kim Tower (KT)

kw-14184

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
4/8/14	1520	75R	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO ₃
			1	Plastic	TOC	H2SO4
			2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron,	NONE
			1	Plastic	Mercury	HNO ₃
			1	Plastic	TOC	H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Rdavalos 04/08/14/1610

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

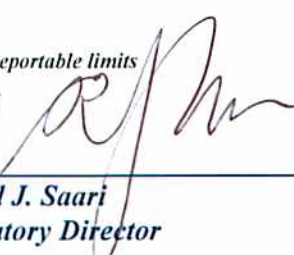
ProjectName: Harbor Sampling **Comments:**
Project Number: S-7
Collection Date: 06/09/14 **Collection Time:** 09:15
Sampled By: Kim Michaelis
Lab Order Number: WW-141868
Date Received: 06/09/14

Sample Type	Sample Time	Sample Date	Comments			
S-7 A	09:15	06/09/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Organic Carbon*	mg/L	0.80*	0.5	06/13/14	RIA*	SM 5310 C
Nitrate-N	mg/L	BRL	0.01	06/10/14	MC	300.0
Nitrite-N	mg/L	BRL	0.004	06/10/14	MC	300.0
Ammonia-N *	mg/L	0.05*	0.02	06/16/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.27	0.2	06/12/14	KB	SM4500 NH3 C
Total Phosphorous (P)	mg/L	0.061	0.005	06/12/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	06/12/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.80*	0.5	06/13/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.05	NA	10/28/14	MC	Calculation
Dissolved Organic Nitrogen	mg/L	<0.15	NA	10/28/14	MC	Calculation
Ortho Phosphorous (P)	mg/L	0.013	0.005	06/10/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	10/28/14	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.22	NA	10/28/14	MC	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	10/28/14	MC	Calculation
E coli	/100	<5	NA	06/09/14	MC	EPA 1603

$$TN = DON(0.075) + PON(0.11) + NH_3(0.05) + NO_3(0.005) + NO_2(0.002) = 0.242$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Harbor Sampling

Comments:

Project Number: S-10

Collection Date: 06/09/14 **Collection Time:** 09:30

Sampled By: Kim Michaelis

Lab Order Number: WW-141869

Date Received: 06/09/14

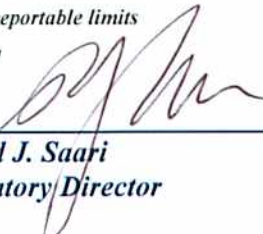
Sample Type	Sample Time	Sample Date	Comments			
S-10 A	09:30	06/09/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Organic Carbon*	mg/L	0.92*	0.5	06/13/14	RIA*	SM 5310 C
Nitrate-N	mg/L	BRL	0.01	06/10/14	MC	300.0
Nitrite-N	mg/L	BRL	0.004	06/10/14	MC	300.0
Ammonia-N *	mg/L	0.08*	0.02	06/16/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.37	0.2	06/12/14	KB	SM4500 NH3 C
Total Phosphorous (P)	mg/L	0.048	0.005	06/12/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.23	0.2	06/12/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.76*	0.5	06/13/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.08	NA	10/28/14	MC	Calculation
Dissolved Organic Nitrogen	mg/L	0.15	NA	10/28/14	MC	Calculation
Ortho Phosphorous (P)	mg/L	0.010	0.005	06/10/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.16	NA	10/28/14	MC	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.14	NA	10/28/14	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.23	NA	10/28/14	MC	Calculation
E coli	/100	<5	NA	06/09/14	MC	EPA 1603

$$TN = DON(0.15) + PON(0.14) + NH_3(0.08) + NO_3(0.005) + NO_2(0.002) = 0.377$$

BRL=below reportable limits

*see attached

By:


Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.
CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
 Date Received: 6/10/2014
 Work Order #: 1406-12600

Sample # 001

SAMPLE DESCRIPTION: WW-141868 S-7

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/09/2014 @ 11:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.05	0.02	mg/l	SM4500-NH3 B,H	6/16/2014 17:03	WWW
TOC Low Level	0.80	0.5	mg/l	SM-5310B	6/13/2014 9:00	EC
Dissolved TOC	0.80	0.5	mg/l	EPA 415.1	6/13/2014 9:00	EC

Sample # 002

SAMPLE DESCRIPTION: WW-141869 S-10

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/09/2014 @ 09:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.08	0.02	mg/l	SM4500-NH3 B,H	6/16/2014 17:03	WWW
TOC Low Level	0.92	0.5	mg/l	SM-5310B	6/12/2014 11:00	EC
Dissolved TOC	0.76	0.5	mg/l	EPA 415.1	6/12/2014 11:00	EC

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-8B
Collection Date: 6/9/14 **Collection Time:** 10:00
Sampled By: Kim Tower
Lab Order Number: WW-141870
Date Received: 06/09/14

Sample Type	Sample Time	Sample Date	Comments			
S-8B A	10:00	6/9/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	<0.2	NA	06/12/14	KB	Calculation
Total Dissolved Solids	mg/L	BRL	6.0	06/12/14	KB	2540 C
Chloride grab	mg/L	BRL	3.0	06/09/14	LL	300.0
Total Organic Carbon*	mg/L	0.60*	0.5	06/12/14	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	06/17/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	06/09/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/09/14	LL	300.0
Ammonia-N *	mg/L	0.09*	0.02	06/16/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	06/12/14	KB	SM4500 NH3 C
Total Phosphorous (P)	mg/L	BRL	0.005	06/12/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	06/12/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	BRL*	0.5	06/12/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.09	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.11	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	ND*	*	06/11/14	Alpha Analytica	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	06/10/14	MC	4500-P
Particulate Organic Carbon	mg/L	<0.10	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	10/28/14	LL	Calculation

$$TN = DON(0.055) + PON(0.1) + NH_3(0.09) + NO_3(0.005) + NO_2(0.002) = 0.252$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1412515
Report Date: 06/17/14

SAMPLE RESULTS

Lab ID: L1412515-01
Client ID: S-8B
Sample Location: Not Specified
Matrix: Water

Date Collected: 06/09/14 10:00
Date Received: 06/10/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	06/10/14 15:15	06/11/14 10:30	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-5B
Collection Date: 6/9/14 **Collection Time:** 10:15
Sampled By: Kim Tower
Lab Order Number: WW-141871
Date Received: 06/09/14

Sample Type	Sample Time	Sample Date	Comments			
S-5B A	10:15	6/9/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.54	NA	06/12/14	KB	Calculation
Total Dissolved Solids	mg/L	126	6.0	06/12/14	KB	2540 C
Chloride grab	mg/L	58.5	3.0	06/09/14	LL	300.0
Total Organic Carbon*	mg/L	2.9*	0.5	06/13/14	RIA*	SM 5310 C
Boron	mg/L	0.018	0.010	06/17/14	MC	200.7
Nitrate-N	mg/L	0.16	0.01	06/09/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/09/14	LL	300.0
Ammonia-N *	mg/L	0.09*	0.02	06/16/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.38	0.2	06/12/14	KB	SM4500 NH3 C
Total Phosphorous (P)	mg/L	0.021	0.005	06/12/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.37	0.2	06/12/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.9*	0.5	06/13/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.25	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.28	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	14.3*	*	06/11/14	Alpha Analytica	*
Ortho Phosphorous (P)	mg/L	0.008	0.005	06/10/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.53	NA	10/28/14	LL	Calculation

$$TN = DON(0.28) + PON(0.01) + NH_3(0.09) + NO_3(0.16) + NO_2(0.002) = 0.542$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1412515
Report Date: 06/17/14

SAMPLE RESULTS

Lab ID: L1412515-02
Client ID: S-5B
Sample Location: Not Specified
Matrix: Water

Date Collected: 06/09/14 10:15
Date Received: 06/10/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	14.3		mg/m3	2.00	NA	1	06/10/14 15:15	06/11/14 10:30	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-4A
Collection Date: 6/9/14 **Collection Time:** 10:30
Sampled By: Kim Tower
Lab Order Number: WW-141872
Date Received: 06/09/14

Sample Type	Sample Time	Sample Date	Comments			
S-4A A	10:30	6/9/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.35	NA	06/12/14	KB	Calculation
Total Dissolved Solids	mg/L	83	6.0	06/12/14	KB	2540 C
Chloride grab	mg/L	30.8	3.0	06/09/14	LL	300.0
Total Organic Carbon*	mg/L	3.5*	0.5	06/13/14	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	06/17/14	MC	200.7
Nitrate-N	mg/L	0.09	0.01	06/09/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/09/14	LL	300.0
Ammonia-N *	mg/L	0.06*	0.02	06/16/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.26	0.2	06/12/14	KB	SM4500 NH3 C
Total Phosphorous (P)	mg/L	0.030	0.005	06/12/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.25	0.2	06/12/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	3.4*	0.5	06/12/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.15	NA	10/28/14	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.19	NA	10/28/14	RIA*	Calculation
Chlorophyll-a	*	4.46*	*	06/11/14	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.005	0.005	06/10/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	10/28/14	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	10/28/14	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.34	NA	10/28/14	RIA*	Calculation

$$TN = DON(0.19) + PON(0.01) + NH_3(0.06) + NO_3(0.09) + NO_2(0.002) = 0.352$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1412515
Report Date: 06/17/14

SAMPLE RESULTS

Lab ID: L1412515-03
Client ID: S-4A
Sample Location: Not Specified
Matrix: Water

Date Collected: 06/09/14 10:30
Date Received: 06/10/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	4.46		mg/m3	2.00	NA	1	06/10/14 15:15	06/11/14 10:30	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-3A
Collection Date: 6/9/14 **Collection Time:** 10:45
Sampled By: Kim Tower
Lab Order Number: WW-141873
Date Received: 06/09/14

Sample Type	Sample Time	Sample Date	Comments			
S-3A A	10:45	6/9/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.37	NA	07/09/14	KB	Calculation
Total Dissolved Solids	mg/L	84	6.0	06/12/14	KB	2540 C
Chloride grab	mg/L	30.3	3.0	06/09/14	LL	300.0
Total Organic Carbon*	mg/L	2.4*	0.5	06/13/14	RIA*	SM 5310 C
Boron	mg/L	0.011	0.010	06/17/14	MC	200.7
Nitrate-N	mg/L	0.16	0.01	06/09/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/09/14	LL	300.0
Ammonia-N *	mg/L	0.07*	0.02	06/16/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.21	0.2	06/12/14	KB	SM4500 NH3 C
Total Phosphorous (P)	mg/L	0.045	0.005	06/12/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	06/12/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.1*	0.5	06/12/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.23	NA	10/28/14	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.13	NA	10/28/14	RIA*	Calculation
Chlorophyll-a	*	10.9*	*	06/11/14	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	06/10/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	10/28/14	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.14	NA	10/28/14	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	<0.36	NA	10/28/14	RIA*	Calculation

$$TN = DON(0.065) + PON(0.07) + NH_3(0.07) + NO_3(0.16) + NO_2(0.002) = 0.367$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1412515
Report Date: 06/17/14

SAMPLE RESULTS

Lab ID: L1412515-04
Client ID: S-3A
Sample Location: Not Specified
Matrix: Water

Date Collected: 06/09/14 10:45
Date Received: 06/10/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	10.9		mg/m3	2.00	NA	1	06/10/14 15:15	06/11/14 10:30	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-2C
Collection Date: 6/9/14 **Collection Time:** 11:10
Sampled By: Kim Tower
Lab Order Number: WW-141874
Date Received: 06/09/14

Sample Type	Sample Time	Sample Date	Comments			
S-2C A	11:10	6/9/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.40	NA	06/12/14	KB	Calculation
Total Dissolved Solids	mg/L	69	6.0	06/12/14	KB	2540 C
Chloride grab	mg/L	26.3	3.0	06/09/14	LL	300.0
Total Organic Carbon*	mg/L	2.3*	0.5	06/12/14	RIA*	SM 5310 C
Boron	mg/L	0.011	0.010	06/17/14	MC	200.7
Nitrate-N	mg/L	0.10	0.01	06/09/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/09/14	LL	300.0
Ammonia-N *	mg/L	0.05*	0.02	06/16/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.30	0.2	06/12/14	KB	SM4500 NH3 C
Total Phosphorous (P)	mg/L	0.054	0.005	06/12/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.21	0.2	06/12/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.0*	0.5	06/12/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.15	NA	10/28/14	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.16	NA	10/28/14	RIA*	Calculation
Chlorophyll-a	*	14.8*	*	06/11/14	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	06/10/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	10/28/14	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.09	NA	10/28/14	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.31	NA	10/28/14	RIA*	Calculation

$$TN = DON(0.16) + PON(0.09) + NH_3(0.05) + NO_3(0.10) + NO_2(0.002) = 0.402$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1412515
Report Date: 06/17/14

SAMPLE RESULTS

Lab ID: L1412515-05
Client ID: S-2C
Sample Location: Not Specified
Matrix: Water

Date Collected: 06/09/14 11:10
Date Received: 06/10/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	14.8		mg/m3	2.00	NA	1	06/10/14 15:15	06/11/14 10:30	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

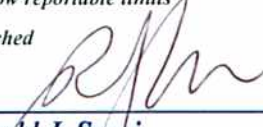
ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-6A
Collection Date: 6/9/14 **Collection Time:** 11:30
Sampled By: Kim Tower
Lab Order Number: WW-141875
Date Received: 06/09/14

Sample Type	Sample Time	Sample Date	Comments			
S-6A A	11:30	6/9/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.56	NA	06/12/14	KB	Calculation
Total Dissolved Solids	mg/L	436	6.0	06/12/14	KB	2540 C
Chloride grab	mg/L	20.1	3.0	06/09/14	LL	300.0
Total Organic Carbon*	mg/L	2.1*	0.5	06/13/14	RIA*	SM 5310 C
Boron	mg/L	0.012	0.010	06/17/14	MC	200.7
Nitrate-N	mg/L	0.28	0.01	06/09/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/09/14	LL	300.0
Ammonia-N *	mg/L	0.05*	0.02	06/16/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.28	0.2	06/12/14	KB	SM4500 NH3 C
Total Phosphorous (P)	mg/L	0.032	0.005	06/12/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.26	0.2	06/12/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.0*	0.5	06/13/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.33	NA	10/28/14	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	0.21	NA	10/28/14	RIA*	Calculation
Chlorophyll-a	*	4.18*	*	06/11/14	Alpha Analytica	*
Ortho Phosphorous (P)	mg/L	0.008	0.005	06/10/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	10/28/14	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	10/28/14	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.54	NA	10/28/14	RIA*	Calculation

$$TN = DON(0.21) + PON(0.02) + NH_3(0.05) + NO_3(0.28) + NO_2(0.002) = 0.562$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1412515
Report Date: 06/17/14

SAMPLE RESULTS

Lab ID: L1412515-06
Client ID: S-6A
Sample Location: Not Specified
Matrix: Water

Date Collected: 06/09/14 11:30
Date Received: 06/10/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	4.18		mg/m3	2.00	NA	1	06/10/14 15:15	06/11/14 10:30	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-12

Collection Date: 6/9/14 **Collection Time:** 11:45

Sampled By: Kim Tower

Lab Order Number: WW-141876

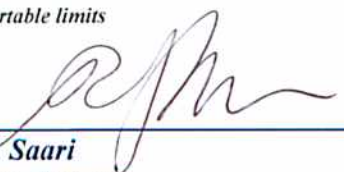
Date Received: 06/09/14

Sample Type	Sample Time	Sample Date	Comments			
S-12 A	11:45	6/9/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.55	NA	07/09/14	KB	Calculation
Total Dissolved Solids	mg/L	60	6.0	06/12/14	KB	2540 C
Chloride grab	mg/L	18.9	3.0	06/09/14	LL	300.0
Total Organic Carbon*	mg/L	2.6*	0.5	06/12/14	RIA*	SM 5310 C
Boron	mg/L	0.014	0.010	06/17/14	MC	200.7
Nitrate-N	mg/L	0.28	0.01	06/09/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/09/14	LL	300.0
Ammonia-N *	mg/L	0.06*	0.02	06/16/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.27	0.2	06/12/14	KB	SM4500 NH3 C
Total Phosphorous (P)	mg/L	0.043	0.005	06/12/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.26	0.2	06/12/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.5*	0.5	06/12/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.34	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.20	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	15.7*	*	06/11/14	Alpha Analytica	*
Ortho Phosphorous (P)	mg/L	0.009	0.005	06/10/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.54	NA	10/28/14	LL	Calculation

$$TN = DON(0.20) + P-N(0.01) + NH_3(0.06) + NO_3(0.28) + NO_2(0.002) = 0.552$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1412515
Report Date: 06/17/14

SAMPLE RESULTS

Lab ID: L1412515-07
Client ID: S-12
Sample Location: Not Specified
Matrix: Water

Date Collected: 06/09/14 11:45
Date Received: 06/10/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	15.7		mg/m3	2.00	NA	1	06/10/14 15:15	06/11/14 10:30	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-8A

Collection Date: 6/9/14 Collection Time: 12:00

Sampled By: Kim Tower

Lab Order Number: WW-141877

Date Received: 06/09/14

Sample Type	Sample Time	Sample Date	Comments			
S-8A A	12:00	6/9/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.66	NA	06/12/14	KB	Calculation
Total Dissolved Solids	mg/L	82	6.0	06/12/14	KB	2540 C
Total Organic Carbon*	mg/L	2.7*	0.5	06/12/14	RIA*	SM 5310 C
Boron	mg/L	0.014	0.010	06/17/14	MC	200.7
Nitrate-N	mg/L	0.28	0.01	06/09/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	06/09/14	LL	300.0
Ammonia-N *	mg/L	0.12*	0.02	06/16/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.38	0.2	06/12/14	KB	SM4500 NH3 C
Chloride	mg/L	19.0	3.0	06/09/14	LL	300.0
Total Phosphorous (P)	mg/L	0.029	0.005	06/12/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.35	0.2	06/12/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.6*	0.5	06/12/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.40	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.23	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	17.6*	*	06/11/14	Alpha Analytical	*
Ortho Phosphorous (P)	mg/L	0.009	0.005	06/10/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.03	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.63	NA	10/28/14	LL	Calculation

$$TN = DON(0.23) + PON(0.03) + NH_3(0.12) + NO_3(0.28) + NO_2(0.002) = 0.662$$

BRL=below reportable limits

*see attached

By:

Ronald J. Sadri

Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMNT.
Project Number: Not Specified

Lab Number: L1412515
Report Date: 06/17/14

SAMPLE RESULTS

Lab ID: L1412515-08
Client ID: S-8A
Sample Location: Not Specified
Matrix: Water

Date Collected: 06/09/14 12:00
Date Received: 06/10/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	17.6		mg/m3	2.00	NA	1	06/10/14 15:15	06/11/14 10:30	30, 10200H	SP



R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 6/10/2014

Work Order #: 1406-12601

Sample # 001

SAMPLE DESCRIPTION: WW-141870 S-8B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/09/2014 @ 10:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.09	0.02	mg/l	SM4500-NH3 B,H	6/16/2014 17:03	WWW
TOC Low Level	0.6	0.5	mg/l	SM-5310B	6/12/2014 11:00	EC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	6/12/2014 11:00	EC

Sample # 002

SAMPLE DESCRIPTION: WW-141871 S-5B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/09/2014 @ 10:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.09	0.02	mg/l	SM4500-NH3 B,H	6/16/2014 17:03	WWW
TOC Low Level	2.9	0.5	mg/l	SM-5310B	6/13/2014 9:00	EC
Dissolved TOC	2.9	0.5	mg/l	EPA 415.1	6/13/2014 9:00	EC

Sample # 003

SAMPLE DESCRIPTION: WW-141872 S-4A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/09/2014 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.06	0.02	mg/l	SM4500-NH3 B,H	6/16/2014 17:03	WWW
TOC Low Level	3.5	0.5	mg/l	SM-5310B	6/12/2014 11:00	EC
Dissolved TOC	3.4	0.5	mg/l	EPA 415.1	6/12/2014 11:00	EC

Sample # 004

SAMPLE DESCRIPTION: WW-141873 S-3A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/09/2014 @ 10:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.07	0.02	mg/l	SM4500-NH3 B,H	6/16/2014 17:03	WWW
TOC Low Level	2.4	0.5	mg/l	SM-5310B	6/12/2014 11:00	EC
Dissolved TOC	2.1	0.5	mg/l	EPA 415.1	6/12/2014 11:00	EC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 6/10/2014

Work Order #: 1406-12601

Sample # 005

SAMPLE DESCRIPTION: WW-141874 S-2C

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/09/2014 @ 11:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.05	0.02	mg/l	SM4500-NH3 B,H	6/16/2014 17:03	WWW
TOC Low Level	2.3	0.5	mg/l	SM-5310B	6/12/2014 11:00	EC
Dissolved TOC	2.0	0.5	mg/l	EPA 415.1	6/12/2014 11:00	EC

Sample # 006

SAMPLE DESCRIPTION: WW-141875 S-6A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/09/2014 @ 11:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.05	0.02	mg/l	SM4500-NH3 B,H	6/16/2014 17:03	WWW
TOC Low Level	2.1	0.5	mg/l	SM-5310B	6/13/2014 9:00	EC
Dissolved TOC	2.0	0.5	mg/l	EPA 415.1	6/13/2014 9:00	EC

Sample # 007

SAMPLE DESCRIPTION: WW-141876 S-12

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/09/2014 @ 11:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.06	0.02	mg/l	SM4500-NH3 B,H	6/17/2014 17:25	NJJ
TOC Low Level	2.6	0.5	mg/l	SM-5310B	6/12/2014 11:00	EC
Dissolved TOC	2.5	0.5	mg/l	EPA 415.1	6/12/2014 11:00	EC

Sample # 008

SAMPLE DESCRIPTION: WW-141877 S-8A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 6/09/2014 @ 12:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.12	0.02	mg/l	SM4500-NH3 B,H	6/17/2014 17:25	NJJ
TOC Low Level	2.7	0.5	mg/l	SM-5310B	6/12/2014 11:00	EC
Dissolved TOC	2.6	0.5	mg/l	EPA 415.1	6/12/2014 11:00	EC

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

11/14/1872

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
6/9/14	1030	S-4A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
6/9/14			1	1 Liter Plastic	TKN, TN, TP	H2SO4
6/9/14			1	250mL Plastic	Boron	HNO3
6/9/14			1	250mL Glass	Orthophosphate	NONE
6/9/14			1	1 Liter Amber	Chlorophyll-a	NONE
6/9/14			1	250mL Plastic	TOC	H2SO4
6/9/14	1045	S-3A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
6/9/14			1	1 Liter Plastic	TKN, TN, TP	H2SO4
6/9/14			1	250mL Plastic	Boron	HNO3
6/9/14			1	250mL Glass	Orthophosphate	NONE
6/9/14			1	1 Liter Amber	Chlorophyll-a	NONE
6/9/14			1	250mL Plastic	TOC	H2SO4

11/14/1873

Relinquished By: Date/Time

Kim Tower

Received By:

Date/Time:

[Signature]
16/15

C

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

W141874

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
6/9/14	1110	S-2C	1	1 Liter Plastic	Dissolved ,Chloride	NONE
6/9/14			1	1 Liter Plastic	TKN, TN, TP	H2SO4
6/9/14			1	250mL Plastic	Boron	HNO3
6/9/14			1	250mL Glass	Orthophosphate	NONE
6/9/14			1	1 Liter Amber	Chlorophyll-a	NONE
6/9/14			1	250mL Plastic	TOC	H2SO4
6/9/14	1130	S-6A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
6/9/14			1	1 Liter Plastic	TKN, TN, TP	H2SO4
6/9/14			1	250mL Plastic	Boron	HNO3
6/9/14			1	250mL Glass	Orthophosphate	NONE
6/9/14			1	1 Liter Amber	Chlorophyll-a	NONE
6/9/14			1	250mL Plastic	TOC	H2SO4

W141875

Relinquished By: Date/Time

Kim Tan

Received By: Date/Time:

[Signature] 6/9/14 1615

C

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

WW141876

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
6/9/14	1145	S-12	1	1 Liter Plastic	Dissolved ,Chloride	NONE
6/9/14			1	1 Liter Plastic	TKN, TN, TP	H2SO4
6/9/14			1	250mL Plastic	Boron	HNO3
6/9/14			1	250mL Glass	Orthophosphate	NONE
6/9/14			1	1 Liter Amber	Chlorophyll-a	NONE
6/9/14			1	250mL Plastic	TOC	H2SO4
6/9/14	1200	S-8A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
6/9/14			1	1 Liter Plastic	TKN, TN, TP	H2SO4
6/9/14			1	250mL Plastic	Boron	HNO3
6/9/14			1	250mL Glass	Orthophosphate	NONE
6/9/14			1	1 Liter Amber	Chlorophyll-a	NONE
6/9/14			1	250mL Plastic	TOC	H2SO4

WW141877

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

[Signature] 6/9/14 1615

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW Sampling
Project Number: S-8A
Collection Date: 8/5/14 Collection Time: 11:15
Sampled By: Kim Tower
Lab Order Number: WW-142539
Date Received: 08/05/14

Sample Type	Sample Time	Sample Date	Comments			
S-8A A	11:15	8/5/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	<0.2	NA	10/27/14	KB	Calculation
Total Dissolved Solids	mg/L	112	6.0	08/06/14	KB	2540 C
Total Organic Carbon*	mg/L	2.4*	0.5	08/08/14	MC	SM 5310 C
Boron	mg/L	0.015	0.010	08/12/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	08/05/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/05/14	LL	300.0
Ammonia-N *	mg/L	0.08*	0.02	08/15/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	08/22/14	KB	SM4500 NH3 C
Chloride	mg/L	51.4	3.0	08/05/14	LL	300.0
Total Phosphorous (P)	mg/L	0.029	0.005	08/17/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	08/22/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.4*	0.5	08/08/14	MC	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.08	NA	10/28/14	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.12	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	8.68*	*	08/07/14	RIA*	*
Ortho Phosphorous (P)	mg/L	0.009	0.005	08/06/14	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	10/28/14	LL	Calculation

$$TN = DON(0.06) + PON(0.1) + NH_3(0.08) + NO_3(0.005) + NO_2(0.002) = 0.247$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1417574
Report Date: 08/11/14

SAMPLE RESULTS

Lab ID: L1417574-01
Client ID: WW-142539
Sample Location: S-8A
Matrix: Water

Date Collected: 08/05/14 11:15
Date Received: 08/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	8.68		mg/m3	2.00	NA	1	08/06/14 16:30	08/07/14 11:15	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-5B

Collection Date: 8/5/14 Collection Time: 11:30

Sampled By: Kim Tower

Lab Order Number: WW-142540

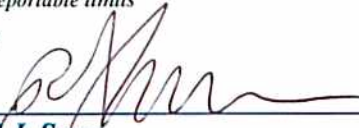
Date Received: 08/05/14

Sample Type	Sample Time	Sample Date	Comments			
S-5B A	11:30	8/5/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	<0.2	NA	10/27/14	LL	Calculation
Total Dissolved Solids	mg/L	BRL	6.0	08/06/14	KB	2540 C
Total Organic Carbon*	mg/L	2.5*	0.5	08/08/14	RIA*	SM 5310 C
Boron	mg/L	0.014	0.010	08/12/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	08/05/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/05/14	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	08/15/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	08/22/14	KB	SM4500 NH3 C
Chloride	mg/L	51.6	3.0	08/05/14	LL	300.0
Total Phosphorous (P)	mg/L	0.050	0.005	08/17/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	08/22/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.4*	0.5	08/08/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.04	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.16	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	4.56*	*	08/07/14	RIA*	*
Ortho Phosphorous (P)	mg/L	0.034	0.005	08/06/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	10/28/14	LL	Calculation

$$TN = DON(0.08) + PON(0.1) + NH_3(0.04) + NO_3(0.005) + NO_2(0.002) = 0.227$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Squar
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1417574
Report Date: 08/11/14

SAMPLE RESULTS

Lab ID: L1417574-02
Client ID: WW-142540
Sample Location: S-5B
Matrix: Water

Date Collected: 08/05/14 11:30
Date Received: 08/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	4.56		mg/m3	2.00	NA	1	08/06/14 16:30	08/07/14 11:15	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

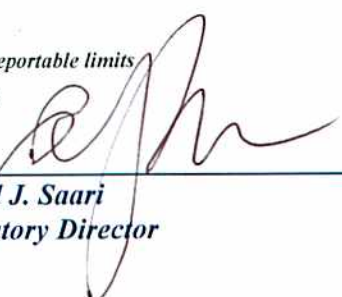
ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-4A
Collection Date: 8/5/14 **Collection Time:** 11:35
Sampled By: Kim Tower
Lab Order Number: WW-142541
Date Received: 08/05/14

Sample Type	Sample Time	Sample Date	Comments			
S-4A A	11:35	8/5/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	< 0.2	NA	08/22/14	MC	Calculation
Total Dissolved Solids	mg/L	77	6.0	08/06/14	KB	2540 C
Total Organic Carbon*	mg/L	2.8*	0.5	08/08/14	RIA*	SM 5310 C
Boron	mg/L	0.010	0.010	08/12/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	08/05/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/05/14	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	08/15/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	08/22/14	KB	SM4500 NH3 C
Chloride	mg/L	30.9	3.0	08/05/14	LL	300.0
Total Phosphorous (P)	mg/L	0.034	0.005	08/17/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	08/22/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.6*	0.5	08/08/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.04	NA	10/28/14	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.16	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	2.22*	*	08/07/14	RIA*	*
Ortho Phosphorous (P)	mg/L	0.007	0.005	08/06/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.2	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	10/28/14	LL	Calculation

$$TN = DON(0.04) + PON(0.1) + NH_3(0.04) + NO_3(0.005) + NO_2(0.002) = 0.227$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1417574
Report Date: 08/11/14

SAMPLE RESULTS

Lab ID: L1417574-03
Client ID: WW-142541
Sample Location: S-4A
Matrix: Water

Date Collected: 08/05/14 11:35
Date Received: 08/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	2.22		mg/m3	2.00	NA	1	08/06/14 16:30	08/07/14 11:15	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-3A

Collection Date: 8/5/14 Collection Time: 11:50

Sampled By: Kim Tower

Lab Order Number: WW-142542

Date Received: 08/05/14

Sample Type	Sample Time	Sample Date	Comments			
S-3A A	11:50	8/5/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.2	NA	08/22/14	KB	Calculation
Total Dissolved Solids	mg/L	73	6.0	08/06/14	KB	2540 C
Total Organic Carbon*	mg/L	2.1*	0.5	08/08/14	RIA*	SM 5310 C
Boron	mg/L	0.012	0.010	08/12/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	08/05/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/05/14	LL	300.0
Ammonia-N *	mg/L	0.02*	0.02	08/15/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.2	0.2	08/22/14	KB	SM4500 NH3 C
Chloride	mg/L	35.0	3.0	08/05/14	LL	300.0
Total Phosphorous (P)	mg/L	0.047	0.005	08/17/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	08/22/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.8*	0.5	08/08/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.02	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.18	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	92.4*	*	08/07/14	RIA*	*
Ortho Phosphorous (P)	mg/L	0.007	0.005	08/06/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.02	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	10/28/14	LL	Calculation

$$TN = DON(0.09) + PON(0.01) + NH_3(0.02) + NO_3(0.005) + NO_2(0.002) = 0.127$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1417574
Report Date: 08/11/14

SAMPLE RESULTS

Lab ID: L1417574-04
Client ID: WW-142542
Sample Location: S-3A
Matrix: Water

Date Collected: 08/05/14 11:50
Date Received: 08/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	92.4		mg/m3	2.00	NA	1	08/06/14 16:30	08/07/14 11:15	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-2L
Collection Date: 8/5/14 **Collection Time:** 12:05
Sampled By: Kim Tower
Lab Order Number: WW-142543
Date Received: 08/05/14

Sample Type	Sample Time	Sample Date	Comments			
S-2C, A	12:05	8/5/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.25	NA	08/22/14	KB	Calculation
Total Dissolved Solids	mg/L	67	6.0	08/06/14	KB	2540 C
Total Organic Carbon*	mg/L	2.2*	0.5	08/08/14	RIA*	SM 5310 C
Boron	mg/L	0.014	0.010	08/12/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	08/05/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/05/14	LL	300.0
Ammonia-N *	mg/L	0.08*	0.02	08/15/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.25	0.2	08/22/14	KB	SM4500 NH3 C
Chloride	mg/L	28.3	3.0	08/05/14	LL	300.0
Total Phosphorous (P)	mg/L	0.057	0.005	08/17/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	08/22/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.7*	0.5	08/08/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.08	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.12	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	46.5*	*	08/07/14	RIA*	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	08/06/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.5	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.05	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	10/28/14	LL	Calculation

$$TN = DON(0.06) + PON(0.025) + NH_3(0.08) + NO_3(0.005) + NO_2(0.002) = 0.172$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1417574
Report Date: 08/11/14

SAMPLE RESULTS

Lab ID: L1417574-05
Client ID: WW-142543
Sample Location: S-2C
Matrix: Water

Date Collected: 08/05/14 12:05
Date Received: 08/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	46.5		mg/m3	2.00	NA	1	08/06/14 16:30	08/07/14 11:15	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.**MA CERT. NO.: M-MA 063**

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW Sampling
Project Number: S-12
Collection Date: 8/5/14 **Collection Time:** 12:35
Sampled By: Kim Tower
Lab Order Number: WW-142545
Date Received: 08/05/14

Comments:

Sample Type	Sample Time	Sample Date	Comments			
S-12 A	12:35	8/5/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.37	NA	08/22/14	KB	Calculation
Total Dissolved Solids	mg/L	69	6.0	08/06/14	KB	2540 C
Total Organic Carbon*	mg/L	3.2*	0.5	08/08/14	RIA*	SM 5310 C
Boron	mg/L	0.012	0.010	08/12/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	08/05/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/05/14	LL	300.0
Ammonia-N *	mg/L	0.05*	0.02	08/15/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.37	0.2	08/22/14	KB	SM4500 NH3 C
Chloride	mg/L	18.9	3.0	08/05/14	LL	300.0
Total Phosphorous (P)	mg/L	0.037	0.005	08/17/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.32	0.2	08/22/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.8*	0.5	08/08/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.05	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.32	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	9.94*	*	08/07/14	RIA*	*
Ortho Phosphorous (P)	mg/L	0.019	0.005	08/06/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.4	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.32	NA	10/28/14	LL	Calculation

$$TN = DON(0.32) + PON(0.02) + NH_3(0.05) + NO_3(0.005) + NO_2(0.002) = 0.397$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1417574
Report Date: 08/11/14

SAMPLE RESULTS

Lab ID: L1417574-07
Client ID: WW-142545
Sample Location: S-12
Matrix: Water

Date Collected: 08/05/14 12:35
Date Received: 08/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	9.94		mg/m3	2.00	NA	1	08/06/14 16:30	08/07/14 11:15	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-8B
Collection Date: 8/5/14 **Collection Time:** 12:45
Sampled By: Kim Tower
Lab Order Number: WW-142546
Date Received: 08/05/14

Sample Type	Sample Time	Sample Date	Comments			
S-8B A	12:45	8/5/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	<0.2	NA	10/22/14	KB	Calculation
Total Dissolved Solids	mg/L	BRL	6.0	08/06/14	KB	2540 C
Total Organic Carbon*	mg/L	0.6*	0.5	08/08/14	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	08/12/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	08/05/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/05/14	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	08/15/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	08/22/14	KB	SM4500 NH3 C
Chloride	mg/L	BRL	3.0	08/05/14	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	08/17/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	08/22/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	08/08/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.04	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.16	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	ND*	*	08/07/14	RIA*	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	08/06/14	MC	4500-P
Particulate Organic Carbon	mg/L	<0.1	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	10/28/14	LL	Calculation

$$TN = DON(0.08) + PON(0.1) + NH_3(0.04) + NO_3(0.005) + NO_2(0.002) = 0.227$$

BRL=below reportable limits

*see attached

By:

Ronak J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1417574
Report Date: 08/11/14

SAMPLE RESULTS

Lab ID: L1417574-08
Client ID: WW-142546
Sample Location: S-8B
Matrix: Water

Date Collected: 08/05/14 12:45
Date Received: 08/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	ND		mg/m3	2.00	NA	1	08/06/14 16:30	08/07/14 11:15	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
 K.Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-6A
Collection Date: 8/5/14 **Collection Time:** 12:20
Sampled By: Kim Tower
Lab Order Number: WW-142544
Date Received: 08/05/14

Sample Type	Sample Time	Sample Date	Comments			
S-6A A	12:20	8/5/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.42	NA	08/22/14	KB	Calculation
Total Dissolved Solids	mg/L	58	6.0	08/06/14	KB	2540 C
Total Organic Carbon*	mg/L	2.1*	0.5	08/08/14	RIA*	SM 5310 C
Boron	mg/L	0.012	0.010	08/12/14	MC	200.7
Nitrate-N	mg/L	0.22	0.01	08/05/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	08/05/14	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	08/15/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.2	0.2	08/22/14	KB	SM4500 NH3 C
Chloride	mg/L	20.0	3.0	08/05/14	LL	300.0
Total Phosphorous (P)	mg/L	0.035	0.005	08/17/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	08/22/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.1*	0.5	08/08/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.26	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.16	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	ND*	*	08/07/14	RIA*	*
Ortho Phosphorous (P)	mg/L	0.010	0.005	08/06/14	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.04	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	< 0.24	NA	10/28/14	LL	Calculation

$$TN = DON(0.16) + PON(0.02) + NH_3(0.04) + NO_3(0.22) + NO_2(0.002) = 0.442$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1417574
Report Date: 08/11/14

SAMPLE RESULTS

Lab ID: L1417574-06
Client ID: WW-142544
Sample Location: S-6A
Matrix: Water

Date Collected: 08/05/14 12:20
Date Received: 08/06/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	08/06/14 16:30	08/07/14 11:15	30, 10200H	SP



2

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
8/5/14	1115	S-8A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
/	/	/	1	1 Liter Plastic	TKN, TN, TP	H2SO4
/	/	/	1	250mL Plastic	Boron	HNO3
/	/	/	1	250mL Glass	Orthophosphate	NONE
/	/	/	1	1 Liter Amber	Chlorophyll-a	NONE
/	/	/	1	250mL Plastic	TOC	H2SO4
8/5/14	1130	S-5B	1	1 Liter Plastic	Dissolved ,Chloride	NONE
/	/	/	1	1 Liter Plastic	TKN, TN, TP	H2SO4
/	/	/	1	250mL Plastic	Boron	HNO3
/	/	/	1	250mL Glass	Orthophosphate	NONE
/	/	/	1	1 Liter Amber	Chlorophyll-a	NONE
/	/	/	1	250mL Plastic	TOC	H2SO4

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Harvey 08/05/14 1415

①

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
8/5/14	1135	S-4A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
8/5/14	1150	S-3A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Rebecca 08/05/14 1415

①

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

JW-142543

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
8/5/14	1205	S-2L	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
8/5/14	1220	S-6A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

JW-142544

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Rehally 08/05/14/15

2

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
8/5/14	1235	S-12	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
8/5/14	1245	S-8B	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

R. Saville 08/05/14 1415

ENVIROTECH LABORATORIES, INC.**MA CERT. NO.: M-MA 063**

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

Project Name: Harbor Sampling**Comments:****Project Number:** S-7**Collection Date:** 09/08/14 **Collection Time:** 11:25**Sampled By:** K Michaels**Lab Order Number:** WW-142965**Date Received:** 09/08/14

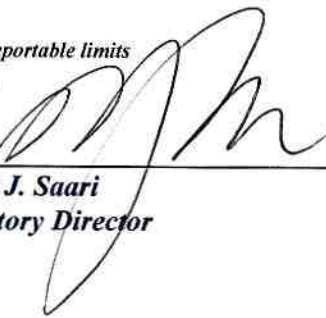
Sample Type		Sample Time	Sample Date	Comments		
S-7	A	11:25	09/08/14			
Parameters		Units	Test Results	Reportable Limits	Date Analyzed	Analyst
Nitrate-N/Nitrite-N		mg/L	0.14	0.01	09/12/14	MC
Total Organic Carbon*		mg/L	0.62*	0.5	09/15/14	RIA*
Ammonia-N *		mg/L	<0.10*	0.02	09/15/14	RIA*
Total Kjeldhal Nitrogen		mg/L	BRL	0.2	09/22/14	KB
Total Phosphorous (P)		mg/L	0.068	0.005	09/08/14	MC
Dissolved Kjeldhal Nitrogen		mg/L	BRL	0.2	09/22/14	KB
Dissolved Total Organic Carbon		mg/L	0.58*	0.5	09/15/14	RIA*
Dissolved Inorganic Nitrogen		mg/L	0.14	NA	12/01/14	MC
Dissolved Organic Nitrogen		mg/L	<0.10	NA	12/01/14	MC
Ortho Phosphorous (P)		mg/L	0.017	0.005	09/09/14	MC
Particulate Organic Carbon		mg/L	0.04	NA	12/01/14	MC
Particulate Organic Nitrogen		mg/L	ND	NA	12/01/14	MC
Total Dissolved Nitrogen		mg/L	<0.34	NA	12/01/14	MC

$$TW = DON(0.05) + PON(0.1) + NH_3(0.01) + NO_2/NO_3(0.14) = 0.3$$

BRL=below reportable limits

*see attached

By:


Ronald J. Saari
Laboratory Director

ENVIROTECH LABORATORIES, INC.**MA CERT. NO.: M-MA 063**

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Harbor Sampling**Comments:****Project Number:** S-10**Collection Date:** 09/08/14 **Collection Time:** 11:11:35**Sampled By:** K Michaels**Lab Order Number:** WW-142966**Date Received:** 09/08/14

Sample Type	Sample Time	Sample Date	Comments			
S-10 A	11:35	09/08/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Nitrate-N/Nitrite-N	mg/L	0.20	0.01	09/12/14	MC	4500-NO3
Total Organic Carbon*	mg/L	0.60*	0.5	09/15/14	RIA*	SM 5310 C
Ammonia-N *	mg/L	<0.10*	0.02	09/15/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.30	0.2	09/22/14	KB	SM4500 NH3 C
Total Phosphorous (P)	mg/L	0.082	0.005	09/09/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.28	0.2	09/22/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.56*	0.5	09/15/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.30	NA	12/01/14	RIA*	Calculation
Dissolved Organic Nitrogen	mg/L	<0.18	NA	12/01/14	RIA*	Calculation
Ortho Phosphorous (P)	mg/L	0.019	0.005	09/09/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.04	NA	12/01/14	RIA*	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	12/01/14	RIA*	Calculation
Total Dissolved Nitrogen	mg/L	0.48	NA	12/01/14	RIA*	Calculation

$$TN = DON(0.09) + PON(0.08) + NH_3(0.01) + NO_2/NO_3(0.20) = 0.32$$

$$TN = TLN(0.30) + NO_2/NO_3(0.20) = 0.50$$

BRL=below reportable limits

*see attached

By: Ronald J. Saari
Laboratory Director

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 9/10/2014
Date Reported: 9/17/2014
P.O. #:
Work Order #: 1409-20362

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

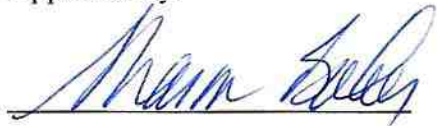
Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI LAI00033, MA M-RI015, CT PH-0508, ME RI00015
NH 2537, NY 11726

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:



Sharon Baker
MIS / Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 9/10/2014

Work Order #: 1409-20362

Sample # 001

SAMPLE DESCRIPTION: WW-142965 S-7

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/08/2014 @ 11:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.10	0.10	mg/l	SM4500-NH3 B,H	9/15/2014 15:12	STH
TOC Low Level	0.62	0.5	mg/l	SM-5310B	9/15/2014 11:00	EC
Dissolved TOC	0.58	0.5	mg/l	EPA 415.1	9/15/2014 11:00	EC

Sample # 002

SAMPLE DESCRIPTION: WW-142966 S-10

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/08/2014 @ 11:35

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.10	0.10	mg/l	SM4500-NH3 B,H	9/15/2014 15:12	STH
TOC Low Level	0.60	0.5	mg/l	SM-5310B	9/15/2014 11:00	EC
Dissolved TOC	0.56	0.5	mg/l	EPA 415.1	9/15/2014 11:00	EC

Samples were received at the laboratory outside of the recommended temperature limits of 0-6C.



October 31, 2014

Ms. Maria Cathcart
Envirotech Laboratories, Inc.
8 Jan Sebastian Drive
Sandwich, MA 02563

RE: Ammonia
WO#1409-20362

Dear Ms. Cathcart:

Pursuant to your request on October 27th, the Quality Assurance Department at R.I. Analytical Laboratories, Inc. has reviewed the reported Ammonia result for your "Plymouth Env" project, WO#1409-20362.

The detection limit of 0.02 mg/L indicated on the Chain of Custody was overlooked in the laboratory process, resulting in a reported results <0.10 mg/L. Additional sample volume was provided in order to achieve the indicated detection limit, however concentration of the 250 mL volume prior to distillation resulted in crystal formation and possible cross-contamination of the samples. The samples could not proceed to distillation and analysis for this reason.

A test code addition to the LIMS has been implemented to prompt analysis of samples at an increased volume (to achieve the indicated detection limit) upon arrival at the laboratory. This should prevent this oversight in the future.

We apologize for any inconvenience. If you have any other questions or seek further information, please do not hesitate to contact me by e-mail at mmanamon@rianalytical.com.

Sincerely,

Melissa A. Manamon
QA/QC Officer
R.I. Analytical Laboratories, Inc.

①

//Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - DPW Environmental Management Attn: Kim Michaelis
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, kmichaelis@townhall.plymouth.ma.us
Project Name: **Harbor Sampling** -Plymouth MA
Sampler: Kim Michaelis (KM)

NW-142965

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
9/8/14	1125	S-7	1	Plastic	TOC	H2SO4
9/8/14		S-7	1	Plastic	Dissolved	NONE
9/8/14		S-7	1	1 Liter Plastic	TKN, TN, TP, NH3	H2SO4
9/8/14		S-7	1	Glass	Ortho	None
9/8/14		S-7	1	Plastic	Bacteria e-coli	None
9/8/14	1135	S-10	1	Plastic	TOC	H2SO4
9/8/14		S-10	1	Plastic	Dissolved	NONE
9/8/14		S-10	1	1 Liter Plastic	TKN, TN, TP	H2SO4
9/8/14		S-10	1	Glass	Ortho	None
9/8/14		S-10	1	Plastic	Bacteria e-coli	None

NW-142966

NOTE: Analysis needed for reporting in lowest detection possible; O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Bacteria E-coli

Relinquished By: Date/Time

Kim Tan 9/8/14

Received By: Date/Time:

Patience 09/08/14 1615

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-8A

Collection Date: 09/25/14 **Collection Time:** 08:00

Sampled By: K Tower

Lab Order Number: WW-143173

Date Received: 09/25/14

Sample Type	Sample Time	Sample Date	Comments			
S-8A A	08:00	09/25/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.31	NA	10/06/14	KB	Calculation
Total Dissolved Solids	mg/L	108	6.0	10/01/14	KB	2540 C
Total Organic Carbon*	mg/L	1.7*	0.5	09/30/14	RIA*	SM 5310 C
Boron	mg/L	0.012	0.010	10/03/14	MC	200.7
Nitrate-N	mg/L	0.11	0.01	09/25/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	09/25/14	LL	300.0
Ammonia-N *	mg/L	0.04*	0.02	10/03/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.20	0.2	10/06/14	KB	SM4500 NH3 C
Chloride	mg/L	49.9	3.0	09/25/14	LL	300.0
Total Phosphorous (P)	mg/L	0.022	0.005	09/30/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.20	0.2	10/06/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.7*	0.5	09/30/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.15	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.16	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	2.49*	*	09/29/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	0.008	0.005	09/26/14	MC	4500-P
Particulate Organic Carbon	mg/L	BRL	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.31	NA	10/28/14	LL	Calculation

$$TN = DON(0.16) + PON(0.1) + NH_3(0.04) + NO_3(0.11) + NO_2(0.002) = 0.412$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari

Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L1422609
Report Date: 10/06/14

SAMPLE RESULTS

Lab ID: L1422609-01
Client ID: WW-143173
Sample Location: S-8A
Matrix: Water

Date Collected: 09/25/14 08:00
Date Received: 09/26/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	2.49		mg/m3	2.00	NA	1	09/26/14 16:00	09/29/14 12:00	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

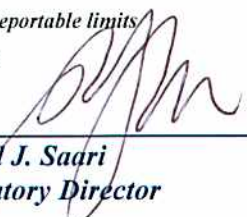
Project Name: Eel River SW Sampling **Comments:**
Project Number: S-5B
Collection Date: 09/25/14 **Collection Time:** 08:15
Sampled By: K Tower
Lab Order Number: WW-143174
Date Received: 09/25/14

Sample Type	Sample Time	Sample Date	Comments			
S-5B A	08:15	09/25/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.34	NA	10/06/14	KB	Calculation
Total Dissolved Solids	mg/L	106	6.0	10/01/14	KB	2540 C
Total Organic Carbon*	mg/L	1.9*	0.5	09/30/14	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/03/14	MC	200.7
Nitrate-N	mg/L	0.11	0.01	09/25/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	09/25/14	LL	300.0
Ammonia-N *	mg/L	0.07	0.02	10/03/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.23	0.2	10/06/14	KB	SM4500 NH3 C
Chloride	mg/L	49.8	3.0	09/25/14	LL	300.0
Total Phosphorous (P)	mg/L	0.023	0.005	09/30/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.23	0.2	10/06/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.6*	0.5	09/30/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.18	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.16	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	3.44*	*	09/29/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	0.021	0.005	09/26/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.16	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.34	NA	10/28/14	LL	Calculation

$$TN = DON(0.16) + PON(0.16) + NH_3(0.07) + NO_3(0.11) + NO_2(0.002) = 0.502$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L1422609
Report Date: 10/06/14

SAMPLE RESULTS

Lab ID: L1422609-02
Client ID: WW-143174
Sample Location: S-5B
Matrix: Water

Date Collected: 09/25/14 08:15
Date Received: 09/26/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	3.44		mg/m3	2.00	NA	1	09/26/14 16:00	09/29/14 12:00	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
 K.Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-4A
Collection Date: 09/25/14 **Collection Time:** 08:35
Sampled By: K Tower
Lab Order Number: WW-143175
Date Received: 09/25/14

Sample Type	Sample Time	Sample Date	Comments			
S-4A A	08:35	09/25/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.31	NA	10/06/14	KB	Calculation
Total Dissolved Solids	mg/L	69	6.0	10/01/14	KB	2540 C
Total Organic Carbon*	mg/L	2.1*	0.5	09/30/14	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/03/14	MC	200.7
Nitrate-N	mg/L	0.08	0.01	09/26/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	09/26/14	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	10/03/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.23	0.2	10/06/14	KB	SM4500 NH3 C
Chloride	mg/L	29.8	3.0	09/26/14	LL	300.0
Total Phosphorous (P)	mg/L	0.024	0.005	09/30/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.22	0.2	10/06/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.9*	0.5	09/30/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.11	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.19	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	2.27*	*	09/29/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	0.010	0.005	09/26/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.2	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.30	NA	10/28/14	LL	Calculation

$$TN = DON(0.19) + PON(0.01) + NH_3(0.03) + NO_3(0.08) + NO_2(0.002) = 0.312$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L1422609
Report Date: 10/06/14

SAMPLE RESULTS

Lab ID: L1422609-03
Client ID: WW-143175
Sample Location: S-4A
Matrix: Water

Date Collected: 09/25/14 08:35
Date Received: 09/26/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	2.27		mg/m3	2.00	NA	1	09/26/14 16:00	09/29/14 12:00	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: Eel River SW Sampling **Comments:**
Project Number: S-3A
Collection Date: 09/25/14 **Collection Time:** 08:50
Sampled By: K Tower
Lab Order Number: WW-143176
Date Received: 09/25/14

Sample Type	Sample Time	Sample Date	Comments			
S-3A A	08:50	09/25/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.39	NA	10/06/14	KB	Calculation
Total Dissolved Solids	mg/L	70	6.0	10/01/14	KB	2540 C
Total Organic Carbon*	mg/L	1.8*	0.5	09/30/14	RIA*	SM 5310 C
Boron	mg/L	0.010	0.010	10/03/14	MC	200.7
Nitrate-N	mg/L	0.16	0.01	09/26/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	09/26/14	LL	300.0
Ammonia-N *	mg/L	0.06*	0.02	10/03/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.23	0.2	10/06/14	KB	SM4500 NH3 C
Chloride	mg/L	34.8	3.0	09/26/14	LL	300.0
Total Phosphorous (P)	mg/L	0.026	0.005	09/30/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.23	0.2	10/06/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.4*	0.5	09/30/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.22	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.17	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	3.28*	*	09/29/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	0.007	0.005	09/26/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.4	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.39	NA	10/28/14	LL	Calculation

$$TN = DON(0.17) + PON(0.1) + NH_3(0.06) + NO_3(0.16) + NO_2(0.002) = 0.492$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L1422609
Report Date: 10/06/14

SAMPLE RESULTS

Lab ID: L1422609-04
Client ID: WW-143176
Sample Location: S-3A
Matrix: Water

Date Collected: 09/25/14 08:50
Date Received: 09/26/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	3.28		mg/m3	2.00	NA	1	09/26/14 16:00	09/29/14 12:00	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-2C

Collection Date: 09/25/14 **Collection Time:** 09:10

Sampled By: K Tower

Lab Order Number: WW-143177

Date Received: 09/25/14

Sample Type	Sample Time	Sample Date	Comments			
S-2C A	09:10	09/25/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.53	NA	10/06/14	KB	Calculation
Total Dissolved Solids	mg/L	69	6.0	10/01/14	KB	2540 C
Total Organic Carbon*	mg/L	1.9*	0.5	09/30/14	RIA*	SM 5310 C
Boron	mg/L	0.010	0.010	10/03/14	MC	200.7
Nitrate-N	mg/L	0.08	0.01	09/26/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	09/26/14	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	10/03/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.45	0.2	10/06/14	KB	SM4500 NH3 C
Chloride	mg/L	28.7	3.0	09/26/14	LL	300.0
Total Phosphorous (P)	mg/L	0.027	0.005	10/30/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.31	0.2	10/06/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.5*	0.5	09/30/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.11	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.28	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	22.4*	*	09/29/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	09/26/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.4	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.14	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.39	NA	10/28/14	LL	Calculation

$$TN = DON(0.28) + PON(0.14) + NH_3(0.03) + NO_3(0.08) + NO_2(0.002) = 0.532$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L1422609
Report Date: 10/06/14

SAMPLE RESULTS

Lab ID: L1422609-05
Client ID: WW-143177
Sample Location: S-2C
Matrix: Water

Date Collected: 09/25/14 09:10
Date Received: 09/26/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	22.4		mg/m3	2.00	NA	1	09/26/14 16:00	09/29/14 12:00	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-6A

Collection Date: 09/25/14 **Collection Time:** 09:25

Sampled By: K Tower

Lab Order Number: WW-143178

Date Received: 09/25/14

Sample Type	Sample Time	Sample Date	Comments			
S-6A A	09:25	09/25/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.26	NA	10/06/14	KB	Calculation
Total Dissolved Solids	mg/L	58	6.0	10/01/14	KB	2540 C
Total Organic Carbon*	mg/L	1.4*	0.5	09/30/14	RIA*	SM 5310 C
Boron	mg/L	0.010	0.010	10/03/14	MC	200.7
Nitrate-N	mg/L	0.26	0.01	09/26/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	09/26/14	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	10/03/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/06/14	KB	SM4500 NH3 C
Chloride	mg/L	20.6	3.0	09/26/14	LL	300.0
Total Phosphorous (P)	mg/L	0.049	0.005	10/30/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/06/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.4*	0.5	09/30/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.29	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.17	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	2.57*	*	09/29/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	0.008	0.005	09/26/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.26	NA	10/28/14	LL	Calculation

$$TN = DON(0.085) + PON(0.1) + NH_3(0.03) + NO_3(0.26) + NO_2(0.002) = 0.477$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari

Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L1422609
Report Date: 10/06/14

SAMPLE RESULTS

Lab ID: L1422609-06
Client ID: WW-143178
Sample Location: S-6A
Matrix: Water

Date Collected: 09/25/14 09:25
Date Received: 09/26/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	2.57		mg/m3	2.00	NA	1	09/26/14 16:00	09/29/14 12:00	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.**MA CERT. NO.: M-MA 063**

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling**Comments:****Project Number:** S-12**Collection Date:** 09/25/14 **Collection Time:** 09:40**Sampled By:** K Tower**Lab Order Number:** WW-143179**Date Received:** 09/25/14

Sample Type	Sample Time	Sample Date	Comments			
S-12 A	09:40	09/25/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	0.46	NA	10/06/14	KB	Calculation
Total Dissolved Solids	mg/L	57	6.0	10/01/14	KB	2540 C
Total Organic Carbon*	mg/L	2.2*	0.5	09/30/14	RIA*	SM 5310 C
Boron	mg/L	0.013	0.010	10/03/14	MC	200.7
Nitrate-N	mg/L	0.26	0.01	09/26/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	09/26/14	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	10/03/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.20	0.2	10/06/14	KB	SM4500 NH3 C
Chloride	mg/L	19.7	3.0	09/26/14	LL	300.0
Total Phosphorous (P)	mg/L	0.021	0.005	09/30/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.20	0.2	10/06/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.9*	0.5	09/30/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.29	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.17	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	7.69*	*	09/29/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	0.005	0.005	09/26/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.3	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.46	NA	10/28/14	LL	Calculation

$$TN = DN(0.17) + PON(0.1) + NH_3(0.03) + NO_3(0.26) + NO_2(0.002) = 0.562$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari

Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L1422609
Report Date: 10/06/14

SAMPLE RESULTS

Lab ID: L1422609-07
Client ID: WW-143179
Sample Location: S-12
Matrix: Water

Date Collected: 09/25/14 09:40
Date Received: 09/26/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
eneral Chemistry - Westborough Lab										
hlorophyll A	7.69		mg/m3	2.00	NA	1	09/26/14 16:00	09/29/14 12:00	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, October 28, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: Eel River SW Sampling

Comments:

Project Number: S-8B

Collection Date: 09/25/14 Collection Time: 10:00

Sampled By: K Tower

Lab Order Number: WW-143180

Date Received: 09/25/14

Sample Type	Sample Time	Sample Date	Comments			
S-8B A	10:00	09/25/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Nitrogen	mg/L	<0.2	NA	10/06/14	KB	Calculation
Total Dissolved Solids	mg/L	BRL	6.0	10/01/14	KB	2540 C
Total Organic Carbon*	mg/L	0.65*	0.5	09/30/14	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/03/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	09/26/14	LL	300.0
Nitrite-N	mg/L	BRL	0.004	09/26/14	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	10/03/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/06/14	KB	SM4500 NH3 C
Chloride	mg/L	BRL	3.0	09/26/14	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	10/30/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/06/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	09/30/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.03	NA	10/28/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.17	NA	10/28/14	LL	Calculation
Chlorophyll-a	*	ND*	*	09/29/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	09/26/14	MC	4500-P
Particulate Organic Carbon	mg/L	<0.15	NA	10/28/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	BRL	NA	10/28/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	10/28/14	LL	Calculation

$$TN = DON(0.085) + PON(0.1) + NH_3(0.03) + NO_3(0.005) + NO_2(0.002) = 0.222$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari

Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MGMT
Project Number: Not Specified

Lab Number: L1422609
Report Date: 10/06/14

SAMPLE RESULTS

Lab ID: L1422609-08
Client ID: WW-143180
Sample Location: S-8B
Matrix: Water

Date Collected: 09/25/14 10:00
Date Received: 09/26/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	09/26/14 16:00	09/29/14 12:00	30, 10200H	SP



R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 9/29/2014

Work Order #: 1409-21847

Sample # 001

SAMPLE DESCRIPTION: WW-143173 S-8A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/25/2014 @ 08:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.036	0.02	mg/l	SM4500-NH3 B,H	10/3/2014 20:15	TAC
TOC Low Level	1.7	0.05	mg/l	SM-5310B	9/30/2014 9:00	EC
Dissolved TOC	1.7	0.5	mg/l	EPA 415.1	9/30/2014 9:00	EC

Sample # 002

SAMPLE DESCRIPTION: WW-143174 S-5B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/25/2014 @ 08:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.07	0.02	mg/l	SM4500-NH3 B,H	10/3/2014 20:15	TAC
TOC Low Level	1.9	0.5	mg/l	SM-5310B	9/30/2014 9:00	EC
Dissolved TOC	1.6	0.5	mg/l	EPA 415.1	9/30/2014 9:00	EC

Sample # 003

SAMPLE DESCRIPTION: WW-143175 S-4A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/25/2014 @ 08:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,H	10/3/2014 20:15	TAC
TOC Low Level	2.1	0.5	mg/l	SM-5310B	9/30/2014 9:00	EC
Dissolved TOC	1.9	0.5	mg/l	EPA 415.1	9/30/2014 9:00	EC

Sample # 004

SAMPLE DESCRIPTION: WW-143176 S-3A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/25/2014 @ 08:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.06	0.02	mg/l	SM4500-NH3 B,H	10/3/2014 20:15	TAC
TOC Low Level	1.8	0.5	mg/l	SM-5310B	9/30/2014 9:00	EC
Dissolved TOC	1.4	0.5	mg/l	EPA 415.1	9/30/2014 9:00	EC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
 Date Received: 9/29/2014
 Work Order #: 1409-21847

Sample # 005

SAMPLE DESCRIPTION: WW-143177 S-2C

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/25/2014 @ 09:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,H	10/3/2014 20:15	TAC
TOC Low Level	1.9	0.5	mg/l	SM-5310B	9/30/2014 9:00	EC
Dissolved TOC	1.5	0.5	mg/l	EPA 415.1	9/30/2014 9:00	EC

Sample # 006

SAMPLE DESCRIPTION: WW-143178 S-6A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/25/2014 @ 09:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,H	10/3/2014 20:15	TAC
TOC Low Level	1.4	0.5	mg/l	SM-5310B	9/30/2014 9:00	EC
Dissolved TOC	1.4	0.5	mg/l	EPA 415.1	9/30/2014 9:00	EC

Sample # 007

SAMPLE DESCRIPTION: WW-143179 S-12

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/25/2014 @ 09:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,H	10/3/2014 20:15	TAC
TOC Low Level	2.2	0.5	mg/l	SM-5310B	9/30/2014 9:00	EC
Dissolved TOC	1.9	0.5	mg/l	EPA 415.1	9/30/2014 9:00	EC

Sample # 008

SAMPLE DESCRIPTION: WW-143180 S-8B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 9/25/2014 @ 10:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,H	10/3/2014 20:15	TAC
TOC Low Level	0.65	0.5	mg/l	SM-5310B	9/30/2014 9:00	EC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	9/30/2014 9:00	EC

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

WW-143173
(L)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
9/25/14	0800	S-8A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
9/25/14	0815	S-5B	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

WW143174
(U)

Relinquished By: Date/Time

John Tu

Received By: Date/Time:

R. Lauer 09/25/14 1550

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

NW-143175
①

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
9/25/14	0835	S-4A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
9/25/14	0850	S-3A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

NW-143176
①

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Revaldo 09/25/14 1550

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
9/25/14	0910 S-2C	S-2C	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
9/25/14	0925	S-6A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

Relinquished By: Date/Time

John Tan

Received By: Date/Time:

Relawala 09/25/14 1558

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
9/25/14	0940	S-12	1	1 Liter Plastic	Dissolved ,Chloride	NONE
/	/	/	1	1 Liter Plastic	TKN, TN, TP	H2SO4
/	/	/	1	250mL Plastic	Boron	HNO3
/	/	/	1	250mL Glass	Orthophosphate	NONE
/	/	/	1	1 Liter Amber	Chlorophyll-a	NONE
/	/	/	1	250mL Plastic	TOC	H2SO4
9/25/14	1000	S-8B	1	1 Liter Plastic	Dissolved ,Chloride	NONE
/	/	/	1	1 Liter Plastic	TKN, TN, TP	H2SO4
/	/	/	1	250mL Plastic	Boron	HNO3
/	/	/	1	250mL Glass	Orthophosphate	NONE
/	/	/	1	1 Liter Amber	Chlorophyll-a	NONE
/	/	/	1	250mL Plastic	TOC	H2SO4

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Reynolds 09/25/14 1550

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: SW Sampling Eel River Plymouth
Project Number: S-5B
Collection Date: 10/15/14 **Collection Time:** 09:00
Sampled By: K Tower
Lab Order Number: WW-143415
Date Received: 10/15/14

Comments: ✓

Sample Type	Sample Time	Sample Date	Comments			
S-5B A	09:00	10/15/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	104	6.0	10/16/14	KB	2540 C
Total Organic Carbon*	mg/L	2.1*	0.5	10/22/14	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/17/14	MC	200.7
Nitrate-N	mg/L	0.20	0.01	10/15/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/15/14	RL	300.0
Ammonia-N *	mg/L	0.25*	0.02	10/24/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.27	0.2	10/27/14	KB	SM4500 NH3 C
Chloride	mg/L	48.4	3.0	10/15/14	RL	300.0
Total Phosphorous (P)	mg/L	0.025	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.23	0.2	10/27/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.0*	0.5	10/22/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.45	NA	12/01/14	RL	Calculation
Dissolved Organic Nitrogen	mg/L	ND	NA	12/01/14	RL	Calculation
Chlorophyll-a	*	5.55*	*	10/17/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	0.014	0.005	10/16/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	12/01/14	RL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	12/01/14	RL	Calculation
Total Dissolved Nitrogen	mg/L	0.43	NA	12/01/14	RL	Calculation

$$TN = DON(0.1) + PON(0.02) + NH_3(0.25) + NO_2(0.003) + NO_3(0.20) = 0.573$$

$$TN = TLN(0.27) + NO_2(0.003) + NO_3(0.20) = 0.473$$

BRL=below reportable limits

*see attached

By:


 Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1424569
Report Date: 10/22/14

SAMPLE RESULTS

Lab ID: L1424569-02
Client ID: WW-143415 S-5B
Sample Location: Not Specified
Matrix: Water

Date Collected: 10/15/14 09:00
Date Received: 10/16/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	5.55		mg/m3	2.00	NA	1	10/16/14 23:45	10/17/14 11:50	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.**MA CERT. NO.: M-MA 063**

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, December 02, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

Project Name: SW Sampling Eel River Plymouth**Comments:** ✓**Project Number:** S-4A**Collection Date:** 10/15/14 **Collection Time:** 09:20**Sampled By:** K Tower**Lab Order Number:** WW-143416**Date Received:** 10/15/14

Sample Type	Sample Time	Sample Date	Comments			
S-4A A	09:20	10/15/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	72	6.0	10/16/14	KB	2540 C
Total Organic Carbon*	mg/L	2.6*	0.5	10/22/14	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/17/14	MC	200.7
Nitrate-N	mg/L	0.12	0.01	10/15/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/15/14	RL	300.0
Ammonia-N *	mg/L	0.34*	0.02	10/24/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.35	0.2	10/27/14	KB	SM4500 NH3 C
Chloride	mg/L	30.2	3.0	10/15/14	RL	300.0
Total Phosphorous (P)	mg/L	0.021	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.35	0.2	10/27/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.7*	0.5	10/22/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.46	NA	12/02/14	RL	Calculation
Dissolved Organic Nitrogen	mg/L	0.01	NA	12/02/14	RL	Calculation
Chlorophyll-a	*	4.25*	*	10/17/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	0.010	0.005	10/16/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/02/14	RL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	12/02/14	RL	Calculation
Total Dissolved Nitrogen	mg/L	0.47	NA	12/02/14	RL	Calculation

$$TN = DON(0.01) + PON(0.1) + NH_3(0.34) + NO_2(0.003) + NO_3(0.12) = 0.573$$

$$TN = TKN(0.35) + NO_2(0.003) + NO_3(0.12) = 0.473$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1424569
Report Date: 10/22/14

SAMPLE RESULTS

Lab ID: L1424569-03
Client ID: WW-143416 S-4A
Sample Location: Not Specified
Matrix: Water

Date Collected: 10/15/14 09:20
Date Received: 10/16/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	4.25		mg/m3	2.00	NA	1	10/16/14 23:45	10/17/14 11:50	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: SW Sampling Eel River Plymouth
Project Number: S-3A
Collection Date: 10/15/14 **Collection Time:** 09:35
Sampled By: K Tower
Lab Order Number: WW-143417
Date Received: 10/15/14

Comments: ✓

Sample Type	Sample Time	Sample Date	Comments			
S-3A A	09:35	10/15/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	76	6.0	10/16/14	KB	2540 C
Total Organic Carbon*	mg/L	1.9*	0.5	10/22/14	RIA*	SM 5310 C
Boron	mg/L	0.010	0.010	10/17/14	MC	200.7
Nitrate-N	mg/L	0.19	0.01	10/15/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/15/14	RL	300.0
Ammonia-N *	mg/L	0.24*	0.02	10/24/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.31	0.2	10/27/14	KB	SM4500 NH3 C
Chloride	mg/L	32.0	3.0	10/15/14	RL	300.0
Total Phosphorous (P)	mg/L	0.033	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.23	0.2	10/27/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.8*	0.5	10/22/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.43	NA	12/02/14	RL	Calculation
Dissolved Organic Nitrogen	mg/L	ND	NA	12/02/14	RL	Calculation
Chlorophyll-a	*	8.39*	*	10/17/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	0.013	0.005	10/16/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	12/02/14	RL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.08	NA	12/02/14	MC	Calculation
Total Dissolved Nitrogen	mg/L	0.42	NA	12/02/14	RL	Calculation

$$TN = DON(0.1) + PON(0.08) + NH_3(0.24) + NO_2(0.003) + NO_3(0.19) = 0.613$$

$$TN = TKN(0.31) + NO_2(0.003) + NO_3(0.19) = 0.503$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM

Project Number: Not Specified

Lab Number: L1424569

Report Date: 10/22/14

SAMPLE RESULTS

Lab ID: L1424569-04
Client ID: WW-143417 S-3A
Sample Location: Not Specified
Matrix: Water

Date Collected: 10/15/14 09:35
Date Received: 10/16/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	8.39		mg/m3	2.00	NA	1	10/16/14 23:45	10/17/14 11:50	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

Project Name: SW Sampling Eel River Plymouth
Project Number: S-2C
Collection Date: 10/15/14 **Collection Time:** 09:45
Sampled By: K Tower
Lab Order Number: WW-143418
Date Received: 10/15/14

Comments: /

Sample Type	Sample Time	Sample Date	Comments			
S-2C A	09:45	10/15/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	64	6.0	10/16/14	KB	2540 C
Total Organic Carbon*	mg/L	1.8*	0.5	10/22/14	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/17/14	MC	200.7
Nitrate-N	mg/L	0.10	0.01	10/15/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/15/14	RL	300.0
Ammonia-N *	mg/L	0.24*	0.02	10/25/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.31	0.2	10/27/14	KB	SM4500 NH3 C
Chloride	mg/L	27.2	3.0	10/15/14	RL	300.0
Total Phosphorous (P)	mg/L	0.025	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.26	0.2	10/27/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.7*	0.5	10/22/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.34	NA	12/01/14	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.02	NA	12/01/14	KB	Calculation
Chlorophyll-a	*	21.8*	*	10/17/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	0.006	0.005	10/16/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	12/01/14	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.05	NA	12/01/14	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.36	NA	12/01/14	KB	Calculation

$$TN = DON(0.02) + PON(0.05) + NH_3(0.24) + NO_2(0.003) + NO_3(0.10) = 0.413$$

$$TN = TKN(0.31) + NO_2(0.003) + NO_3(0.10) = 0.413$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1424569
Report Date: 10/22/14

SAMPLE RESULTS

Lab ID: L1424569-05
Client ID: WW-143418 S-2C
Sample Location: Not Specified
Matrix: Water

Date Collected: 10/15/14 09:45
Date Received: 10/16/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	21.8		mg/m3	2.00	NA	1	10/16/14 23:45	10/17/14 11:50	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

Project Name: SW Sampling Eel River Plymouth
Project Number: S-6A
Collection Date: 10/15/14 **Collection Time:** 10:05
Sampled By: K Tower
Lab Order Number: WW-143419
Date Received: 10/15/14

Comments: ✓

Sample Type	Sample Time	Sample Date	Comments			
S-6A A	10:05	10/15/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	58	6.0	10/16/14	KB	2540 C
Total Organic Carbon*	mg/L	1.4*	0.5	10/22/14	RIA*	SM 5310 C
Boron	mg/L	0.011	0.010	10/17/14	MC	200.7
Nitrate-N	mg/L	0.29	0.01	10/15/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/15/14	RL	300.0
Ammonia-N *	mg/L	0.18*	0.02	10/25/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.20	0.2	10/27/14	KB	SM4500 NH3 C
Chloride	mg/L	20.1	3.0	10/15/14	RL	300.0
Total Phosphorous (P)	mg/L	0.024	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.20	0.2	10/27/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.5*	0.5	10/22/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.47	NA	12/01/14	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.02	NA	12/01/14	KB	Calculation
Chlorophyll-a	*	2.81*	*	10/17/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	0.015	0.005	10/16/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/01/14	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	12/01/14	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.49	NA	12/01/14	KB	Calculation

$$TN = DON(0.02) + PIN(0.1) + NH_3(0.18) + NO_2(0.003) + NO_3(0.29) = 0.593$$

$$TN = TKN(0.20) + NO_2(0.003) + NO_3(0.29) =$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1424569
Report Date: 10/22/14

SAMPLE RESULTS

Lab ID: L1424569-06
Client ID: WW-143419 S-6A
Sample Location: Not Specified
Matrix: Water

Date Collected: 10/15/14 10:05
Date Received: 10/16/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	2.81		mg/m3	2.00	NA	1	10/16/14 23:45	10/17/14 11:50	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, December 02, 2014

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: SW Sampling Eel River Plymouth
Project Number: S-12
Collection Date: 10/15/14 **Collection Time:** 10:20
Sampled By: K Tower
Lab Order Number: WW-143420
Date Received: 10/15/14

Comments: ✓

Sample Type	Sample Time	Sample Date	Comments			
S-12 A	10:20	10/15/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	57	6.0	10/16/14	KB	2540 C
Total Organic Carbon*	mg/L	2.0*	0.5	10/22/14	RIA*	SM 5310 C
Boron	mg/L	0.012	0.010	10/17/14	MC	200.7
Nitrate-N	mg/L	0.27	0.01	10/15/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/15/14	RL	300.0
Ammonia-N *	mg/L	0.22*	0.02	10/25/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.36	0.2	10/27/14	KB	SM4500 NH3 C
Chloride	mg/L	19.2	3.0	10/15/14	RL	300.0
Total Phosphorous (P)	mg/L	0.024	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.23	0.2	10/27/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.0*	0.5	10/22/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.49	NA	12/01/14	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.01	NA	12/01/14	KB	Calculation
Chlorophyll-a	*	15.8*	*	10/17/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	0.010	0.005	10/16/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/01/14	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.13	NA	12/01/14	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.5	NA	12/01/14	KB	Calculation

$$TN = DON(0.01) + PON(0.13) + NH_3(0.22) + NO_2(0.003) + NO_3(0.27) = 0.633$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1424569
Report Date: 10/22/14

SAMPLE RESULTS

Lab ID: L1424569-07
Client ID: WW-143420 S-12
Sample Location: Not Specified
Matrix: Water

Date Collected: 10/15/14 10:20
Date Received: 10/16/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	15.8		mg/m3	2.00	NA	1	10/16/14 23:45	10/17/14 11:50	30, 10200H	SP



ENVIROTECH LABORATORIES, INC.**MA CERT. NO.: M-MA 063**

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 02, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: SW Sampling Eel River Plymouth
Project Number: S-8B
Collection Date: 10/15/14 **Collection Time:** 10:35
Sampled By: K Tower ✓
Lab Order Number: WW-143421
Date Received: 10/15/14

Comments:

Sample Type	Sample Time	Sample Date	Comments			
S-8B A	10:35	10/15/14	**possible contamination.			
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	BRL	6.0	10/16/14	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	10/22/14	RIA*	SM 5310 C
Boron	mg/L	BRL	0.010	10/17/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	10/15/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/15/14	RL	300.0
Ammonia-N *	mg/L	0.22*	0.02	10/25/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/27/14	KB	SM4500 NH3 C
Chloride	mg/L	BRL	3.0	10/15/14	RL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/27/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	15**	0.5	10/22/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.22	NA	12/01/14	KB	Calculation
Dissolved Organic Nitrogen	mg/L	ND	NA	12/01/14	KB	Calculation
Chlorophyll-a	*	ND*	*	10/17/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	BRL	0.005	10/16/14	MC	4500-P
Particulate Organic Carbon	mg/L	**	NA	12/01/14	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	12/01/14	KB	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	12/01/14	KB	Calculation

$$TN = DON(0.1) + PON(0.1) + NH_3(0.22) + NO_2(0.003) + NO_3(0.005) = 0.428$$

BRL=below reportable limits

*see attached

By:


Ronald J. Saari
Laboratory Director

Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1424569
Report Date: 10/22/14

SAMPLE RESULTS

Lab ID: L1424569-01
Client ID: WW-143414 S-8A
Sample Location: Not Specified
Matrix: Water

Date Collected: 10/15/14 08:45
Date Received: 10/16/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	3.91		mg/m3	2.00	NA	1	10/16/14 23:45	10/17/14 11:50	30, 10200H	SP



Project Name: PLYMOUTH ENVIRONMENTAL MANAGEM
Project Number: Not Specified

Lab Number: L1424569
Report Date: 10/22/14

SAMPLE RESULTS

Lab ID: L1424569-08
Client ID: WW-143421 S-8B
Sample Location: Not Specified
Matrix: Water

Date Collected: 10/15/14 10:35
Date Received: 10/16/14
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorophyll A	ND		mg/m3	2.00	NA	1	10/16/14 23:45	10/17/14 11:50	30, 10200H	SP



Project Name: PLYMOUTH ENVIRONMENTAL MANA

Project Number: Not Specified

Lab Number: L1424569

Report Date: 10/22/14

Method Blank Analysis
Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analysis
General Chemistry - Westborough Lab for sample(s): 01-08 Batch: WG731908-1									
Chlorophyll A	ND	mg/m3	2.00	NA	1	10/16/14 23:45	10/17/14 11:50	30, 10200H	SP



R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/17/2014

Work Order #: 1410-23471

Sample # 001

SAMPLE DESCRIPTION: WW-143414 S-8A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/15/2014 @ 08:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.10	0.02	mg/l	SM4500-NH3 B,H	10/29/2014 16:20	JWD
TOC Low Level	2.1	0.5	mg/l	SM-5310B	10/22/2014 11:00	EC
Dissolved TOC	2.1	0.5	mg/l	EPA 415.1	10/22/2014 11:00	EC

Sample # 002

SAMPLE DESCRIPTION: WW-143415 S-5B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/15/2014 @ 09:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.25	0.10	mg/l	SM4500-NH3 B,H	10/24/2014 20:25	JWD
TOC Low Level	2.1	0.5	mg/l	SM-5310B	10/22/2014 11:00	EC
Dissolved TOC	2.0	0.5	mg/l	EPA 415.1	10/22/2014 11:00	EC

Sample # 003

SAMPLE DESCRIPTION: WW-143416 S-4A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/15/2014 @ 09:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.34	0.10	mg/l	SM4500-NH3 B,H	10/24/2014 20:25	JWD
TOC Low Level	2.6	0.5	mg/l	SM-5310B	10/22/2014 11:00	EC
Dissolved TOC	2.7	0.5	mg/l	EPA 415.1	10/22/2014 11:00	EC

Sample # 004

SAMPLE DESCRIPTION: WW-143417 S-3A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/15/2014 @ 09:35

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.24	0.10	mg/l	SM4500-NH3 B,H	10/24/2014 20:25	JWD
TOC Low Level	1.9	0.5	mg/l	SM-5310B	10/22/2014 11:00	EC
Dissolved TOC	1.8	0.5	mg/l	EPA 415.1	10/22/2014 11:00	EC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/17/2014

Work Order #: 1410-23471

Sample # 005

SAMPLE DESCRIPTION: WW-143418 S-2C

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/15/2014 @ 09:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.24	0.10	mg/l	SM4500-NH3 B,H	10/25/2014 9:00	STH
TOC Low Level	1.8	0.5	mg/l	SM-5310B	10/22/2014 11:00	EC
Dissolved TOC	1.7	0.5	mg/l	EPA 415.1	10/22/2014 11:00	EC

Sample # 006

SAMPLE DESCRIPTION: WW-143419 S-6A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/15/2014 @ 10:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.18	0.10	mg/l	SM4500-NH3 B,H	10/25/2014 9:00	STH
TOC Low Level	1.4	0.5	mg/l	SM-5310B	10/22/2014 11:15	EC
Dissolved TOC	1.5	0.5	mg/l	EPA 415.1	10/22/2014 11:15	EC

Sample # 007

SAMPLE DESCRIPTION: WW-143420 S-12

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/15/2014 @ 10:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.22	0.10	mg/l	SM4500-NH3 B,H	10/25/2014 9:00	STH
TOC Low Level	2.0	0.5	mg/l	SM-5310B	10/22/2014 11:15	EC
Dissolved TOC	2.0	0.5	mg/l	EPA 415.1	10/22/2014 11:15	EC

Sample # 008

SAMPLE DESCRIPTION: WW-143421 S-8B

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/15/2014 @ 10:35

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.22	0.10	mg/l	SM4500-NH3 B,H	10/25/2014 9:00	STH
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	10/22/2014 11:15	EC
Dissolved TOC	15	0.5	mg/l	EPA 415.1	10/22/2014 11:15	EC

(L)

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

ww-143414

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/15/14	0845	S-8A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
10/15/14	0900	S-5B	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

ww-143415

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

R. Dowally 10/15/14 1515

10

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **Eel River SW Sampling -Plymouth MA**
Sampler: Kim Tower (KT)

10-143416

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/15/14	0920	S-4A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
10/15/14	0935	S-3A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
10			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

10-143417

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Kim Tower 10/15/14 1515

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

143418

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/15/14	0945	S-2C	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
10/15/14	1005	S-6A	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

143419

Relinquished By: Date/Time

Received By: Date/Time:

10/15/14 1515

①

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: Eel River SW Sampling -Plymouth MA
Sampler: Kim Tower (KT)

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/15/14	1020	S-12	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4
10/15/14	1035	S-8B	1	1 Liter Plastic	Dissolved ,Chloride	NONE
			1	1 Liter Plastic	TKN, TN, TP	H2SO4
			1	250mL Plastic	Boron	HNO3
			1	250mL Glass	Orthophosphate	NONE
			1	1 Liter Amber	Chlorophyll-a	NONE
			1	250mL Plastic	TOC	H2SO4

Relinquished By: Date/Time

KT

Received By: Date/Time:

KT 10/15/14 1515

(ENVIROTECH)

WW143428

TOC low - S-1L

ENVIROTECH LABORATORIES, INC.**MA CERT. NO.: M-MA 063**

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 02, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: SW Sampling Eel River Plymouth
Project Number: S-8A
Collection Date: 10/15/14 **Collection Time:** 08:45
Sampled By: K Tower
Lab Order Number: WW-143414
Date Received: 10/15/14

Comments:

✓

Sample Type	Sample Time	Sample Date	Comments			
S-8A A	08:45	10/15/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	103	6.0	10/16/14	KB	2540 C
Total Organic Carbon*	mg/L	2.1*	0.5	10/22/14	RIA*	SM 5310 C
Boron	mg/L	0.012	0.010	10/17/14	MC	200.7
Nitrate-N	mg/L	0.20	0.01	10/15/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/15/14	RL	300.0
Ammonia-N *	mg/L	0.10*	0.02	10/29/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.22	0.2	10/27/14	KB	SM4500 NH3 C
Chloride	mg/L	48.4	3.0	10/15/14	RL	300.0
Total Phosphorous (P)	mg/L	0.026	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.22	0.2	10/27/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	2.1*	0.5	10/22/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.30	NA	12/02/14	RL	Calculation
Dissolved Organic Nitrogen	mg/L	0.12	NA	12/02/14	RL	Calculation
Chlorophyll-a	*	3.91*	*	10/17/14	Alpha *	*
Ortho Phosphorous (P)	mg/L	0.013	0.005	10/16/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/02/14	RL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	12/02/14	RL	Calculation
Total Dissolved Nitrogen	mg/L	0.42	NA	12/02/14	RL	Calculation

$$TN = DON(0.12) + PON(0.1) + NH_3(0.10) + NO_2(0.003) + NO_3(0.20) = 0.523$$
$$TN = TKN(0.22) + NO_2(0.003) + NO_3(0.20) = 0.423$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Sauri
Laboratory Director

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

Project Name: GW Eel River

Comments:

Project Number: DW1

Collection Date: 10/20/14 Collection Time: 13:15

Sampled By: Kim Tower

Lab Order Number: WW-143486

Date Received: 10/20/14

Sample Type	Sample Time	Sample Date	Comments			
DW1 A	13:15	10/20/14	**Chloroform			
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	71	6.0	10/22/14	KB	2540 C
Total Organic Carbon*	mg/L	0.58*	0.5	10/22/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	1**	*	10/23/14	RIA*	*
Total Iron	mg/L	0.08	0.01	10/21/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/29/14	RIA*	245.1
Boron	mg/L	0.010	0.010	10/21/14	MC	200.7
Copper	mg/L	BRL	0.003	10/21/14	MC	200.7
Nitrate-N	mg/L	0.97	0.01	10/20/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/20/14	RL	300.0
Ammonia-N *	mg/L	0.12*	0.02	10/29/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/14/14	KB	SM4500 NH3 C
Chloride	mg/L	22.6	3.0	10/20/14	RL	300.0
Total Phosphorous (P)	mg/L	0.011	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/14/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.68*	0.5	10/22/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.09	NA	12/01/14	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.08	NA	12/01/14	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.007	0.005	10/21/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/01/14	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	12/01/14	KB	Calculation
Total Dissolved Nitrogen	mg/L	<1.17	NA	12/01/14	KB	Calculation

$$TN = DON (0.04) + PON (0.1) + NH_3 (0.12) + NO_2 (0.003) + NO_3 (0.97) = 1.233$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
Laboratory Director

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 10/21/2014
Date Reported: 10/31/2014
P.O. #:
Work Order #: 1410-23710

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI LAI00033, MA M-RI015, CT PH-0508, ME RI00015
NH 2537, NY 11726

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:



Sharon Baker
MIS / Data Reporting
enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23710

Sample # 001

SAMPLE DESCRIPTION: WW-143486 DW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/20/2014 @ 13:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.12	0.10	mg/l	SM4500-NH3 B,H	10/29/2014 13:45	STH
TOC Low Level	0.58	0.5	mg/l	SM-5310B	10/22/2014 11:15	EC
Dissolved TOC	0.68	0.5	mg/l	EPA 415.1	10/22/2014 11:15	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Chloroform	1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23710

Sample # 001

SAMPLE DESCRIPTION: WW-143486 DW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/20/2014 @ 13:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
cis-1,3-Dichloropropene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
trans-1,3-Dichloropropylene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	10/23/2014 15:27	KAC
Surrogates			RANGE			
Dibromofluoromethane	103		86-118%	SW-846 8260C	10/23/2014 15:27	KAC
Toluene-d8	97		88-110%	SW-846 8260C	10/23/2014 15:27	KAC
4-Bromofluorobenzene	100		86-115%	SW-846 8260C	10/23/2014 15:27	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260C	10/23/2014 15:27	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/29/2014 13:07	JRW
Mercury Digestion				EPA 245.1	10/29/2014 8:08	OMC

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management
K. Towers/ 11 Lincoln St.
Plymouth, MA

ProjectName: GW Eel River
Project Number: A19
Collection Date: 10/20/14
Sampled By: Kim Tower
Lab Order Number: WW-143487
Date Received: 10/20/14

Comments:

Sample Type	Sample Time	Sample Date	Comments			
A19 A	14:45	10/20/14	**Chloroform			
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	70	6.0	10/22/14	KB	2540 C
Total Organic Carbon*	mg/L	0.53*	0.5	10/22/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	1**	*	10/23/14	RIA*	*
Total Iron	mg/L	0.08	0.01	10/21/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/29/14	RIA*	245.1
Boron	mg/L	BRL	0.010	10/21/14	MC	200.7
Copper	mg/L	BRL	0.003	10/21/14	MC	200.7
Nitrate-N	mg/L	0.98	0.01	10/20/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/20/14	RL	300.0
Ammonia-N *	mg/L	<0.10*	0.02	10/29/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/27/14	KB	SM4500 NH3 C
Chloride	mg/L	22.8	3.0	10/20/14	RL	300.0
Total Phosphorous (P)	mg/L	0.011	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/27/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.61*	0.5	10/22/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.98	NA	12/01/14	KB	Calculation
Dissolved Organic Nitrogen	mg/L	< 0.08	NA	12/01/14	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.008	0.005	10/21/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/01/14	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	12/01/14	KB	Calculation
Total Dissolved Nitrogen	mg/L	<1.18	NA	12/01/14	KB	Calculation

$$TN = DON (0.04) + PON (0.1) + NH_3 (0.01) + NO_2 (0.003) + NO_3 (0.98) = 1.13$$

BRL=below reportable limits

*see attached

By: 
Ronald J. Sauri
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23710

Sample # 002

SAMPLE DESCRIPTION: WW-143487 A19

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/20/2014 @ 14:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.10	0.10	mg/l	SM4500-NH3 B,H	10/29/2014 13:45	STH
TOC Low Level	0.53	0.5	mg/l	SM-5310B	10/22/2014 11:15	EC
Dissolved TOC	0.61	0.5	mg/l	EPA 415.1	10/22/2014 11:15	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Chloroform	1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23710

Sample # 002

SAMPLE DESCRIPTION: WW-143487 A19

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/20/2014 @ 14:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
cis-1,3-Dichloropropene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
trans-1,3-Dichloropropylene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	10/23/2014 15:54	KAC
Surrogates			RANGE			
Dibromofluoromethane	103		86-118%	SW-846 8260C	10/23/2014 15:54	KAC
Toluene-d8	98		88-110%	SW-846 8260C	10/23/2014 15:54	KAC
4-Bromofluorobenzene	102		86-115%	SW-846 8260C	10/23/2014 15:54	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260C	10/23/2014 15:54	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/29/2014 13:10	JRW
Mercury Digestion				EPA 245.1	10/29/2014 8:08	OMC

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: Kim Tower (KT)

hw 143486

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/20/14	1315	DW-1	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN - Total Nitrogen	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, Mercury, TDS	NONE
			1	Glass	Ortho-Phosphate	NONE
10/20/14	1445	A19	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN - Total Nitrogen	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, Mercury, TDS	NONE
			1	Glass	Ortho-Phosphate	NONE

hw-143487

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

R. Lewis 10/20/14 1600

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

Project Name: GW Eel River

Comments:

Project Number: 2SR

Collection Date: 10/21/14 Collection Time: 09:35

Sampled By: Kim Tower

Lab Order Number: WW-143500

Date Received: 10/21/14

Sample Type	Sample Time	Sample Date	Comments			
2SR A	09:35	10/21/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	44	6.0	10/22/14	KB	2540 C
Total Organic Carbon*	mg/L	0.64*	0.5	10/22/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/23/14	RIA*	*
Total Iron	mg/L	0.05	0.01	10/27/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/30/14	RIA*	245.1
Boron	mg/L	0.010	0.010	10/27/14	MC	200.7
Copper	mg/L	BRL	0.003	10/27/14	MC	200.7
Nitrate-N	mg/L	0.87	0.01	10/21/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/21/14	RL	300.0
Ammonia-N *	mg/L	<0.10*	0.02	10/29/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/27/14	KB	SM4500 NH3 C
Chloride	mg/L	12.3	3.0	10/21/14	RL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/27/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.72*	0.5	10/22/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.87	NA	12/01/14	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.10	NA	12/01/14	KB	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	10/21/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/01/14	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.10	NA	12/01/14	KB	Calculation

$$TN = DON(0.05) + PON(0.05) + NH_3(0.01) + NO_2(0.003) + NO_3(0.87) = 0.983$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Satri
Laboratory Director

*Note: updated
report to include
TDN 

ENVIROTECH LABORATORIES, INC.**MA CERT. NO.: M-MA 063**

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Monday, January 12, 2015

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River**Project Number:** 2SR**Comments:****Collection Date:** 10/21/14 **Collection Time:** 09:35**Sampled By:** Kim Tower**Lab Order Number:** WW-143500**Date Received:** 10/21/14

Sample Type	Sample Time	Sample Date	Comments			
2SR A	09:35	10/21/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	44	6.0	10/22/14	KB	2540 C
Total Organic Carbon*	mg/L	0.64*	0.5	10/22/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/23/14	RIA*	*
Total Iron	mg/L	0.05	0.01	10/27/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/30/14	RIA*	245.1
Boron	mg/L	0.010	0.010	10/27/14	MC	200.7
Copper	mg/L	BRL	0.003	10/27/14	MC	200.7
Nitrate-N	mg/L	0.87	0.01	10/21/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/21/14	RL	300.0
Ammonia-N *	mg/L	<0.10*	0.02	10/29/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/27/14	KB	SM4500 NH3 C
Chloride	mg/L	12.3	3.0	10/21/14	RL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/27/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.72*	0.5	10/22/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.87	NA	12/01/14	KB	Calculation
Dissolved Organic Nitrogen	mg/L	<0.10	NA	12/01/14	KB	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	10/21/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/01/14	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.10	NA	12/01/14	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.87	NA	01/12/15	MC	Calculation

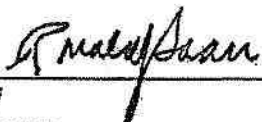
$$TN = DON(0.05) + PON(0.05) + NH_3(0.01) + NO_2(0.003) + NO_3(0.87) =$$

0.983

BRL=below reportable limits

*see attached

By:


Ronald J. Saari
Laboratory Director

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 10/21/2014
Date Reported: 11/3/2014
P.O. #:
Work Order #: 1410-23709

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

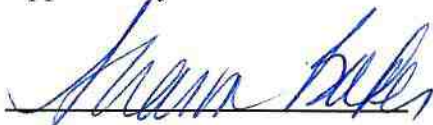
Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI LAI00033, MA M-RI015, CT PH-0508, ME RI00015
NH 2537, NY 11726

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:



Sharon Baker
MIS / Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23709

Sample # 001

SAMPLE DESCRIPTION: WW-143500 2SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2014 @ 09:35

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.10	0.10	mg/l	SM4500-NH3 B,H	10/29/2014 13:45	STH
TOC Low Level	0.64	0.5	mg/l	SM-5310B	10/22/2014 11:15	EC
Dissolved TOC	0.72	0.5	mg/l	EPA 415.1	10/22/2014 11:15	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23709

Sample # 001

SAMPLE DESCRIPTION: WW-143500 2SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2014 @ 09:35

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
cis-1,3-Dichloropropene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
trans-1,3-Dichloropropylene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	10/23/2014 16:21	KAC
Surrogates			RANGE			
Dibromofluoromethane	103		86-118%	SW-846 8260C	10/23/2014 16:21	KAC
Toluene-d8	98		88-110%	SW-846 8260C	10/23/2014 16:21	KAC
4-Bromofluorobenzene	101		86-115%	SW-846 8260C	10/23/2014 16:21	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260C	10/23/2014 16:21	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/30/2014 11:07	JRW
Mercury Digestion				EPA 245.1	10/30/2014 8:24	OMC

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

Project Name: GW Eel River

Comments:

Project Number: 2DR

Collection Date: 10/21/14 **Collection Time:** 10:10

Sampled By: Kim Tower

Lab Order Number: WW-143501

Date Received: 10/21/14

Sample Type	Sample Time	Sample Date	Comments			
2DR A	10:10	10/21/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	107	6.0	10/22/14	KB	2540 C
Total Organic Carbon*	mg/L	1.2*	0.5	10/22/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/23/14	RIA*	*
Total Iron	mg/L	8.37	0.01	10/27/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/30/14	RIA*	245.1
Boron	mg/L	0.024	0.010	10/27/14	MC	200.7
Copper	mg/L	BRL	0.003	10/27/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	10/21/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/21/14	RL	300.0
Ammonia-N *	mg/L	0.19*	0.02	10/29/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/27/14	KB	SM4500 NH3 C
Chloride	mg/L	41.5	3.0	10/21/14	RL	300.0
Total Phosphorous (P)	mg/L	0.062	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/27/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.1*	0.5	10/22/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.19	NA	12/01/14	RL	Calculation
Dissolved Organic Nitrogen	mg/L	ND	NA	12/01/14	RL	Calculation
Ortho Phosphorous (P)	mg/L	0.053	0.005	10/21/14	MC	4500-P
Particulate Organic Carbon	mg/L	0.1	NA	12/01/14	RL	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.01	NA	12/01/14	RL	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	12/01/14	RL	Calculation

$$TN = DON(0.1) + PON(0.05) + NH_3(0.19) + NO_2(0.003) + NO_3(0.005) = 0.348$$

BRL=below reportable limits

*see attached

By: 

Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23709

Sample # 002

SAMPLE DESCRIPTION: WW-143501 2DR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2014 @ 10:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.19	0.10	mg/l	SM4500-NH3 B,H	10/29/2014 13:45	STH
TOC Low Level	1.2	0.5	mg/l	SM-5310B	10/22/2014 11:15	EC
Dissolved TOC	1.1	0.5	mg/l	EPA 415.1	10/22/2014 11:15	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23709

Sample # 002

SAMPLE DESCRIPTION: WW-143501 2DR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2014 @ 10:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
cis-1,3-Dichloropropene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
trans-1,3-Dichloropropylene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	10/23/2014 16:48	KAC
Surrogates			RANGE			
Dibromofluoromethane	102		86-118%	SW-846 8260C	10/23/2014 16:48	KAC
Toluene-d8	94		88-110%	SW-846 8260C	10/23/2014 16:48	KAC
4-Bromofluorobenzene	102		86-115%	SW-846 8260C	10/23/2014 16:48	KAC
1,2 Dichloroethane-d4	102		80-120%	SW-846 8260C	10/23/2014 16:48	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/30/2014 11:10	JRW
Mercury Digestion				EPA 245.1	10/30/2014 8:24	OMC

ENVIROTECH LABORATORIES, INC.**MA CERT. NO.: M-MA 063**

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

Project Name: GW Eel River**Comments:****Project Number:** A21A**Collection Date:** 10/21/14 **Collection Time:** 11:10**Sampled By:** Kim Tower**Lab Order Number:** WW-143502**Date Received:** 10/21/14

Sample Type	Sample Time	Sample Date	Comments			
A21A A	11:10	10/21/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	82	6.0	10/22/14	KB	2540 C
Total Organic Carbon*	mg/L	1.1*	0.5	10/22/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/23/14	RIA*	*
Total Iron	mg/L	1.77	0.01	10/27/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/30/14	RIA*	245.1
Boron	mg/L	0.014	0.010	10/27/14	MC	200.7
Copper	mg/L	BRL	0.003	10/27/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	10/21/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/21/14	RL	300.0
Ammonia-N *	mg/L	0.14*	0.02	10/29/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.31	0.2	10/27/14	KB	SM4500 NH3 C
Chloride	mg/L	30.0	3.0	10/21/14	RL	300.0
Total Phosphorous (P)	mg/L	0.027	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.29	0.2	10/27/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.1*	0.5	10/28/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.14	NA	12/01/14	RL	Calculation
Dissolved Organic Nitrogen	mg/L	0.15	NA	12/01/14	RL	Calculation
Ortho Phosphorous (P)	mg/L	0.034	0.005	10/21/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/01/14	RL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	12/01/14	RL	Calculation
Total Dissolved Nitrogen	mg/L	0.29	NA	12/01/14	RL	Calculation

$$TN = DON(0.15) + PON(0.02) + NH_3(0.14) + NO_2(0.003) + NO_3(0.005) = 0.318$$

BRL=below reportable limits

*see attached

By: Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23709

Sample # 003

SAMPLE DESCRIPTION: WW-143502 A21-A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2014 @ 11:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.14	0.10	mg/l	SM4500-NH3 B,H	10/29/2014 13:45	STH
TOC Low Level	1.1	0.5	mg/l	SM-5310B	10/22/2014 11:15	EC
Dissolved TOC	1.1	0.5	mg/l	EPA 415.1	10/22/2014 11:15	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23709

Sample # 003

SAMPLE DESCRIPTION: WW-143502 A21-A

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2014 @ 11:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
cis-1,3-Dichloropropene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
trans-1,3-Dichloropropylene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	10/23/2014 17:15	KAC
Surrogates			RANGE			
Dibromofluoromethane	103		86-118%	SW-846 8260C	10/23/2014 17:15	KAC
Toluene-d8	97		88-110%	SW-846 8260C	10/23/2014 17:15	KAC
4-Bromofluorobenzene	103		86-115%	SW-846 8260C	10/23/2014 17:15	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260C	10/23/2014 17:15	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/30/2014 11:15	JRW
Mercury Digestion				EPA 245.1	10/30/2014 8:24	OMC

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

Project Name: GW Eel River
Project Number: A15
Collection Date: 10/21/14 **Collection Time:** 13:10
Sampled By: Kim Tower
Lab Order Number: WW-143503
Date Received: 10/21/14

Comments:

Sample Type	Sample Time	Sample Date	Comments			
A15 A	13:10	10/21/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	148	6.0	10/22/14	KB	2540 C
Total Organic Carbon*	mg/L	0.52*	0.5	10/28/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/23/14	RIA*	*
Total Iron	mg/L	0.07	0.01	10/27/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/30/14	RIA*	245.1
Boron	mg/L	0.012	0.010	10/27/14	MC	200.7
Copper	mg/L	BRL	0.003	10/27/14	MC	200.7
Nitrate-N	mg/L	1.40	0.01	10/21/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/21/14	RL	300.0
Ammonia-N *	mg/L	<0.10*-	0.02	10/29/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/30/14	KB	SM4500 NH3 C
Chloride	mg/L	52.1	3.0	10/21/14	RL	300.0
Total Phosphorous (P)	mg/L	0.044	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/30/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.59*	0.5	10/28/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.40	NA	12/01/14	RL	Calculation
Dissolved Organic Nitrogen	mg/L	< 0.10	NA	12/01/14	RL	Calculation
Ortho Phosphorous (P)	mg/L	0.049	0.005	10/21/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/01/14	RL	SM 5310 C
Particulate Organic Nitrogen	mg/L	<0.10	NA	12/01/14	RL	Calculation
Total Dissolved Nitrogen	mg/L	1.40	NA	12/01/14	RL	Calculation

$$TN = DON(0.05) + PON(0.05) + NH_3(0.01) + NO_2(0.003) + NO_3(1.40) = 1.513$$

BRL=below reportable limits

*see attached

By: 
 Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23709

Sample # 004

SAMPLE DESCRIPTION: WW-143503 A15

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2014 @ 13:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	<0.10	0.10	mg/l	SM4500-NH3 B,H	10/29/2014 13:45	STH
TOC Low Level	0.52	0.5	mg/l	SM-5310B	10/28/2014 7:30	EC
Dissolved TOC	0.59	0.5	mg/l	EPA 415.1	10/28/2014 7:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23709

Sample # 004

SAMPLE DESCRIPTION: WW-143503 A15

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2014 @ 13:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
cis-1,3-Dichloropropene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
trans-1,3-Dichloropropylene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	10/23/2014 17:42	KAC
Surrogates			RANGE			
Dibromofluoromethane	102		86-118%	SW-846 8260C	10/23/2014 17:42	KAC
Toluene-d8	97		88-110%	SW-846 8260C	10/23/2014 17:42	KAC
4-Bromofluorobenzene	101		86-115%	SW-846 8260C	10/23/2014 17:42	KAC
1,2 Dichloroethane-d4	101		80-120%	SW-846 8260C	10/23/2014 17:42	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/30/2014 11:21	JRW
Mercury Digestion				EPA 245.1	10/30/2014 8:24	OMC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Date Received: 10/21/2014
Work Order #: 1410-23709

TOC - Dissolved sample was field filtered, analyzed as received by the lab.

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management
 K.Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: GW Eel River
Project Number: 7SR
Collection Date: 10/21/14 **Collection Time:** 14:40
Sampled By: Kim Tower
Lab Order Number: WW-143504
Date Received: 10/21/14

Comments:

Sample Type	Sample Time	Sample Date	Comments			
7SR A	14:40	10/21/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	235	6.0	10/22/14	KB	2540 C
Total Organic Carbon*	mg/L	0.53*	0.5	10/28/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/23/14	RIA*	*
Total Iron	mg/L	0.05	0.01	10/27/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/30/14	RIA*	245.1
Boron	mg/L	BRL	0.010	10/27/14	MC	200.7
Copper	mg/L	BRL	0.003	10/27/14	MC	200.7
Nitrate-N	mg/L	0.09	0.01	10/21/14	RL	300.0
Nitrite-N	mg/L	BRL	0.006	10/21/14	RL	300.0
Ammonia-N *	mg/L	0.64*	0.02	10/29/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.70	0.2	10/30/14	KB	SM4500 NH3 C
Chloride	mg/L	140	3.0	10/22/14	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	10/22/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.69	0.2	10/30/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.60*	0.5	10/28/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.73	NA	12/01/14	KB	Calculation
Dissolved Organic Nitrogen	mg/L	0.05	NA	12/01/14	KB	Calculation
Ortho Phosphorous (P)	mg/L	0.006	0.005	10/21/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/01/14	KB	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.01	NA	12/01/14	KB	Calculation
Total Dissolved Nitrogen	mg/L	0.78	NA	12/01/14	KB	Calculation

$$TN = DON(0.05) + PON(0.01) + NH_3(0.64) + NO_2(0.003) + NO_3(0.09) = 0.793$$

BRL=below reportable limits

*see attached

By:


 Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23709

Sample # 005

SAMPLE DESCRIPTION: WW-143504 7SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2014 @ 14:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.64	0.10	mg/l	SM4500-NH3 B,H	10/29/2014 16:20	WWW
TOC Low Level	0.53	0.5	mg/l	SM-5310B	10/28/2014 7:30	EC
Dissolved TOC	0.60	0.5	mg/l	EPA 415.1	10/28/2014 7:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23709

Sample # 005

SAMPLE DESCRIPTION: WW-143504 7SR

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/21/2014 @ 14:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
cis-1,3-Dichloropropene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
trans-1,3-Dichloropropylene	<0.4	0.4	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	10/23/2014 18:09	KAC
Surrogates			RANGE			
Dibromofluoromethane	103		86-118%	SW-846 8260C	10/23/2014 18:09	KAC
Toluene-d8	97		88-110%	SW-846 8260C	10/23/2014 18:09	KAC
4-Bromofluorobenzene	102		86-115%	SW-846 8260C	10/23/2014 18:09	KAC
1,2 Dichloroethane-d4	100		80-120%	SW-846 8260C	10/23/2014 18:09	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/30/2014 11:24	JRW
Mercury Digestion				EPA 245.1	10/30/2014 8:24	OMC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/21/2014

Work Order #: 1410-23709

TOC - Dissolved sample was field filtered, analyzed as received by the lab.

①

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: Kim Tower (KT)

WW43500

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/21/14	0935	252	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN - Total Nitrogen	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, Mercury, TDS	NONE
			1	Glass	Ortho-Phosphate	NONE
10/21/14	1010	252	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN - Total Nitrogen	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, Mercury, TDS	NONE
			1	Glass	Ortho-Phosphate	NONE

WW43501

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

John G. [Signature] 10/21/14 1530

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody

Client:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: **Kim Tower (KT)**

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/24/14	1110	A21-A	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN - Total Nitrogen	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, Mercury, TDS	NONE
			1	Glass	Ortho-Phosphate	NONE
10/24/14	1310	A15	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN - Total Nitrogen	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, Mercury, TDS	NONE
			1	Glass	Ortho-Phosphate	NONE

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

Michael 10/24/14 1530

①

Chain of Custody

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Client:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: Kim Tower (KT)

661143504

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/21/14	1435P	75R	2	Glass Vial	VOC	HCL
	1440		1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN - Total Nitrogen	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, Mercury, TDS	NONE
			1	Glass	Ortho-Phosphate	NONE
			2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN - Total Nitrogen	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, Mercury, TDS	NONE
			1	Glass	Ortho-Phosphate	NONE

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By:

Date/Time:

[Signature] 10/21/14 1330

ENVIROTECH LABORATORIES, INC.**MA CERT. NO.: M-MA 063**

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

Project Name: GW Eel River**Comments:****Project Number:** A13**Collection Date:** 10/22/14 **Collection Time:** 10:30**Sampled By:** Kim Tower**Lab Order Number:** WW-143522**Date Received:** 10/22/14

Sample Type	Sample Time	Sample Date	Comments			
A-13 A	10:30	10/22/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	285	6.0	10/30/14	KB	2540 C
Total Organic Carbon*	mg/L	1.1*	0.5	10/28/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/27/14	RIA*	*
Total Iron	mg/L	2.32	0.01	10/24/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/31/14	RIA*	245.1
Boron	mg/L	BRL	0.010	10/24/14	MC	200.7
Copper	mg/L	BRL	0.003	10/24/14	MC	200.7
Nitrate-N	mg/L	0.32	0.01	10/22/14	LL	300.0
Nitrite-N	mg/L	BRL	0.006	10/22/14	LL	300.0
Ammonia-N *	mg/L	0.29*	0.02	10/30/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	0.32	0.2	10/30/14	KB	SM4500 NH3 C
Chloride	mg/L	173	3.0	10/22/14	LL	300.0
Total Phosphorous (P)	mg/L	0.015	0.005	10/31/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	0.30	0.2	10/30/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	1.1*	0.5	10/28/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.61	NA	12/01/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	0.01	NA	12/01/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	0.009	0.005	10/23/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/01/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	0.02	NA	12/01/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	0.62	NA	12/01/14	LL	Calculation

$$TN = DON(0.01) + PON(0.02) + NH_3(0.29) + NO_2(0.003) + NO_3(0.32) = 0.643$$

BRL=below reportable limits

*see attached

By:

Ronald J. Sauri
Laboratory Director

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Attn: Mr. Ron Saari
8 Jan Sebastian Drive
Sandwich, MA 02563

Date Received: 10/23/2014
Date Reported: 10/31/2014
P.O. #:
Work Order #: 1410-23933

DESCRIPTION: PLYMOUTH ENV.

Subject sample(s) has/have been analyzed by our Warwick, R.I. laboratory with the attached results.

Reference: All parameters were analyzed by U.S. EPA approved methodologies.
The specific methodologies are listed in the methods column of the Certificate of Analysis.

Data qualifiers (if present) are explained in full at the end of a given sample's analytical results.
The Certificate of Analysis shall not be reproduced except in full, without written approval of R.I. Analytical.
Results relate only to samples submitted to the laboratory for analysis.
Test results are not blank corrected.

Certification #: RI LAI00033, MA M-RI015, CT PH-0508, ME RI00015
NH 2537, NY 11726

If you have any questions regarding this work, or if we may be of further assistance, please contact our customer service department.

Approved by:



Sharon Baker
MIS / Data Reporting

enc: Chain of Custody

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2014

Work Order #: 1410-23933

Sample # 001

SAMPLE DESCRIPTION: WW143522 A13

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2014 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.29	0.02	mg/l	SM4500-NH3 B,H	10/30/2014 17:04	STH
TOC Low Level	1.1	0.5	mg/l	SM-5310B	10/28/2014 7:30	EC
Dissolved TOC	1.1	0.5	mg/l	EPA 415.1	10/28/2014 7:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2014

Work Order #: 1410-23933

Sample # 001

SAMPLE DESCRIPTION: WW143522 A13

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2014 @ 10:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
cis-1,3-Dichloropropene	<0.4	0.4	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
trans-1,3-Dichloropropylene	<0.4	0.4	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	10/27/2014 17:17	KAC
Surrogates			RANGE			
Dibromofluoromethane	100		86-118%	SW-846 8260C	10/27/2014 17:17	KAC
Toluene-d8	102		88-110%	SW-846 8260C	10/27/2014 17:17	KAC
4-Bromofluorobenzene	100		86-115%	SW-846 8260C	10/27/2014 17:17	KAC
1,2 Dichloroethane-d4	99		80-120%	SW-846 8260C	10/27/2014 17:17	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/31/2014 11:25	JRW
Mercury Digestion				EPA 245.1	10/31/2014 8:27	OMC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Date Received: 10/23/2014
Work Order #: 1410-23933

TOC - Dissolved sample was field filtered, analyzed as received by the lab.

ENVIROTECH LABORATORIES, INC.

MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

Project Name: GW Eel River

Comments:

Project Number: GW 1

Collection Date: 10/22/14 **Collection Time:** 11:30

Sampled By: Kim Tower

Lab Order Number: WW-143523

Date Received: 10/22/14

Sample Type	Sample Time	Sample Date	Comments			
GW 1 A	11:30	10/22/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	BRL	6.0	10/30/14	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	10/28/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/27/14	RIA*	*
Total Iron	mg/L	BRL	0.01	10/24/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/31/14	RIA*	245.1
Boron	mg/L	BRL	0.010	10/24/14	MC	200.7
Copper	mg/L	BRL	0.003	10/24/14	MC	200.7
Nitrate-N	mg/L	BRL	0.01	10/22/14	LL	300.0
Nitrite-N	mg/L	BRL	0.006	10/22/14	LL	300.0
Ammonia-N *	mg/L	0.06*	0.02	10/30/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/30/14	KB	SM4500 NH3 C
Chloride	mg/L	BRL	3.0	10/22/14	LL	300.0
Total Phosphorous (P)	mg/L	BRL	0.005	10/31/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/30/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	<0.5*	0.5	10/28/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.06	NA	12/01/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.14	NA	12/01/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	BRL	0.005	10/23/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/01/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	12/01/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.2	NA	12/01/14	LL	Calculation

$$TN = DON(0.07) + PON(0.1) + NH_3(0.06) + NO_2(0.003) + NO_3(0.005) = 0.238$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2014

Work Order #: 1410-23933

Sample # 002

SAMPLE DESCRIPTION: WW143523 OW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2014 @ 11:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.06	0.02	mg/l	SM4500-NH3 B,H	10/30/2014 17:04	STH
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	10/28/2014 7:30	EC
Dissolved TOC	<0.5	0.5	mg/l	EPA 415.1	10/28/2014 7:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2014

Work Order #: 1410-23933

Sample # 002

SAMPLE DESCRIPTION: WW143523 GW-1

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2014 @ 11:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
cis-1,3-Dichloropropene	<0.4	0.4	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
trans-1,3-Dichloropropylene	<0.4	0.4	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	10/27/2014 17:44	KAC
Surrogates			RANGE			
Dibromofluoromethane	101		86-118%	SW-846 8260C	10/27/2014 17:44	KAC
Toluene-d8	102		88-110%	SW-846 8260C	10/27/2014 17:44	KAC
4-Bromofluorobenzene	100		86-115%	SW-846 8260C	10/27/2014 17:44	KAC
1,2 Dichloroethane-d4	98		80-120%	SW-846 8260C	10/27/2014 17:44	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/31/2014 11:28	JRW
Mercury Digestion				EPA 245.1	10/31/2014 8:27	OMC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Date Received: 10/23/2014
Work Order #: 1410-23933

TOC - Dissolved sample was field filtered, analyzed as received by the lab.

ENVIROTECH LABORATORIES, INC.
MA CERT. NO.: M-MA 063

8 Jan Sebastian Drive
 Sandwich, MA 02563
 (508)888-6460 1-800-339-6460
 FAX (508)888-6446

Tuesday, December 16, 2014

Plymouth Environmental Management
 K. Towers/ 11 Lincoln St.
 Plymouth, MA

ProjectName: GW Eel River
Project Number: A17
Collection Date: 10/22/14
Sampled By: Kim Tower
Lab Order Number: WW-143524
Date Received: 10/22/14

Comments:

Sample Type	Sample Time	Sample Date	Comments			
A 17 A	12:50	10/22/14				
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Total Dissolved Solids	mg/L	238	6.0	10/30/14	KB	2540 C
Total Organic Carbon*	mg/L	<0.5*	0.5	10/28/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	ND*	*	10/27/14	RIA*	*
Total Iron	mg/L	0.05	0.01	10/24/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/31/14	RIA*	245.1
Boron	mg/L	BRL	0.010	10/24/14	MC	200.7
Copper	mg/L	BRL	0.003	10/24/14	MC	200.7
Nitrate-N	mg/L	1.3	0.01	10/22/14	LL	300.0
Nitrite-N	mg/L	BRL	0.006	10/22/14	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	10/30/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/30/14	KB	SM4500 NH3 C
Chloride	mg/L	107	3.0	10/24/14	LL	300.0
Total Phosphorous (P)	mg/L	0.009	0.005	10/31/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/30/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.5*	0.5	10/28/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	1.33	NA	12/01/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.17	NA	12/01/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	0.007	0.005	10/23/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/01/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	12/01/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<1.5	NA	12/01/14	LL	Calculation

$$TN = DON(0.085) + PON(0.1) + NH_3(0.03) + NO_2(0.003) + NO_3(1.3) = 1.518$$

BRL=below reportable limits

*see attached

By:


 Ronald J. Saari
 Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2014

Work Order #: 1410-23933

Sample # 003

SAMPLE DESCRIPTION: WW143524 A-17

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2014 @ 12:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,H	10/30/2014 17:04	STH
TOC Low Level	<0.5	0.5	mg/l	SM-5310B	10/28/2014 7:30	EC
Dissolved TOC	0.5	0.5	mg/l	EPA 415.1	10/28/2014 7:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Chloroform	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2014

Work Order #: 1410-23933

Sample # 003

SAMPLE DESCRIPTION: WW143524 A-17

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2014 @ 12:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
cis-1,3-Dichloropropene	<0.4	0.4	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
trans-1,3-Dichloropropylene	<0.4	0.4	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	10/27/2014 18:12	KAC
Surrogates			RANGE			
Dibromofluoromethane	101		86-118%	SW-846 8260C	10/27/2014 18:12	KAC
Toluene-d8	101		88-110%	SW-846 8260C	10/27/2014 18:12	KAC
4-Bromofluorobenzene	100		86-115%	SW-846 8260C	10/27/2014 18:12	KAC
1,2 Dichloroethane-d4	99		80-120%	SW-846 8260C	10/27/2014 18:12	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/31/2014 11:31	JRW
Mercury Digestion				EPA 245.1	10/31/2014 8:27	OMC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Date Received: 10/23/2014
Work Order #: 1410-23933

TOC - Dissolved sample was field filtered, analyzed as received by the lab.

ENVIROTECH LABORATORIES, INC.**MA CERT. NO.: M-MA 063**

8 Jan Sebastian Drive
Sandwich, MA 02563
(508)888-6460 1-800-339-6460
FAX (508)888-6446

Wednesday, December 17, 2014

Plymouth Environmental Management

K. Towers/ 11 Lincoln St.

Plymouth, MA

ProjectName: GW Eel River**Comments:****Project Number:** 5S**Collection Date:** 10/22/14 **Collection Time:** 14:30**Sampled By:** Kim Tower**Lab Order Number:** WW-143525**Date Received:** 10/22/14

Sample Type	Sample Time	Sample Date	Comments			
5S A	14:30	10/22/14	**Chloroform			
Parameters	Units	Test Results	Reportable Limits	Date Analyzed	Analyst	Method
Nitrite-N	mg/L	BRL	0.006	10/22/14	LL	300.0
Total Dissolved Solids	mg/L	986	6.0	10/30/14	KB	2540 C
Total Organic Carbon*	mg/L	0.68*	0.5	10/28/14	RIA*	SM 5310 C
Volatile Organic Compounds*	ug/L	3**	*	10/27/14	RIA*	*
Total Iron	mg/L	1.40	0.01	10/24/14	MC	200.7
Mercury*	mg/L	<0.0005*	0.0005	10/31/14	RIA*	245.1
Boron	mg/L	BRL	0.010	10/24/14	MC	200.7
Copper	mg/L	BRL	0.003	10/24/14	MC	200.7
Nitrate-N	mg/L	0.39	0.01	10/22/14	LL	300.0
Ammonia-N *	mg/L	0.03*	0.02	10/30/14	RIA*	SM4500 NH3 C
Total Kjeldhal Nitrogen	mg/L	BRL	0.2	10/30/14	KB	SM4500 NH3 C
Chloride	mg/L	595	3.0	10/22/14	LL	300.0
Total Phosphorous (P)	mg/L	0.029	0.005	10/31/14	MC	4500-P
Dissolved Kjeldhal Nitrogen	mg/L	BRL	0.2	10/30/14	KB	SM4500 NH3 C
Dissolved Total Organic Carbon	mg/L	0.77*	0.5	10/28/14	RIA*	EPA 415.1
Dissolved Inorganic Nitrogen	mg/L	0.42	NA	12/01/14	LL	Calculation
Dissolved Organic Nitrogen	mg/L	<0.17	NA	12/01/14	LL	Calculation
Ortho Phosphorous (P)	mg/L	0.028	0.005	10/23/14	MC	4500-P
Particulate Organic Carbon	mg/L	ND	NA	12/01/14	LL	SM 5310 C
Particulate Organic Nitrogen	mg/L	ND	NA	12/01/14	LL	Calculation
Total Dissolved Nitrogen	mg/L	<0.59	NA	12/01/14	LL	Calculation

$$TN = DON(0.085) + PON(0.1) + NH_3(0.03) + NO_2(0.003) + NO_3(0.39) = 0.608$$

BRL=below reportable limits

*see attached

By:

Ronald J. Saari
Laboratory Director

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2014

Work Order #: 1410-23933

Sample # 004

SAMPLE DESCRIPTION: WW143525 5S

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2014 @ 14:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Ammonia (as N)	0.03	0.02	mg/l	SM4500-NH3 B,H	10/30/2014 17:04	STH
TOC Low Level	0.68	0.5	mg/l	SM-5310B	10/28/2014 7:30	EC
Dissolved TOC	0.77	0.5	mg/l	EPA 415.1	10/28/2014 7:30	EC
Volatile Organic Compounds						
Benzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Bromobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Bromochloromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Bromodichloromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Bromoform	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Bromomethane	<5	5	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
n-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Sec-butylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
tert-Butylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Carbon Tetrachloride	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Chlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Chloroethane	<5	5	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Chloroform	3	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Chloromethane	<5	5	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
2-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
4-Chlorotoluene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Dibromochloromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,2-Dibromo-3-Chloropropane	<2	2	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,2-Dibromoethane(EDB)	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Dibromomethane	<2	2	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,2-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,3-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,4-Dichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Dichlorodifluoromethane	<5	5	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,1-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,2-Dichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,1-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
cis-1,2-Dichloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
trans-1,2-Dichloroethylene	<2	2	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,3-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
2,2-Dichloropropane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,1-Dichloropropene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,3-Dichloropropene (total)	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Ethylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Hexachlorobutadiene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Isopropylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.

Date Received: 10/23/2014

Work Order #: 1410-23933

Sample # 004

SAMPLE DESCRIPTION: WW143525 SS

SAMPLE TYPE: GRAB

SAMPLE DATE/TIME: 10/22/2014 @ 14:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
p-Isopropyltoluene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Methylene Chloride	<5	5	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Naphthalene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
n-Propylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Styrene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,1,1,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,1,2,2-Tetrachloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Tetrachloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Toluene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,2,3-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,2,4-Trichlorobenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,1,1-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,1,2-Trichloroethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Trichloroethene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Trichlorofluoromethane	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,2,3-Trichloropropane	<2	2	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,2,4-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
1,3,5-Trimethylbenzene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Vinyl Chloride	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
o-Xylene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
m,p-Xylene	<1	1	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
MTBE	<2	2	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Carbon Disulfide	<5	5	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Acetone	<10	10	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
2-Butanone(MEK)	<10	10	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
4-Methyl-2-pentanone(MIBK)	<10	10	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
2-Hexanone	<10	10	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
cis-1,3-Dichloropropene	<0.4	0.4	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
trans-1,3-Dichloropropylene	<0.4	0.4	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Vinyl Acetate	<50	50	ug/l	SW-846 8260C	10/27/2014 18:39	KAC
Surrogates			RANGE			
Dibromofluoromethane	101		86-118%	SW-846 8260C	10/27/2014 18:39	KAC
Toluene-d8	101		88-110%	SW-846 8260C	10/27/2014 18:39	KAC
4-Bromofluorobenzene	100		86-115%	SW-846 8260C	10/27/2014 18:39	KAC
1,2 Dichloroethane-d4	98		80-120%	SW-846 8260C	10/27/2014 18:39	KAC
Total Metals						
Mercury	<0.0005	0.0005	mg/l	EPA 245.1	10/31/2014 11:35	JRW
Mercury Digestion				EPA 245.1	10/31/2014 8:27	OMC

R.I. Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

Envirotech Laboratories, Inc.
Date Received: 10/23/2014
Work Order #: 1410-23933

TOC - Dissolved sample was field filtered, analyzed as received by the lab.

Laboratory:

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of CustodyClient:

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: Kim Tower (KT)

①

NW-143522

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/22/14	1030	A13	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN - Total Nitrogen	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, Mercury, TDS	NONE
			1	Glass Plastic	Ortho-Phosphate TOL	NONE H ₂ SO ₄
10/22/14	1130	SW-1	2	Glass Vial	VOC	HCL
		SW-1	1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN - Total Nitrogen	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, Mercury, TDS	NONE
			1	Glass Plastic	Ortho-Phosphate TOL	NONE H ₂ SO ₄

NW-143523

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

R. L. Lally 10/22/14 1545

**Laboratory:**

Envirotech Laboratories, 8 Sebastian Drive, Unit 12, Sandwich Ma 02563
(508) 888-6460

Chain of Custody**Client:**

Town of Plymouth - Department of Marine & Environmental Affairs Attn: Kim Tower
11 Lincoln Street, Plymouth, MA 02360 /508-747-1620 x198, ktower@townhall.plymouth.ma.us
Project Name: **GW Eel River -Plymouth MA**
Sampler: **Kim Tower (KT)**

Date	Time	Sample ID	# bottles	Type bottle	Analysis	Preservative
10/22/14	1250	A17	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN - Total Nitrogen	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, Mercury, TDS	NONE
			1	Glass Plastic	Ortho-Phosphate TOC	NONE H2SO4
10/22/14	1430	55	2	Glass Vial	VOC	HCL
			1	1 Liter Plastic	Dissolved	NONE
			1	1 Liter Plastic	NH ₃ , T-Phosphorus, TKN - Total Nitrogen	H2SO4
			1	Plastic	Boron, NO ₂ , NO ₃ , Chloride, Cu, Iron, Mercury, TDS	NONE
			1	Glass Plastic	Ortho-Phosphate TOC	NONE H2SO4

NOTE: Analysis needed for reporting in lowest detection possible; Total Dissolved Solids, O-Phosphate, Total Phosphate, Ammonia, Nitrate, Nitrite, Total Dissolved Nitrogen, Dissolved Inorganic Nitrogen, Dissolved Organic Nitrogen, Particulate Organic Carbon, Particulate Organic Nitrogen, Boron, Chloride, Copper, Iron, Mercury, VOC

Relinquished By: Date/Time

Kim Tower

Received By: Date/Time:

R. Dewals 10/22/14 1545