Massachusetts Department of Environmental Protection - Drinking Water Program **SOC**

Synthetic Organic Contaminant Report

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: 3213000 City / Town: NORTH READING

PWS Name: North Reading Water Department PWS Class: COM ☒ NTNC ☐ TNC ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information		Date Collected	Collected By
10292	Central St. Andover Comb.	☒ (M)ultiple ☐ (S)ingle	☐ (R)aw ☒ (F)inished	2/27/2013	M. E. Clark

Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below:	
		(1) Reason for Resubmission	(2) Collection Date of Original Sample
☒ RS ☐ SS	☒ Original ☐ Resubmitted ☐ Confirmation	☐ Resample ☐ Reanalysis ☐ Report Correction	

SAMPLE NOTES – (Such as, if a Manifold/Multiple sample, list any sources that were on-line during sample collection).

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: M-MA086 Primary Lab Name: Alpha Analytical Subcontracted? (Y/N) Y

Analytical Methods (List All)	Date Extracted	Date Analyzed	Analysis Lab MA Cert#	Analysis Lab Name	Lab Sample ID#
EPA 504.1	3/5/2013	3/6/2013	M-NH003	Granite State Analytical	1302-633-1
EPA 505	3/5/2013	3/6/2013	M-NH003	Granite State Analytical	1302-633-1
EPA 515.3	3/7/2013	3/8/2013	M-NH003	Granite State Analytical	1302-633-1
EPA 525.2	3/5/2013	3/6/2013	M-NH003	Granite State Analytical	1302-633-1
EPA 531.1	3/4/2013	3/5/2013	M-NH003	Granite State Analytical	1302-633-1

Was this Sample composited by the Lab?	COMPOSITE SAMPLE NOTES - Please list the composited sources by DEP Source Code (XXXXXXX-XXX), up to five individual sources.
☐	

LAB SAMPLE NOTES - Information on matrix spike/method blank sample information is on file at our office.

Alpha Job L1303340

CAS #	SOC Regulated Contaminants	Result µg/L	MCL µg/L	MDL µg/L	Analytical Method
1563-66-2	CARBOFURAN	ND	40	0.9	EPA 531.1
23135-22-0	OXAMYL (VYDATE)	ND	200	1	EPA 531.1
94-75-7	2,4-D	ND	70	1	EPA 515.3
93-72-1	2,4,5-TP (SILVEX)	ND	50	0.25	EPA 515.3
75-99-0	DALAPON	ND	200	1	EPA 515.3
88-85-7	DINOSEB	ND	7	0.5	EPA 515.3
1918-02-1	PICLORAM	ND	500	1.3	EPA 515.3
87-86-5	PENTACHLOROPHENOL	ND	1	0.1	EPA 515.3
15972-60-8	ALACHLOR	ND	2	0.1	EPA 525.2
1912-24-9	ATRAZINE	ND	3	0.1	EPA 525.2
72-20-80	ENDRIN	ND	2	0.1	EPA 525.2
76-44-8	HEPTACHLOR	ND	0.4	0.04	EPA 525.2
1024-57-3	HEPTACHLOR EPOXIDE	ND	0.2	0.06	EPA 525.2
58-89-9	LINDANE	ND	0.2	0.07	EPA 525.2
72-43-5	METHOXYCHLOR	ND	40	0.1	EPA 525.2
118-74-1	HEXACHLOROBENZENE	ND	1	0.1	EPA 525.2
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	50	0.1	EPA 525.2
122-34-9	SIMAZINE	ND	4	0.1	EPA 525.2
50-32-8	BENZO(A)PYRENE	ND	0.2	0.1	EPA 525.2
103-23-1	DI(2-ETHYLHEXYL)ADIPATE	ND	400	0.6	EPA 525.2
117-81-7	DI(2-ETHYLHEXYL)PHTHALATE	ND	6	3	EPA 525.2

Massachusetts Department of Environmental Protection - Drinking Water Program **SOC**

Synthetic Organic Contaminant Report

PWS ID#: 3213000 Lab Sample ID#: 1302-633-1

CAS #	SOC Regulated Contaminants	Result µg/L	MCL µg/L	MDL µg/L	Analytical Method
57-74-9	CHLORDANE	ND	2	0.2	EPA 505
8001-35-2	TOXAPHENE	ND	3	1.0	EPA 505
12674-11-2	PCB AROCLOR 1016	ND	---	0.2	EPA 505
11104-28-2	PCB AROCLOR 1221	ND	---	0.2	EPA 505
11141-16-5	PCB AROCLOR 1232	ND	---	0.2	EPA 505
53469-21-9	PCB AROCLOR 1242	ND	---	0.2	EPA 505
12672-29-6	PCB AROCLOR 1248	ND	---	0.2	EPA 505
11097-69-1	PCB AROCLOR 1254	ND	---	0.2	EPA 505
11096-82-5	PCB AROCLOR 1260	ND	---	0.2	EPA 505
1336-36-3	PCBS (DECACHLOROBIPHENYL)		0.5		
	Monitoring requirements for DBCP and EDB have been waived statewide for SURFACE WATER SOURCES ONLY. All groundwater sources must monitor for these two contaminants.				
96-12-8	DIBROMOCHLOROPROPANE (DBCP)	ND	0.2	0.02	EPA 504.1
106-93-4	ETHYLENEDIBROMIDE (EDB)	ND	0.02	0.02	EPA 504.1
	Monitoring requirements for the following four contaminants have been waived statewide for both groundwater and surface water sources, however monitoring and reporting for Diquat is required for surface waters that have applied Diquat.				
85-00-7	DIQUAT		20		
145-73-3	ENDOTHALL		100		
1071-83-6	GLYPHOSATE		700		
1746-01-6	2,3,7,8-TCDD (DIOXIN)		$3.0x10^{-5}$		

CAS#	SOC Unregulated Contaminants	Result µg/L	ORSG µg/L	MDL µg/L	Analytical Method
116-06-3	ALDICARB	ND	3*	1	EPA 531.1
1646-88-4	ALDICARB SULFONE	ND	2*	1	EPA 531.1
1646-87-3	ALDICARB SULFOXIDE	ND	4*	1	EPA 531.1
63-25-2	CARBARYL	ND	---	1	EPA 531.1
16655-82-6	3-HYDROXYCARBOFURAN	ND	---	1	EPA 531.1
16752-77-5	METHOMYL	ND	---	1	EPA 531.1
1918-00-9	DICAMBA	ND	---	0.18	EPA 515.3
309-00-2	ALDRIN	ND	---	0.1	EPA 525.2
23184-66-9	BUTACHLOR	ND	---	0.1	EPA 525.2
60-57-1	DIELDRIN	ND	---	0.04	EPA 525.2
51218-45-2	METOLACHLOR	ND	---	0.1	EPA 525.2
21087-64-9	METRIBUZIN	ND	100*	0.1	EPA 525.2
1918-16-7	PROPACHLOR	ND	---	0.1	EPA 525.2

* No MCL, however the DEP Office of Research and Standards has established a guideline (ORSG) limit for this contaminant.

Method	Surrogate Name	% Recovery (70 – 130%)
EPA 515.3	2,4-Dichlorophenyl acetic acid	106
EPA 525.2	1,3-Dimethyl-2-nitrobenzene	99
EPA 525.2	Perylene-d12	87
EPA 525.2	Pyrene-d10	99

Method	Surrogate Name	% Recovery (70 – 130%)
EPA 525.2	Triphenylphosphate	122

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature: [signature]

Date: 3/12/13

If not submitting these results electronically, mail TWO copies of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

DEP REVIEW STATUS (Initial & Date)	Review Comments		☐ WQTS Data Entered
☐ Accepted _____ ☐ Disapproved			

Massachusetts Department of Environmental Protection - Drinking Water Program **SOC**

Synthetic Organic Contaminant Report

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PWS ID #: 3213000 City / Town: NORTH READING

PWS Name: North Reading Water Department PWS Class: COM ☒ NTNC ☐ TNC ☐

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information		Date Collected	Collected By
10010	Lakeside Blvd W.T.P.	☒ (M)ultiple ☐ (S)ingle	☐ (R)aw ☒ (F)inished	2/27/2013	M. E. Clark

Routine or Special Sample	Original, Resubmitted or Confirmation Report	If Resubmitted Report, list below: (1) Reason for Resubmission	(2) Collection Date of Original Sample
☒ RS ☐ SS	☒ Original ☐ Resubmitted ☐ Confirmation	☐ Resample ☐ Reanalysis ☐ Report Correction	

SAMPLE NOTES – (Such as, if a Manifold/Multiple sample, list any sources that were on-line during sample collection).

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: M-MA086 Primary Lab Name: Alpha Analytical Subcontracted? (Y/N) Y

Analytical Methods (List All)	Date Extracted	Date Analyzed	Analysis Lab MA Cert#	Analysis Lab Name	Lab Sample ID#
EPA 504.1	3/5/2013	3/6/2013	M-NH003	Granite State Analytical	1302-633-2
EPA 505	3/5/2013	3/6/2013	M-NH003	Granite State Analytical	1302-633-2
EPA 515.3	3/7/2013	3/8/2013	M-NH003	Granite State Analytical	1302-633-2
EPA 525.2	3/5/2013	3/6/2013	M-NH003	Granite State Analytical	1302-633-2
EPA 531.1	3/4/2013	3/5/2013	M-NH003	Granite State Analytical	1302-633-2

Was this Sample composited by the Lab?	COMPOSITE SAMPLE NOTES - Please list the composited sources by DEP Source Code (XXXXXXX-XXX), up to five individual sources.
☐	

LAB SAMPLE NOTES - Information on matrix spike/method blank sample information is on file at our office.

Alpha Job L1303340

CAS #	SOC Regulated Contaminants	Result µg/L	MCL µg/L	MDL µg/L	Analytical Method
1563-66-2	CARBOFURAN	ND	40	0.9	EPA 531.1
23135-22-0	OXAMYL (VYDATE)	ND	200	1	EPA 531.1
94-75-7	2,4-D	ND	70	1	EPA 515.3
93-72-1	2,4,5-TP (SILVEX)	ND	50	0.25	EPA 515.3
75-99-0	DALAPON	ND	200	1	EPA 515.3
88-85-7	DINOSEB	ND	7	0.5	EPA 515.3
1918-02-1	PICLORAM	ND	500	1.3	EPA 515.3
87-86-5	PENTACHLOROPHENOL	ND	1	0.1	EPA 515.3
15972-60-8	ALACHLOR	ND	2	0.1	EPA 525.2
1912-24-9	ATRAZINE	ND	3	0.1	EPA 525.2
72-20-80	ENDRIN	ND	2	0.1	EPA 525.2
76-44-8	HEPTACHLOR	ND	0.4	0.04	EPA 525.2
1024-57-3	HEPTACHLOR EPOXIDE	ND	0.2	0.06	EPA 525.2
58-89-9	LINDANE	ND	0.2	0.07	EPA 525.2
72-43-5	METHOXYCHLOR	ND	40	0.1	EPA 525.2
118-74-1	HEXACHLOROBENZENE	ND	1	0.1	EPA 525.2
77-47-4	HEXACHLOROCYCLOPENTADIENE	ND	50	0.1	EPA 525.2
122-34-9	SIMAZINE	ND	4	0.1	EPA 525.2
50-32-8	BENZO(A)PYRENE	ND	0.2	0.1	EPA 525.2
103-23-1	DI(2-ETHYLHEXYL)ADIPATE	ND	400	0.6	EPA 525.2
117-81-7	DI(2-ETHYLHEXYL)PHTHALATE	ND	6	3	EPA 525.2

Massachusetts Department of Environmental Protection - Drinking Water Program **SOC**

Synthetic Organic Contaminant Report

PWS ID#: 3213000 Lab Sample ID#: 1302-633-2

CAS #	SOC Regulated Contaminants	Result µg/L	MCL µg/L	MDL µg/L	Analytical Method
57-74-9	CHLORDANE	ND	2	0.2	EPA 505
8001-35-2	TOXAPHENE	ND	3	1.0	EPA 505
12674-11-2	PCB AROCLOR 1016	ND	---	0.2	EPA 505
11104-28-2	PCB AROCLOR 1221	ND	---	0.2	EPA 505
11141-16-5	PCB AROCLOR 1232	ND	---	0.2	EPA 505
53469-21-9	PCB AROCLOR 1242	ND	---	0.2	EPA 505
12672-29-6	PCB AROCLOR 1248	ND	---	0.2	EPA 505
11097-69-1	PCB AROCLOR 1254	ND	---	0.2	EPA 505
11096-82-5	PCB AROCLOR 1260	ND	---	0.2	EPA 505
1336-36-3	PCBS (DECACHLOROBIPHENYL)		0.5		
	Monitoring requirements for DBCP and EDB have been waived statewide for SURFACE WATER SOURCES ONLY. All groundwater sources must monitor for these two contaminants.				
96-12-8	DIBROMOCHLOROPROPANE (DBCP)	ND	0.2	0.02	EPA 504.1
106-93-4	ETHYLENEDIBROMIDE (EDB)	ND	0.02	0.02	EPA 504.1
	Monitoring requirements for the following four contaminants have been waived statewide for both groundwater and surface water sources, however monitoring and reporting for Diquat is required for surface waters that have applied Diquat.				
85-00-7	DIQUAT		20		
145-73-3	ENDOTHALL		100		
1071-83-6	GLYPHOSATE		700		
1746-01-6	2,3,7,8-TCDD (DIOXIN)		3.0×10^{-5}		

CAS#	SOC Unregulated Contaminants	Result µg/L	ORSG µg/L	MDL µg/L	Analytical Method
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63-25-2	CARBARYL	ND	---	1	EPA 531.1
16655-82-6	3-HYDROXYCARBOFURAN	ND	---	1	EPA 531.1
16752-77-5	METHOMYL	ND	---	1	EPA 531.1
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51218-45-2	METOLACHLOR	ND	---	0.1	EPA 525.2
21087-64-9	METRIBUZIN	ND	100*	0.1	EPA 525.2
1918-16-7	PROPACHLOR	ND	---	0.1	EPA 525.2

* No MCL, however the DEP Office of Research and Standards has established a guideline (ORSG) limit for this contaminant.

Method	Surrogate Name	% Recovery (70 – 130%)
EPA 515.3	2,4-Dichlorophenyl acetic acid	106
EPA 525.2	1,3-Dimethyl-2-nitrobenzene	99
EPA 525.2	Perylene-d12	90
EPA 525.2	Pyrene-d10	102

Method	Surrogate Name	% Recovery (70 – 130%)
EPA 525.2	Triphenylphosphate	124

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Lab Director Signature: Christopher J Wahlstrom

Date: 3/12/13

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EPA 505	3/5/2013	3/6/2013	M-NH003	Granite State Analytical	1302-633-3
EPA 515.3	3/7/2013	3/8/2013	M-NH003	Granite State Analytical	1302-633-3
EPA 525.2	3/5/2013	3/6/2013	M-NH003	Granite State Analytical	1302-633-3
EPA 531.1	3/4/2013	3/5/2013	M-NH003	Granite State Analytical	1302-633-3

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Alpha Job L1303340

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Massachusetts Department of Environmental Protection - Drinking Water Program **SOC**

Synthetic Organic Contaminant Report

PWS ID#: 3213000 Lab Sample ID#: 1302-633-3

CAS #	SOC Regulated Contaminants	Result µg/L	MCL µg/L	MDL µg/L	Analytical Method
57-74-9	CHLORDANE	ND	2	0.2	EPA 505
8001-35-2	TOXAPHENE	ND	3	1.0	EPA 505
12674-11-2	PCB AROCLOR 1016	ND	---	0.2	EPA 505
11104-28-2	PCB AROCLOR 1221	ND	---	0.2	EPA 505
11141-16-5	PCB AROCLOR 1232	ND	---	0.2	EPA 505
53469-21-9	PCB AROCLOR 1242	ND	---	0.2	EPA 505
12672-29-6	PCB AROCLOR 1248	ND	---	0.2	EPA 505
11097-69-1	PCB AROCLOR 1254	ND	---	0.2	EPA 505
11096-82-5	PCB AROCLOR 1260	ND	---	0.2	EPA 505
1336-36-3	PCBS (DECACHLOROBIPHENYL)		0.5		
	Monitoring requirements for DBCP and EDB have been waived statewide for SURFACE WATER SOURCES ONLY All groundwater sources must monitor for these two contaminants.				
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106-93-4	ETHYLENEDIBROMIDE (EDB)	ND	0.02	0.02	EPA 504.1
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16752-77-5	METHOMYL	ND	---	1	EPA 531.1
1918-00-9	DICAMBA	ND	---	0.18	EPA 515.3
309-00-2	ALDRIN	ND	---	0.1	EPA 525.2
23184-66-9	BUTACHLOR	ND	---	0.1	EPA 525.2
60-57-1	DIELDRIN	ND	---	0.04	EPA 525.2
51218-45-2	METOLACHLOR	ND	---	0.1	EPA 525.2
21087-64-9	METRIBUZIN	ND	100*	0.1	EPA 525.2
1918-16-7	PROPACHLOR	ND	---	0.1	EPA 525.2

* No MCL, however the DEP Office of Research and Standards has established a guideline (ORSG) limit for this contaminant.

Method	Surrogate Name	% Recovery (70 – 130%)
EPA 515.3	2,4-Dichlorophenyl acetic acid	110
EPA 525.2	1,3-Dimethyl-2-nitrobenzene	98
EPA 525.2	Perylene-d12	90
EPA 525.2	Pyrene-d10	106

Method	Surrogate Name	% Recovery (70 – 130%)
EPA 525.2	Triphenylphosphate	128

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge

Primary Lab Director Signature: Christopher J Wahlstedt

Date: 3/12/13

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