



Marine Chemist Service, Inc.

11850 TUG BOAT LANE
NEWPORT NEWS, VA 23606-2527
TEL: (757) 873-0933 · NORFOLK (757) 640-1122
FAX: (757) 873-1074 · NORFOLK (757) 625-5696
www.MarineChemist.com

Credentials	Agency	Scope
Accreditation	AIHA LAP, LLC	<u>Laboratory ID: 100551</u>
	ELLAP	Lead in Paint, Soil, Wipe & Air
	EMLAP	Fungal Direct Examination: Air & Tape
	IHLAP	Asbestos: PCM
		Dust: Gravimetry
		Metals: Air
Accreditation	NIST	<u>Laboratory Code: 200628-0</u>
	NVLAP	Asbestos Bulk: PLM
Virginia Certification	VELAP	<u>Laboratory No: 460257</u>
	TNI	RCRA 8 Metals: TCLP & NPW
		Lead and Copper: Drinking Water
Virginia Laboratory	DGS - DPOR	<u>License No.: 3333 000004</u>
		Asbestos: PLM & PCM

NOTE: Laboratory Credentials cover only to the scopes listed above.

April 5, 2023

Bruce Keener
Queens Lake
234 East Queens Drive
Williamsburg, VA 23185

Reference: Environmental Sampling
Queens Lake
Williamsburg, VA
MCS Job# 23-131A

Dear Mr. Keener,

Please find enclosed the James R. Reed & Associates Laboratory Report of Analysis for the above referenced job site (Report # 23-049279:16). On March 23, 2023, Marine Chemist Service, Inc. collected two environmental water samples (one upstream and one downstream) from Queens Lake. The water samples were analyzed for pH, salinity, Heterotrophic Plate Count (HPC), nitrogen, phosphorous, and Enterococci/E. Coli.

The upstream sample analysis showed the sample to have a pH of 7.98, the salinity was less than 1 part per trillion (ppt), the HPC was 575 colony forming units (CFU) per ml, the total nitrogen was 0.5 mg/L, the total phosphorous was less than 0.1 mg/L, and the Enterococci/E. Coli was 7/308 MPN/100ml. The pH, salinity, and total nitrogen were all within recommended concentrations for freshwater. The total phosphorous is recommended to be below 0.025 mg/L, but the laboratory detection limit is 0.1 mg/L, meaning it may be below the recommended level. The Enterococci/E. Coli levels would be considered as elevated for a recreational freshwater body, as the Virginia average concentration threshold is 126 MPN/100ml. For a nonrecreational freshwater body the Virginia average concentration threshold is 630 MPN/100ml, which Queens Lake is below.

The downstream sample analysis showed the sample to have a pH of 7.92, the salinity was less than 1 part per trillion (ppt), the HPC was 405 colony forming units (CFU) per ml, the total nitrogen was 0.7 mg/L, the total phosphorous was 0.13 mg/L, and the Enterococci/E. Coli was 7/1 MPN/100ml. The pH, salinity, and total nitrogen were all within recommended concentrations for freshwater. The total phosphorous is recommended to be below 0.025 mg/L, and the concentration in the Queens Lake on the day of sampling was 0.13 mg/L, which is elevated. The Enterococci/E. Coli levels would be considered as acceptable for a recreational freshwater body, as the Virginia average concentration threshold is 126 MPN/100ml. For a nonrecreational freshwater body the Virginia average concentration threshold is 630 MPN/100ml, which Queens Lake is below.



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	NVLAP	Asbestos Bulk: PLM
Virginia Certification	VELAP	<u>Laboratory No: 460257</u>
	TNI	RCRA 8 Metals: TCLP & NPW
		Lead and Copper: Drinking Water
Virginia Laboratory	DGS - DPOR	<u>License No.: 3333 000004</u>
		Asbestos: PLM & PCM

NOTE: Laboratory Credentials cover only to the scopes listed above.

Feel free to contact us if you have questions or need additional information.

Sincerely,

Patrick Studley

Patrick Studley, CIH, CSP

REPORT OF ANALYSIS

CLIENT: Marine Chemist Service, Inc.
ATTN: Patrick Studley
ADDRESS: 11850 Tug Boat Lane
Newport News, VA 23606
PHONE: 757-873-0933
EMAIL: mcslab@marinechemist.com

REPORT NO: 23-049279:16
GRAB COLLECTION:
Date: 3/23/2023 Time: 1331
COMPOSITE COLLECTION:
Start Date: Time:
End Date: Time:
SAMPLE RECEIPT:
Date: 3/23/2023 Time: 1444



Special Notes:
LAKE SAMPLE

SAMPLE ID: DOWNSTREAM, PH: 7.92
SAMPLE NO: 23-04927

Parameter	Method Number	JRA QL	Result	Unit	Analyst	Date	Time
Heterotrophic Plate Count	*9215 B	1	405	CFU/ml	SMH	3/23/2023	1605
Total Nitrogen	351.2/353.2	0.5	0.7	mg/L	JMH	3/28/2023	1523
Total Kjeldahl Nitrogen	351.2	0.50	0.74	mg/L	ACS	3/28/2023	0900
Nitrate/Nitrite	353.2	0.06	< 0.06	mg/L	AAH	3/24/2023	1537
Total Phosphorus	365.1	0.10	0.13	mg/L	TNT	3/27/2023	1415
E. Coli-Colilert (mpn)	Colilert	1	1	MPN/100mL	SMH	3/23/2023	1650
Enterococci	Enterolert	1	7	MPN/100mL	SMH	3/23/2023	1635
Salinity	*2520B	1	< 1	ppt	TNM	3/29/2023	1615

NOTES:

JRA Quantification Level is the concentration of the lowest calibration standard above zero with a reliable signal.
Reproduction of this report is not permitted, except in full, without written approval from James R Reed & Associates.
The results on this report relate only to the sample(s) provided for analysis and conform to TNI standards unless otherwise indicated.
Chain of Custody attached.
*SM 2004 (HPC)
VELAP Standards not applicable to Total Nitrogen

RESPECTFULLY SUBMITTED

Elaine Claiborne
Laboratory Director
Date: 04-Apr-23

James R. Reed & Associates
770 Pilot House Drive, Newport News, VA 23606
(757) 873-4703 • Fax: (757) 873-1498

VELAP# 460013
EPA# VA00015



REPORT OF ANALYSIS

CLIENT: Marine Chemist Service, Inc.
ATTN: Patrick Studley
ADDRESS: 11850 Tug Boat Lane
Newport News, VA 23606
PHONE: 757-873-0933
EMAIL: mcslab@marinechemist.com

REPORT NO: 23-049289:16
GRAB COLLECTION:
Date: 3/23/2023 Time: 1355
COMPOSITE COLLECTION:
Start Date: Time:
End Date: Time:
SAMPLE RECEIPT:
Date: 3/23/2023 Time: 1444



Special Notes:
LAKE SAMPLE

SAMPLE ID: UPSTREAM, PH: 7.98
SAMPLE NO: 23-04928

Parameter	Method Number	JRA QL	Result	Unit	Analyst	Date	Time
Heterotrophic Plate Count	*9215 B	1	575	CFU/ml	SMH	3/23/2023	1605
Total Nitrogen	351.2/353.2	0.5	0.5	mg/L	JMH	3/28/2023	1523
Total Kjeldahl Nitrogen	351.2	0.50	0.52	mg/L	ACS	3/28/2023	0900
Nitrate/Nitrite	353.2	0.06	< 0.06	mg/L	AAH	3/24/2023	1537
Total Phosphorus	365.1	0.10	< 0.10	mg/L	TNT	3/27/2023	1415
E. Coli-Colilert (mpn)	Colilert	1	308	MPN/100mL	SMH	3/23/2023	1650
Enterococci	Enterolert	1	7	MPN/100mL	SMH	3/23/2023	1635
Salinity	*2520B	1	< 1	ppt	TNM	3/29/2023	1615

NOTES:

JRA Quantification Level is the concentration of the lowest calibration standard above zero with a reliable signal.

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Chain of Custody attached.

*SM 2004 (HPC)

VELAP Standards not applicable to Total Nitrogen

RESPECTFULLY SUBMITTED

Elaine Claiborne
Laboratory Director

Date: 04-Apr-23

James R. Reed & Associates
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(757) 873-4703 • Fax: (757) 873-1498

VELAP# 460013
EPA# VA00015





CHAIN OF CUSTODY

Chlorine Not Detected

ANALYSIS REQUESTED

ANALYSIS REQUESTED	A	B	C	D	E
Salinity	1				
Total Nitrogen (TKN, NOx)	1,3				
Phosphorus	1,3				
HPC (8-hr. holding time)	1,5				
E. Coli MPN (8-hr. holding time)	1,5				
Enterococci (8-hr. holding time)	1,5				

Bottle I.D.	Preserv.	A	B	C	D	E	Composite				Total # of cont.				
							Sample Type*	Sample Location	Start Date	End Date		Start Time	End Time	Date	Time

Company Name: Marine Chemist Service, Inc. Telephone: 757-873-0933
 Company Contact: Patrick Studley
 Results To: Patrick Studley
 Address: 11850 Tug Boat Lane
 Newport News, VA 23606
 Project ID: Lake Sample

Queens Lake Water Sampling Letter
 MCS-JOB#23-131A-Queens Lake
 Williamsburg VA

*WW= Wastewater, GW = Groundwater, DW - Drinking Water, HW - Hazardous Waste, OTHERS

Sampled By: K. Jan Stanley Date/Time: 3/23/23 1355
 Relinquished By: Byron Stanley Date/Time: 3/23/23 1449
 Received By: Blaine Gowan Date/Time: 3/23/23 1444
 Relinquished By: _____ Date/Time: _____
 Received By: _____ Date/Time: _____

- Preservatives:
- 1 = <6°C
 - 2 = HNO₃
 - 3 = H₂SO₄
 - 4 = NaOH
 - 5 = Na₂S₂O₃
 - 6 = Na₂S₂O₃ + HCl
 - 7 = NaOH + ZnOAc
 - 8 = H₂SO₄ + FAS
 - 9 = NH₄Cl
 - 10 = Ascorbic Acid + HCl
 - 11 = HCl
 - 12 = Zinc Acetate + NaOH

____ for Compliance
 ____ Not for Compliance

Page 1 of 1

Arrival Temp: 5.8 °C

JAMES R. REED and ASSOCIATES (757) 873-4703; FAX (757) 873-1498
 770 Pilot House Drive, Newport News, VA 23606

The Board for Global EHS Credentialing (BGC)

through its vested authority, hereby confirms that

Patrick Gene Studley

has met all requirements of education, experience, and examination, and on-going maintenance set forth through the BGC's American Board of Industrial Hygiene® (ABIH®) credentialing division for re-certification in the Comprehensive Practice of Industrial Hygiene and is thereby conferred the credential of

Certified Industrial Hygienist® (CIH®)

The aforementioned individual is given all rights, privileges, and responsibilities as both a diplomate of the BGC and holder of the CIH credential, provided that the credential is not suspended or revoked, and it is renewed annually. Moreover, the holder must meet all recertification requirements, including the obligation to practice ethically as prescribed by the BGC.



Credential Number: 11321 CP
Award Date: May 31, 2017
Expiration Date: December 1, 2027

Thomas G. Grumbles, CIH, CPPS, FAIHA
Chair of the Board of Directors

Ulric K. Chung, MCS, PhD
Chief Executive Officer and Secretary



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON
08-31-2023

NUMBER
3333000004

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS
ASBESTOS ANALYTICAL LABORATORY LICENSE
PCM PLM



MARINE CHEMIST SERVICE INC
11850 TUG BOAT LANE
NEWPORT NEWS, VA 23606-0000



Demetrios J. Mellis
Demetrios J. Mellis, Director

Status can be verified at <http://www.dpor.virginia.gov>

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)

DPOR COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR ASBESTOS, LEAD, AND HOME INSPECTORS
ASBESTOS ANALYTICAL LABORATORY LICENSE

PCM PLM
NUMBER: 3333000004 EXPIRES: 08-31-2023

MARINE CHEMIST SERVICE INC
11850 TUG BOAT LANE
NEWPORT NEWS, VA 23606-0000



(FOLD)

Status can be verified at <http://www.dpor.virginia.gov>

DPOR-PC (02/2017)



AIHA Laboratory Accreditation Programs, LLC

acknowledges that

Marine Chemist Service, Inc.

11850 Tug Boat Lane, Newport News, VA 23606

Laboratory ID: LAP-100551

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

LABORATORY ACCREDITATION PROGRAMS

- | | | |
|-------------------------------------|-----------------------------------|---------------------------------------|
| <input checked="" type="checkbox"/> | INDUSTRIAL HYGIENE | Accreditation Expires: March 01, 2023 |
| <input checked="" type="checkbox"/> | ENVIRONMENTAL LEAD | Accreditation Expires: March 01, 2023 |
| <input checked="" type="checkbox"/> | ENVIRONMENTAL MICROBIOLOGY | Accreditation Expires: March 01, 2023 |
| <input type="checkbox"/> | FOOD | Accreditation Expires: |
| <input type="checkbox"/> | UNIQUE SCOPES | Accreditation Expires: |

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached Scope of Accreditation. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2017 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached Scope of Accreditation. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Cheryl O. Morton

Cheryl O Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision19: 09/01/2020

Date Issued: 02/01/2021



**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES**



Certifies that

**VA Laboratory ID#: 460257
Marine Chemist Service, Inc.
11850 Tug Boat Lane
Newport News, VA 23606**

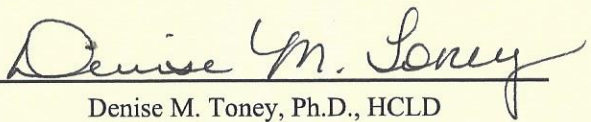
Owner: ROBERT WALKER JR.
Responsible Official: CHARLES G. WALKER

Having met the requirements of 1 VAC 30-46 and
having been found compliant with the 2009 TNI Standard approved by The NELAC Institute
is hereby approved as an

Accredited Environmental Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: **August 12, 2022**
Expiration Date: **December 14, 2022**
Certificate # 12035



Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories

Continued accreditation status depends on successful ongoing participation in the program.
Certificate to be conspicuously displayed at the laboratory.
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP)
Scope of Accreditation.
Customers are urged to verify the laboratory's current accreditation status.