Marine Chemist Association, Inc.

76 Farmholme Road ■ Stonington, CT. 06378
P (860) 599-3079 ■ F (860) 599-3079 ■ dvraff@comcast.net

January 2021

Marine Chemist Association Newsletter

The Marine Chemist Association held an Executive Board meeting via Zoom on January 12, 2021.

A summary of the meeting and a general discussion follows.

Happy New Year to all. As we enter 2021 the MCA continues to confront challenges as we move forward. As everyone knows in 2020 all in person seminars were canceled and a Zoom sectional was held in October 2020. The meeting went much better than the board expected and we received many positive comments. Forty-eight chemists attended, along with a USCG 306 representative and one trainee. One of the significant comments received was that having on-line seminars allows chemists to save time and money by not devoting a full weekend to attending a seminar and also allows them to continue to serve their customers. Your Executive Board will continue to evaluate the various options for seminars going forward but they still believe that some form of in person interaction is very valuable.

The MCA has scheduled two virtual (Zoom) sectional seminars this year, one on March 27th and one on October 23rd. Currently both sectionals will present the same content so if you participate you will receive credit for one sectional in 2021. The topics to be covered will be the various steps involved in issuing a "Safe for Hot Work" certificate. The seminar outline follows.

2021 Sectional Seminar Agenda, March 27, 2021. 0900 EST via Zoom

Incidents, Occurrences and Information. Larry Russell NFPA

Cleaning a tank to meet the Safe for Hot Work Standard Safety Designation (SSD) Joshua Marshall CMC 721

- What cleaning is required to meet the Safe for Hot Work Requirement?
- How are pipelines handled?

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- How are adjacent spaces handled?
- Cleaning perspectives from a cleaning company.

Inspection of a Tank to meet the Safe for Hot Work SSD. Lamar Labauve CMC 576, Retired.

- What does a chemist look for?
- What does a chemist look for in pipelines?
- How do you test pipelines?
- What do you look for in adjacent spaces
- What do you test for (hot work only)

Issuing a Safe for Hot Work Certificate. Guy Colonna, NFPA, Director, Retired.

- What is required on a certificate?
- How do you list the test result?
- Best practices?
- How do you write a good SFHW certificate?

This sectional seminar will start at 0900 EST on March 27th. There is no charge for MCA members or affiliates to attend. Non-members will be charged a $78.00 fee payable on the website, www.marinechemistpaysite.com once payment is made please send an email to dvraff@comcast.net and the information to join will be sent.

While the MCA had hoped to have an in-person annual seminar this year the level of uncertainty involved in scheduling seminars has precluded this. Currently, the MCA is exploring the option of holding a virtual annual seminar. More will be announced as the details are finalized. It is expected that it will involve two four hour days.

NFPA 306

The standard is currently in its revision cycle with a closing date of 6/1/21. Suggested changes to the standard must be submitted via the NFPA website.

https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=306

Remember, the standard undergoes revision every five years. If you are thinking of submitting a comment for consideration now is the time to do it. After June 1st the comments will become public.

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During the annual seminar the proposals will be reviewed so feedback may be provided to your 306 representatives. Your representatives are;

Les Blaize, principal
John Bell, alternate
Greg Grondin, principal
Jim Bruff, alternate

Remember this is your standard and while it takes effort to submit a change proposal, it makes the standard better.

NFPA

The draft hot work training module along with the draft of the revised LNG training module are with the MCQB for comment and review. The intent is to have each of the learning modules posted for use by Marine Chemists and trainees after MCQB meeting in March.

NFPA 301, Fire Protection for Merchant Vessels is out for draft comments. NFPA 350 Guide for Safe Confined Space Entry and Work received no public comment and Larry will poll the committee to see if a second draft meeting is necessary.

The USCG issued a safety alert on bonding and grounding, this was sent out to all chemists and also posted on the MCA website. The NTSB issued a report on maritime incidents including one on cargo pontoons where there was a fire when a Marine Chemist Certificate instructions were not followed.

The NFPA Project Administrator for the Marine Field Service will be on leave from May to August. NFPA will notify chemists who need to recertify during this period and request that they expedite submittal of their applications for recertification before May.

MCQB Report

The board met on 10/25/20 virtually. The next meeting is scheduled to be held virtually on March 24 and 25. There is currently a proposal is to have one virtual meeting per year.

During 2020 one Marine Chemist's Qualification Certificate was revoked; and one other Qualification Certificate was suspended. No further details were made available at this time due to ongoing matters related to each of these actions.

The board asked Larry Russell and Brian Axelrad if any chemist can contact the board with questions, especially on any correspondence that is sent out. They both replied that any Marine Chemist or trainee can contact the MCQB with questions. Those questions should be communicated in writing. They

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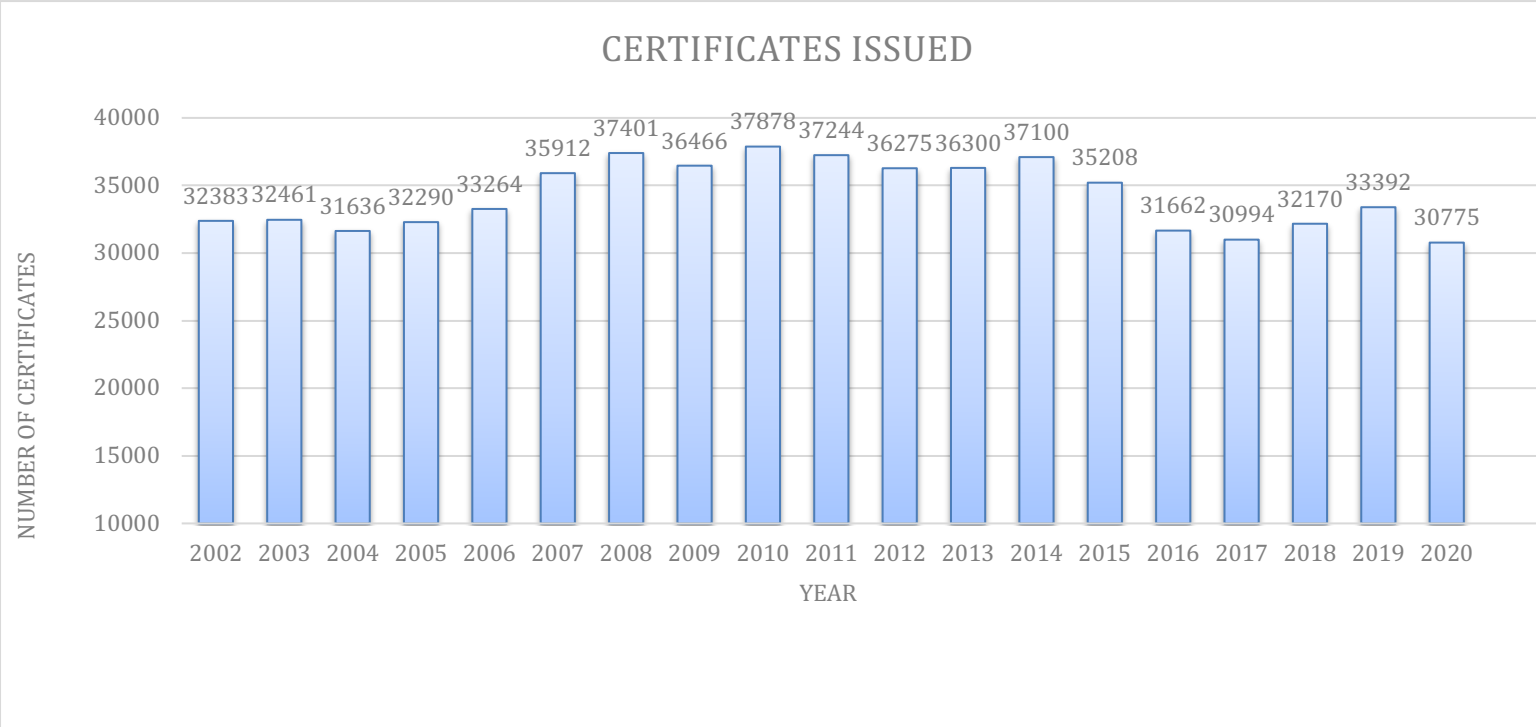
further stated that any Marine Chemist or trainee may request an audience with the MCQB. Such a request and the purpose of the meeting should be communicated to the Board in writing.

Larry emphasized the importance of referencing current requirements on Marine Chemist's Certificates. He noted that EMCC users need to ensure that when using the drop down list, the instructions selected are correct for the purpose of the Marine chemist's Certificate. Some chemists are referencing outdated requirements. (Such as expired editions of 306) You can easily change, modify, add or remove any drop down instruction.

MGHCP and Certificate counts

Currently, there were 29,878 certificates issued in 2020. The projected amount is estimated to be 30,775 which is a lower mark than 2017, our lowest year. The 2019 total was 33392. If this projection is correct it indicated a drop in revenue of roughly 65K. (In 2020 17,666 EMCC certs were issued vs 19,701 in 2019, 519 paper certificate packages of 25 certificates were sent out in 2020 vs 550 in 2019, (this does not mean that they were all issued)

The following chart illustrates the certificates issued since 2002. Please note that the 2020 number is currently only an estimate.



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Executive Board

The current makeup of your executive board is as follows.

As of April 1, 2020		Term Ends
Brian Axelrad	Past Chair	July 2022
Michael Schmidt	Chair	July 2022
Philip Giles	Chair Elect	July 2022
Bryan Berna	Pacific	April 2023
Vince Pempeit	Pacific	April 2022
Tom Govey	Gulf	April 2022
Toby Turcotte	Gulf	April 2023
Peter Raffo	Atlantic	April 2022
Austin Montanti	Atlantic	April 2023

MACOSH – MACOSH's (OSHA's Marine Advisory Committee on Occupational Health and Safety) work has resumed. Amy Liu is representing the MCA and is chair of the shipyard work group. Larry Russell is also on the shipyard committee. Don Raffo is overall chair.

Certificate Reporting - Larry Russell reported that about 24 chemists are delinquent in their monthly reporting making a final count difficult. Please take the time to do your monthly on line reporting. Monthly reporting is done through the following website.
https://groups.nfpa.org/MC/SitePages/Home.aspx

EMCC and Certificates - Any questions on the EMCC program, computer and printer problems should be addressed to Rick Sterling. (sterling.mca@gmail.com

Website - The MCA website (www.marinechemistassociation.com) has been updated. There is a members-only section which requires a log-in. All seminar presentations are on the website. In the members-only section you can view seminar attendance for the past several years. This is one of the most popular areas for chemists. If you have an issue with your log-in you should contact the administrator at support@marinechemistassociation.com
Additionally, the MCA recently purchased www.marinechemistassociation.org. If you visit this site you will be redirected to the current MCA website.
There is a Forum section which only chemists can view. It is an area where news and discussions are posted. If you are registered, you will get a text message whenever there is a new post. This has turned out to be a popular feature on the website. If you have not registered you will not get notifications and must manually enter the site to obtain the latest forum news and posts. We encourage all chemists to join the forum and obtain notifications.

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You will also notice that there is now a link on the website which will allow you to automatically pay for annual dues and seminars at www.marinechemistpaysite.com
You are encouraged to use this new method for payment and registration. Currently about 50% of chemists have paid using the site. At the last meeting the Excom decided to make paying by credit card more attractive by making it $2.00 less than mail-in registration.

Scholarship - The 2021 MCA scholarship application form has been placed on the website. If you have a child or grandchild who meets the criteria please consider having them apply. Applications must be received by May 1st 2021.

SCHOLARSHIP COMMITTEE MEMBERS			
APPOINTMENT DATE	**SECTION**	**MEMBER**	**TERM ENDS**
7/15/2019	**PAST CHAIR**	**BRIAN AXELRAD**	**8/1/2022**
7/15/2019	**ATLANTIC**	**PETER RAFFO**	**3/1/2022**
7/15/2017	**GULF**	**TOM GOVEY**	**3/1/2022**
7/15/2017	**PACIFIC**	**VINCE PEMPIET**	**3/1/2022**
7/15/2017	**MGHCP**	**JOE COX**	**Indefinite**
7/15/2017	**ADMINISTRATOR**	**DON RAFFO**	**NON VOTING**

Seminars
As previously discussed, 2021 seminars will all be virtual.

Draft Schedule for Seminars

Current	2020	2021	2022	2023	2024
March	Atlantic (Canceled)	Pacific (Virtual)	TBD	TBD	TBD
Annual	Pacific (Canceled)	Gulf/Inland (Possible Virtual)	San Antonio	San Francisco	TBD
October	Gulf/Inland (Canceled)	Atlantic (Virtual)	Chicago	TBD	TBD

Outreach
The MCA has developed a trifold pamphlet which can be given out at different events. The trifold was to be presented at each seminar this year. However, due to the pandemic we have not been able to provide copies, but have included a copy below. If you think you have a need for copies please let me know.

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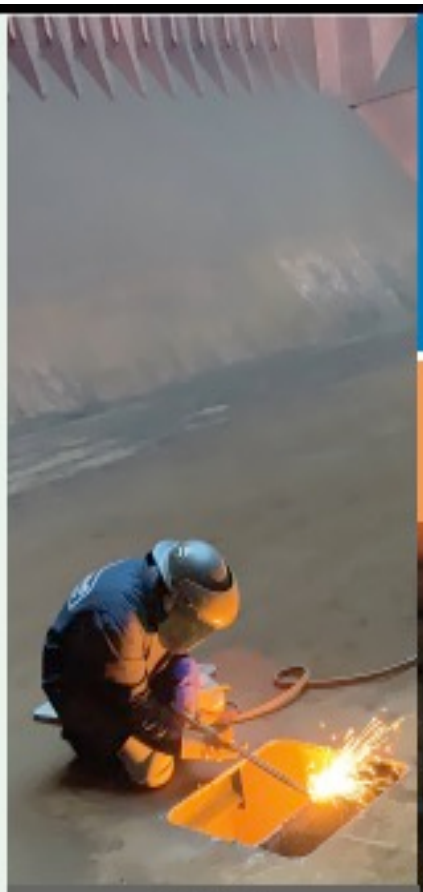
MARINE CHEMIST ASSOCIATION

The Marine Chemist Association, Inc. is an independent professional organization composed of chemists certified by the National Fire Protection Association in accordance with the published rules. It had its origin in May 1938, as the Marine Chemists' Subsection of the NFPA Marine Section. Upon termination of the Marine Section in 1948, the present Association was organized for the following purposes:

(a) To promote the science of, and improve the method of evaluation and eliminating health, fire and explosion hazards in marine and associated industries.

(b) To obtain and circulate information relative to these hazards and other information regarding the professional and ethical activities of its members.

(c) To enhance the general welfare of its members by promoting a closer relationship with all concerned industry and regulatory bodies.



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FIND A CHEMIST
www.marinechemistassociation.com
Click on the "Find a Chemist" tab.

Need a Confined Space Expert?

MARINE CHEMIST ASSOCIATION

Certified Marine Chemists have received extensive training to keep employees and facilities safe from confined space and fire hazards.

Devoted to the development and dissemination of methods for evaluating
And eliminating health, explosion, and fire hazards in marine industries.

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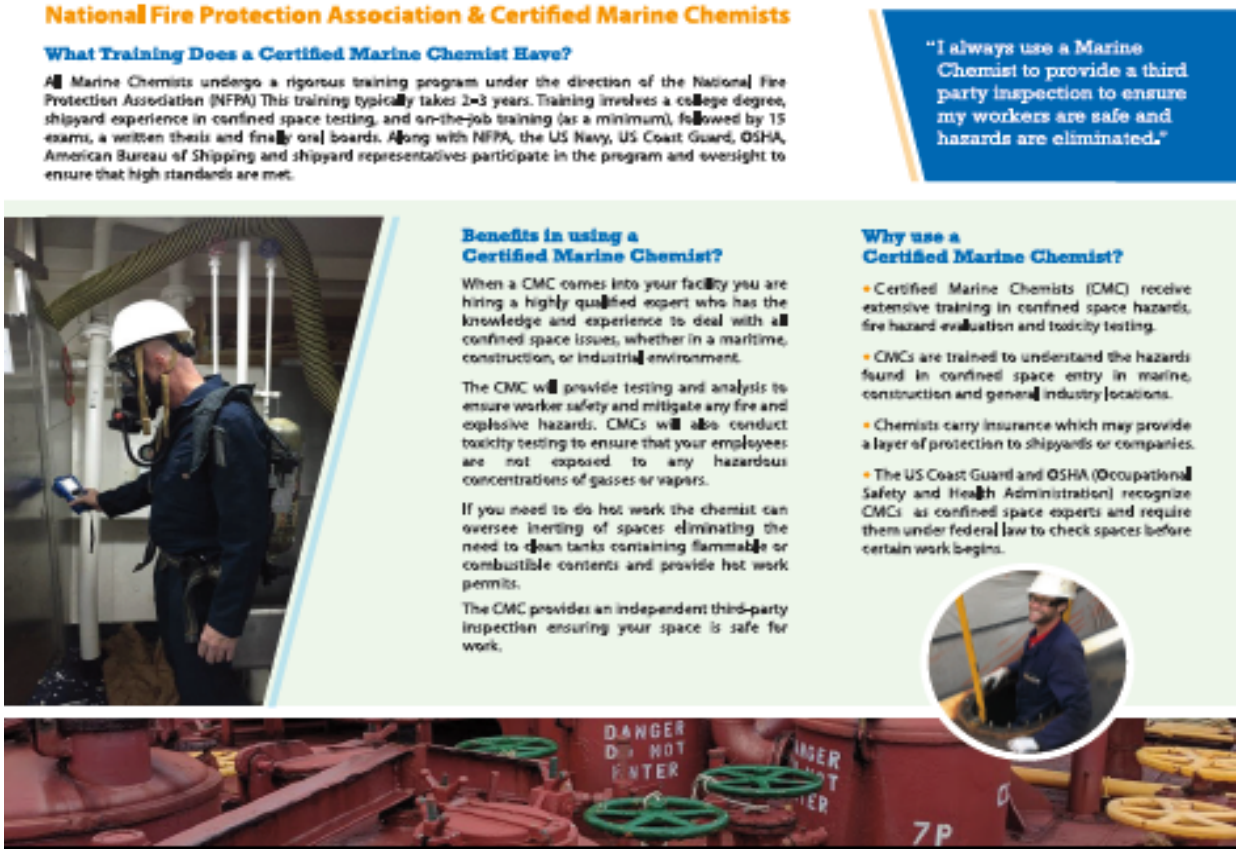

National Fire Protection Association & Certified Marine Chemists

What Training Does a Certified Marine Chemist Have?

All Marine Chemists undergo a rigorous training program under the direction of the National Fire Protection Association (NFPA) This training typically takes 2-3 years. Training involves a college degree, shipyard experience in confined space testing, and on-the-job training (as a minimum), followed by 15 exams, a written thesis and finally oral boards. Along with NFPA, the US Navy, US Coast Guard, OSHA, American Bureau of Shipping and shipyard representatives participate in the program and oversight to ensure that high standards are met.

"I always use a Marine Chemist to provide a third party inspection to ensure my workers are safe and hazards are eliminated."

Benefits in using a Certified Marine Chemist?

When a CMC comes into your facility you are hiring a highly qualified expert who has the knowledge and experience to deal with all confined space issues, whether in a maritime, construction, or industrial environment.

The CMC will provide testing and analysis to ensure worker safety and mitigate any fire and explosive hazards. CMCs will also conduct toxicity testing to ensure that your employees are not exposed to any hazardous concentrations of gasses or vapors.

If you need to do hot work the chemist can oversee inerting of spaces eliminating the need to clean tanks containing flammable or combustible contents and provide hot work permits.

The CMC provides an independent third-party inspection ensuring your space is safe for work.

Why use a Certified Marine Chemist?

- Certified Marine Chemists (CMC) receive extensive training in confined space hazards, fire hazard evaluation and toxicity testing.
- CMCs are trained to understand the hazards found in confined space entry in marine, construction and general industry locations.
- Chemists carry insurance which may provide a layer of protection to shipyards or companies.
- The US Coast Guard and OSHA (Occupational Safety and Health Administration) recognize CMCs as confined space experts and require them under federal law to check spaces before certain work begins.

Nomination Committee

Past Chair Brian Axelrad is currently seeking volunteers for the Chairman-Elect position. Voting will take place in January 2021. If you are interested in this position please contact Brian. Traditionally, an individual from the Gulf/Inland section would fill this position, however it is open to all.

Code of Conduct for Meetings

During any official MCA meeting there should be no discussion of personal matters, private disputes, or business pricing. Discussion should be limited to technical matters and the business of running the MCA.

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Marine Chemist Clothing and Lands' End

The MCA has established a relationship with Lands' End where you can go to their website and purchase any item they offer and have a choice of MCA logos embroidered on it. The clothing is of high quality and they offer a wide selection from shirts to messenger bags, jackets, mugs, pants, etc.
To get to the site enter:
http://ocs.landsend.com/cd/frontdoor?store_name=MARINE_CHEMIST_ASSOCIATION&store_type=3
Once you pick an item you can select from several different logos and then decide where to place it. Many of the items are given as gifts during seminars.

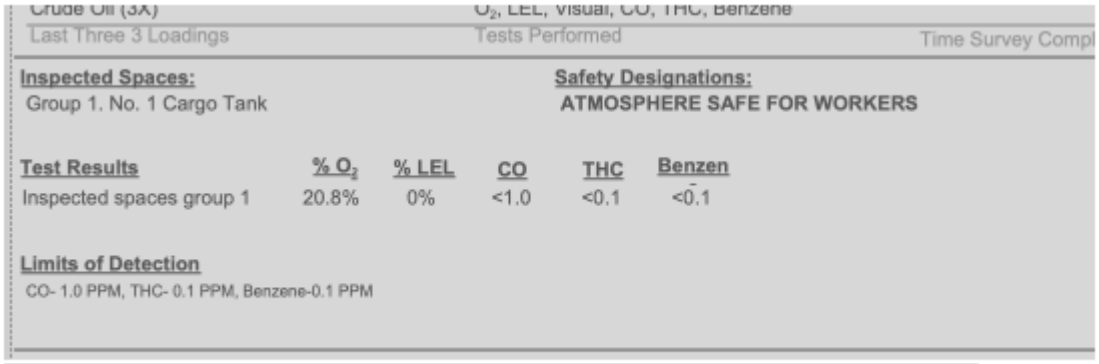
Facebook Page

For those of you who are on Facebook, visit Friends of Marine Chemist Association. It is a closed group and only chemists, spouses and friends may view and post on the page. If you'd like to see the page, send a friend request to the group. We encourage all to post information, photos, comments or anything else related to our profession, seminars, and events. Please check it out. It proved very popular when posting information about our annual seminar. Please consider sharing some on the job photos.

Information on E Certs

One of the common errors seen on most EMCC certificates along with a fix follows.

When issuing certificates that include Benzene readings or when entering readings that require <0.1 PPM. The printed document tends to look like the following:



Crude Oil (3X) — O_2, LEL, Visual, CO, THC, Benzene
Last Three 3 Loadings — Tests Performed — Time Survey Compl

Inspected Spaces:
Group 1. No. 1 Cargo Tank

Safety Designations:
ATMOSPHERE SAFE FOR WORKERS

Test Results	% O_2	% LEL	CO	THC	Benzen
Inspected spaces group 1	20.8%	0%	<1.0	<0.1	<0.1

Limits of Detection
CO- 1.0 PPM, THC- 0.1 PPM, Benzene-0.1 PPM

If you notice the E is left off of Benzene and the readings below are missing the PPM.
This can be easily fixed by doing the following 3 steps before finalizing the EMCC Certificate.

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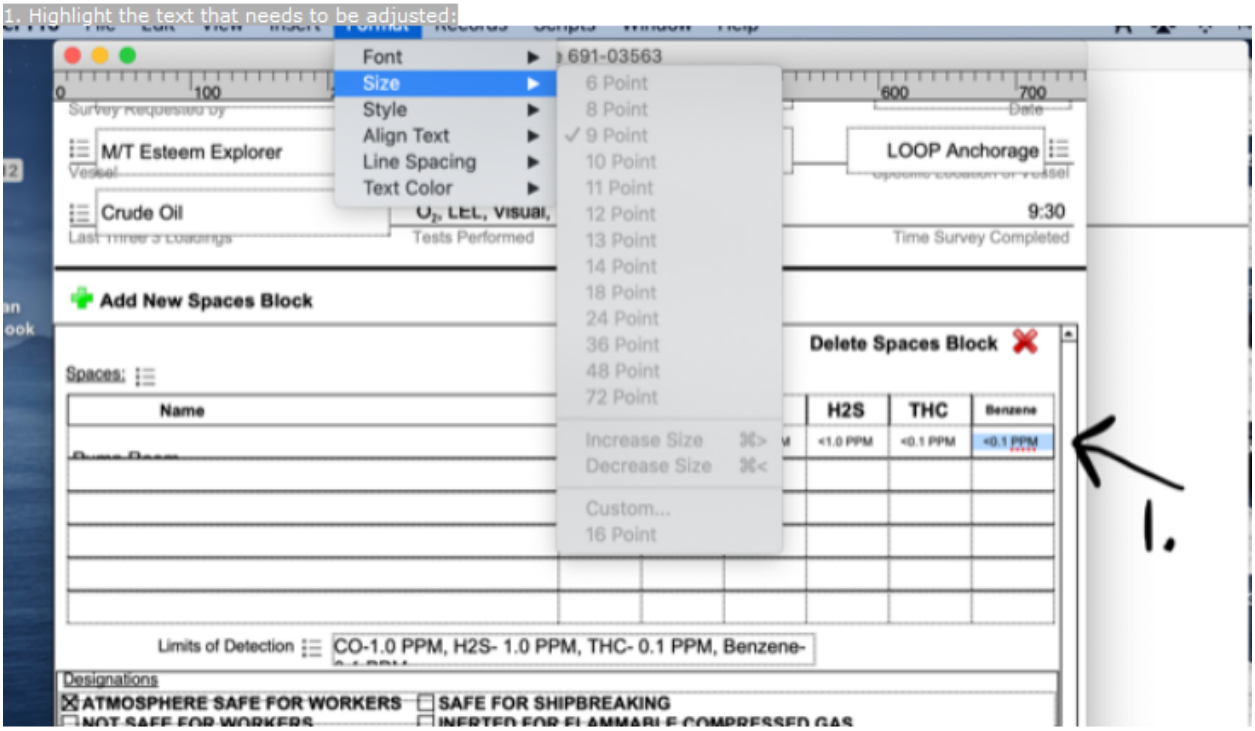
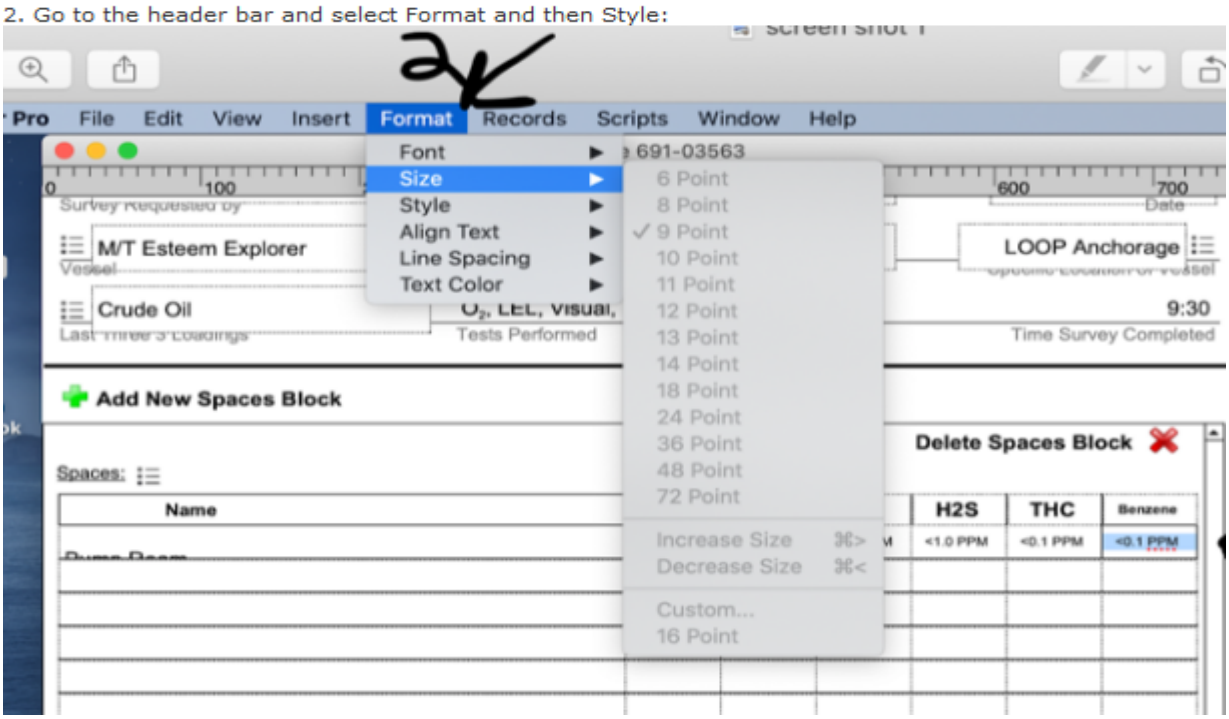
1. Highlight the text that needs to be adjusted:



2. Go to the header bar and select Format and then Style:



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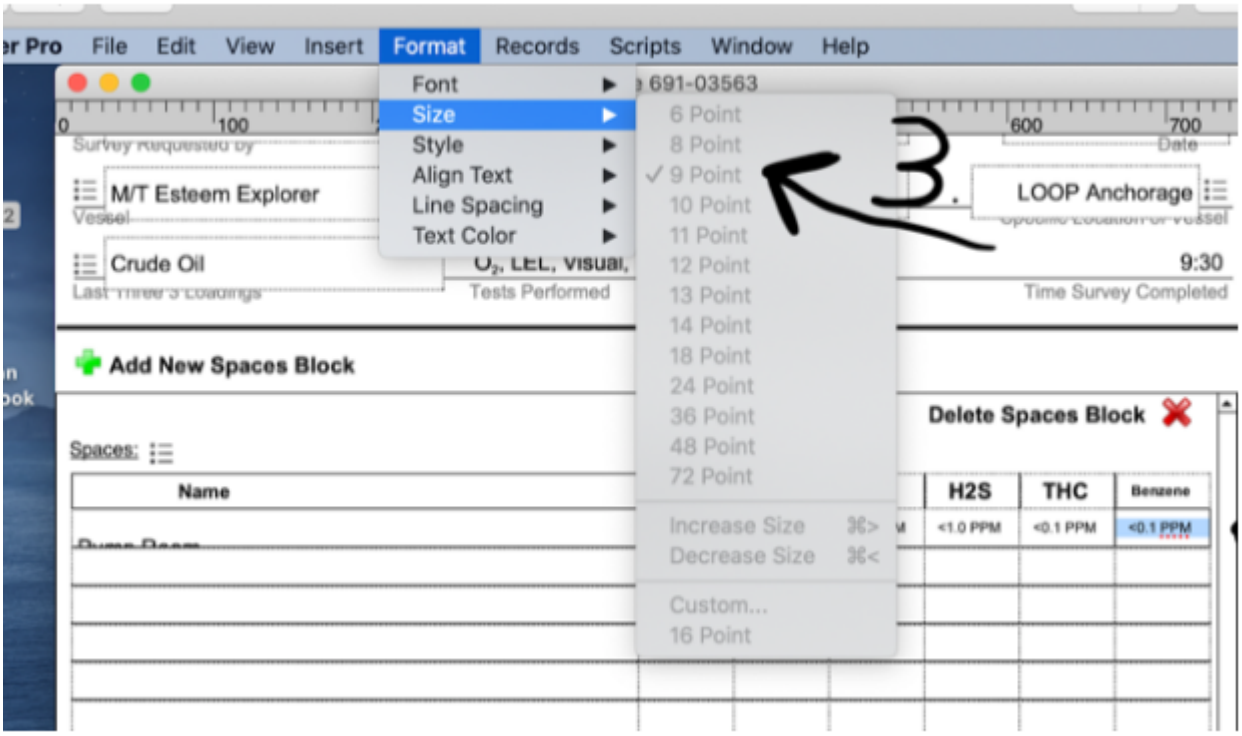
3. Change the Size to 9 point:



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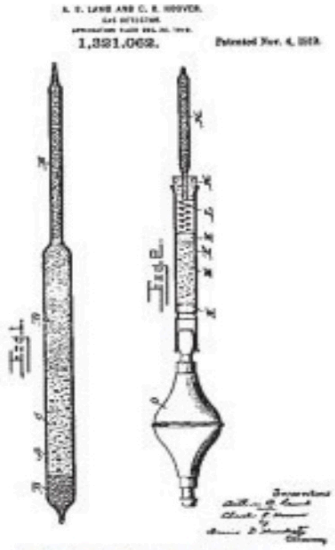
Some History on Drager Tubes from the files of Brian Axelrad

Dräger-Tubes and Applications
Dräger-Tube Measurement

Today, detector tubes are one of the classical measurement techniques of gas analysis. The first detector tube patent appeared in America in 1919. Two Americans, A. B. Lamb and C. R. Hoover, impregnated pumice with a mixture of iodine pentoxide and sulfuric acid. This preparation, which they put in a vial, became the first chemical sensor for measuring or rather detecting carbon monoxide. Before this early detector tube, canaries were used as "sensors" in coal mining.



Patent drawing by Lamb and Hoover

This first detector tube was only used for qualitative detection of the presence of carbon monoxide, quantitative measurement was not yet possible. Today the Dräger-Tubes provide quantitative results with a high degree of accuracy and selectivity. Since the development of the first Dräger-Tube, more than 75 years ago, Dräger has expanded the product line and Dräger-Tubes belong to the traditional products of Dräger.

Gas Sampling Pump 1950

In comparison with the first detector tube patent, the basic shape and structure of a tube may appear not to have changed; however, closer inspection reveals the contents have changed dramatically. What is a Dräger-Tube? Simplistically, it is a vial which contains a chemical preparation that reacts with the measured substance by changing color. To achieve the normal shelf life of 2 years the tube tips are fused at both ends. Thus, the vial provides an inert package for the reagent system. Most of the Dräger-Tubes are scale tubes and it should be emphasized that the length-of-stain discoloration is an indication of the concentration of the measured substance.

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Respectfully submitted,
Don Raffo
Secretary/Treasurer MCA

Any opinions, policies or statements expressed in this newsletter are the personal opinion of the author and do not necessarily represent the official position or policy of the MCA.