NFPA & The Marine Chemist

Annual Marine Chemist Meeting, Albuquerque NM

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Agenda

• History of NFPA & Marine Chemist (MC)
• Organizational structure
• NFPA Standards Development Process
• NFPA Codes, Standards and Guidelines
• What’s Next?
  – Possible Opportunities- Discussion
Global non-profit devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards. Our information and knowledge comes in many forms:

- Support for the development, adoption and enforcement of our codes and standards
- Research and data analysis
- Technical training and certification
- Public education
- Outreach and advocacy

Founded in 1896
6,000 volunteers
300 employees
www.nfpa.org

More than 60,000 members
300 codes and standards
275+ technical code-and-standard-development committees
Offices in the United Arab Emirates, Canada, Mexico, France & China
History

- Early 1900s Organization of National Fire Protection Association (NFPA) Marine Committee
- 1922 Regulations Governing Marine Fire Hazards including Appendix A adopted
- 1922 First 25 Marine Chemists certificated by American Bureau of Shipping (ABS)
- 1947 Appendix A completely revised by NFPA & ABS committee and issued as NFPA 306
- 1959 Department of Labor and the U.S. Coast Guard express concern about shipyard safety
- 1960 The ABS declines proposed increased administrative role...mission and legal liability concerns
- 1963 NFPA assumes responsibility for certificating Marine Chemist
  - Established the Marine Field Service Program
  - Established Marine Gas Hazards Control Fund
- 1967 Regulations for the Organization and Function of the Marine Chemist Qualification Board adopted
History

• 1975 Explosion & Fire on Tank Barge B-924, Greenville MS
  – Killed 4 people & injured two others
  – Property damage of $288K
  – Welding repairs were done on tank barge that was not gas free
• 1975 Marine Chemist Qualification Board (MCQB) reorganized and given more authority
• 1978 Rules for Certification and Recertification of Marine Chemists are revised
• 1979 Marine Gas Hazards Control Program (MGHCP), Incorporated, is established, replacing the Marine Gas Hazards Control Fund of 1963
• 1982 Marine Chemist Training Curriculum published
• 1988 NFPA 306 completely revised
• 1991 Marine Chemist Training Curriculum revised
• 1994 OSHA revises to 29 CFR 1915, Subparts A and B

2011 NFPA introduces the Electronic Marine Chemist’s Certificate (EMCC)
Organizational Structure
Organizational Structure

• Organizational structure
  – NFPA
    • Board of Directors
    • Marine Field Service Specialist
  – Marine Field Service Advisory Committee (MFSAC)
  – Marine Gas Hazards Control Program (MGHCP)
  – Marine Chemist Qualification Board (MCQB)
Organizational Structure
NFPA Board of Directors

The 25 NFPA board members are chosen from various disciplines and backgrounds and are elected based on experience in business, finance, or administration; respect of peers; respect as a member of the safety community; commitment to the Association's goals; and appreciation for the relationship NFPA must maintain with the changing needs of society.

Scope

• The Board of Directors of the NFPA is responsible for the establishment, appointment, administration, and termination of the technical committees that develop the Codes, Standards & Guidelines promulgated by NFPA.
• Appoints the Marine Field Service Advisory Committee (MFSAC)
• Appoints the Marine Chemist Qualification Board (MCQB)
NFPA Field Service Specialist

Yes, that’s Larry Russell…he is the man behind the curtain

As Les says… “It is all his fault…”
NFPA Field Service Specialist

• Reports into NFPA Industrial & Chemical Engineering Division
• Administrator of NFPA Certificated Marine Chemist Program
• Administrator for the NFPA Marine Field Service Program
  – This work includes collaborating and providing outreach to the maritime industry on matters concerning marine facility and marine vessel fire prevention/protection, life safety and chemical hazards safety.
  – Examples: Maritime Confined Space training, API 2001 Technical Committee, USCG Chemical Transportation Advisory Committee (CTAC)
NFPA Field Service Specialist

• On behalf on NFPA, acts as an independent 3rd party facilitator that interacts with all stakeholders and the Federal Government (e.g. OSHA, USCG, US Navy) to advance marine safety.

• Internal Relationships:
  – Deals with NFPA Management 😊

• External Relationships:
  – Marine Field Service Advisory Committee: Executive Secretary
  – MCQB: Executive Secretary
  – External parties: SCA, SAMS, NAMS, AWO, ABS, USCG, MARAD, NSC, IMO
NFPA Administrator

Jill McGovern

- Supports NFPA Field Service Specialist Larry Russell
- MC Program including trainee applicants, initial certifications and re-certifications
- Electronic Forms
- Training Modules
- Monthly Reports
- Marine Chemist Web Master
Organizational Structure
Marine Field Service Advisory Committee (MFSAC)

Scope

This Committee is established to advise and assist the President of the Association in the administration of the Marine Field Service and to facilitate communication between the sponsoring elements of the maritime industry and the management of the Association.

The Committee will consult with the President in the selection and appointment of staff personnel assigned to the Service, will provide advisory assistance to the President in its administration, and will receive periodic reports thereof.

- MFSAC members come from maritime industry associations
- Reviews, approves and monitors the Marine Field Service Budget

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Executive Secretary
*Non-voting Status

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Organizational Structure
Marine Gas Hazards Control Program (MGHCP)

Scope

The Marine Gas Hazards Control Program is an independent, non-profit corporation whose members come from industry trade organizations. The primary function of this group is to administer funds that come from surcharges collected by the marine chemist for each survey conducted.

The surcharges are collected by the Marine chemist from those shipyard operators or owners who directly use their services. The marine chemist then sends on a quarterly basis, the total surcharge collected to the Marine Gas Hazards Control Program.
Organizational Structure
Scope

Scope and purpose- See NFPA Regulations for the Organization & Function of the Marine Chemist Qualification Board. Appointed by the NFPA Board of Directors, the Marine Chemist Qualification Board (MCQB) shall:

1. Establish the Rules for the Certification and Recertification of the Marine Chemists, which shall be adopted by the NFPA Board of Directors.
2. Act on applications for certification and recertification as a Marine Chemist or registration as a trainee.
3. Suspend, cancel or revoke a certificate in accordance with the rules.
4. Renew certificates based on satisfactory compliance with the requirements of the Rules and the MCQB.
NFPA FAQs

• What NFPA can’t do…
  – Directly influence the # of certificates
    • Function of # of repairs, economy etc.
  – Set the price of certificates to support operating budget (MGHCP responsibility)
  – Collect the certificate fees (MGHCP responsibility)
  – Write the Codes & Standards
    • NFPA follows the American National Standards Institute (ANSI) process for the development of voluntary consensus standards
    • NFPA is an independent 3rd party facilitator in the Codes & Standards process
  – Provide Certified Safety Professional (CSP) credit for MC training modules.
    • Note: Training was not developed for general distribution…used for specific & limited purpose only
Other Activities

- Electronic Marine Chemist Certificate (EMCC) program has been outsourced by MGHCP to Rick Sterling
- NFPA Journal Article: 50 Years of NFPA+ Marine Industry, Vigilant Eye
- NFPA IT - Internal review of NFPA IT infrastructure to improve efficiency of marine program
  - Marine Chemist website update
  - FileMaker => SalesForce database
  - On-line monthly reporting
NFPA Standards Development Process
Guiding Principles

• Due process
• Openness
• Lack of dominance
• Seek society’s balance between:
  – Acceptable risk
  – Commitment of resources
Technical Committees

- Balanced “Consensus bodies” TCs
- Typical max size of 30
- ~7,700 Volunteers
- ~278 Technical Committees
- ~300 Codes & Standards
In Summary

- Balanced Consensus Body TCs
- Extensive Public Input & Notification
  - (NFPA News, ANSI Standards Action, Federal Register)
- Steps
  0) New Project Request
  1) Public **Input** (PI) Stage
  2) Public **Comment** (PC) Stage
  3) Annual NFPA Technical Meeting in June
  4) Council Appeals/Issuance of Standard- 3x/year
NFPA Codes, Standards & Guidelines

• **NFPA 306 Standard for the Control of Gas Hazards on Vessels**
  – Current: 2014 Edition
  – 2019 Edition, Chapter 9 will address LNG as cargo & in fuel systems
    …consider getting the LNG endorsement!
  – Status of 2019 Edition
    • Public Comments closed 5/10/2017
    • Second Draft Meeting- TBD
    • Second draft report posting date 1/24/2018

• **NFPA 312 Standard for Fire Protection of Vessels During Construction, Conversion, Repair, and Lay-Up**
  – Current: 2016 Edition
  – Status of 2021 Edition
    • Open for Public Inputs with a closing date is 6/27/2018
NFPA Codes, Standards & Guidelines

- NFPA 51B Standard for Fire Prevention During Welding, Cutting, and Other Hot Work
- NFPA 59A Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)
- NFPA 350 Guide for Safe Confined Space Entry and Work
- NFPA 1005 Standard for Professional Qualifications for Marine Fire Fighting for Land-Based Fire Fighters
- NFPA 1405 Guide for Land-Based Fire Departments that Respond to Marine Vessel Fires
Network…

Connect with your local Fire Department!

Seattle is a great pro-active example

5.9 Marine Chemist’s Certificate. No person shall engage in hot work in or on the spaces listed below until a Certificate setting forth that such work can be done safely is issued. Such Certificates shall be valid only if they are issued by a Marine Chemist certified by the National Fire Protection Association.

A Marine Chemist Certificate shall be required prior to Level II hot work operations on any vessel and hot work in hazardous areas or compartments that are insulated with foam, contain or have contained flammable or combustible vapors, coatings, fuel oils, hydraulic oils, lube oil, waste oil or other petroleum products. Such hazardous areas or compartments may include, but are not limited to:

- Fuel oil tanks and piping systems, including pumps, strainers, vents and its associated appurtenances.
- Hydraulic, lube, slops or waste oil tanks and their associated piping systems.
- Engine rooms, diesel generator rooms, reeler flats, machinery spaces, shaft alleys and steering gear compartments.
- Cargo tanks or compartments that contain or have contained hazardous materials including flammable or combustible gases, liquids or solids.
- Sewage holding tanks and piping systems, including pumps and vents.
- Foam-insulated compartments such as refrigerated cargo holds, fish holds or processing areas not in compliance with Section 6.2.2 of this document.
- Work conducted on refrigeration and/or cooling systems using fluorocarbons or ammonia.
- Work on bulkheads and overheads directly adjacent to those compartments listed above.
Have you joined NFPA’s online community, NFPA Xchange?

- Connect with professionals worldwide
- Ask questions
- Explore content, and more

It’s free & easy. Go to: nfpa.org/Xchange
What’s Next?
Possible Opportunities - Discussion

• Attendance of conferences & tradeshows by NFPA and/or MC
  – Objective: Increase awareness of Marine Chemists
    • National Safety Council (NSC)
    • American Waterways Operators (AWO)
    • Shipbuilders Council of America (SCA)
• Direct mailing to Clients by MCA
  – Challenge: Would need to establish marine mailing list
The Future

Next generation of Marine Chemist

…Caroline the Chemist 😊
Questions
Thank You

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