

**Agenda
Technical Committee
2022 Annual Meeting
Institute of Makers of Explosives
Web Conference
October 26, 2022**

Chairman: Ian McNally (Hilltop Energy)
Vice Chairman: Jason McCann (Baker Hughes, Inc.)

I. CALL TO ORDER

- A. Welcome
- B. Introduction of Participants

II. ANTITRUST AND CVI GUIDELINES

The Chair and counsel will review the IME Antitrust and CVI/SSI Guidelines and advise attendees that the meeting will be conducted in accordance with the provisions of the Guidelines.

III. APPROVAL OF THE MINUTES OF THE PREVIOUS MEETING

The minutes from the prior meeting held May 11, 2022 are posted on the IME member website.

IV. TECHNICAL COMMITTEE REPORT

The Technical Committee Report for the 2022 Annual Meeting, as distributed to the committee prior to the meeting, will be reviewed and any recommendations and/or action items considered.

V. SUBCOMMITTEES & SAFETY LIBRARY

- A. Existing Subcommittees
- B. Activities to be assigned to subcommittees
- C. Subcommittee Assignments
 - 1. Subcommittee Leadership Vacancies –*seek nominations for any current or expected/upcoming vacancies*
 - 2. Members are reminded to review and update their individual subcommittee assignments through the IME website, Member Information System.

VI. NEW BUSINESS

VII. INTERNATIONAL

- A. UN Committee General Updates (*Hoffman*)
- B. IGUS/CIE (*Hsu/Hoffman*)

VIII. LIAISON ASSIGNMENT REPORTS

- A. ANSI A10.7 Committee (Commercial Explosives and Blasting Agents for Construction and Demolition) (*Hoffman/Flanagan*)

B. NFPA Committees

1. IME Representation and Alternates (*Hoffman*)
2. NFPA 780 Lightning Protection (*Hoffman*)
3. NFPA 495 Explosive Materials - Update Electrical Code, Safe Havens, Exploding Targets (*Hoffman*)
4. NFPA 498 Safe Havens and Exchange Lots (*Hoffman*)
5. NFPA 400 (*Hsu/Hoffman*)
6. NFPA 77 Static Electricity (*Hoffman*)

C. American Petroleum Institute (API): RP 67 (*Segura and Clay*)

D. International Society of Explosives Engineers (ISEE) (*Shivak*)

E. Australian Explosives Industry and Safety Group (AEISG) (*Bilman*)

F. SAFEX International (*Halliday/Hsu*)

G. Federation of European Explosives Manufacturers (FEEM) (*Hoffman*)

H. Energy Workforce & Technology Council (EWTC) (*Flanagan*)

I. Canadian Explosives Industry Association (CEAEC) (*Ebsworth/Flanagan*)

J. National Mining Association (NMA) (*Sholler*)

K. National Stone, Sand and Gravel Association (NSSGA) (*Sholler*)

L. National Institute for Explosives Technology (NIXT) (*Hoffman*)

M. Explosives Safety & Technology Society of India (Visfotak) (*Hoffman*)

N. International Fire Code (IFC) (*Hoffman*)

O. EnerGeo Alliance (Formally International Association of Geophysical Contractors (IAGC) (*Vacant*))

IX. NOMINATION OF CHAIR AND VICE CHAIR

X. UNSCHEDULED BUSINESS

XI. ADJOURNMENT

TECHNICAL COMMITTEE REPORT

IME Annual Meeting

October 26, 2022

The Technical Committee shall have the responsibility to evaluate and make recommendations on all technical matters pertaining to safety in the manufacture, transportation, handling, storage, and use of explosive materials. It shall also be responsible for reviewing the IME's safety library publications relating to technical matters and for making recommendations for changes, as appropriate.

SUBCOMMITTEES & SAFETY LIBRARY

The Technical Committee is responsible for 18 subcommittees and one working group. The following describes the responsibilities and activities of those Technical Subcommittees.

SLP-1: *Construction Guide for Storage Magazines* – Chair: John Capers, Vice Chair: Jim Cole

SLP 1 was last revised in October 2017.

SLP-2: *American Table of Distances* – Chair: Bill Joa, Vice Chair: David Zoghby

SLP 2 was last revised in April 2017.

SLP-3: *Suggested Code of Regulations* – Chair: Vacant, Vice Chair: Nicholas Harrington.

SLP 3 was last revised in February 2021.

SLP-4: *Warnings and Instructions* – Chair: Mike Curtis, Vice Chair: Nicholas Harrington

SLP 4 was last revised in October 2016. The SLP is currently under revision.

The SAFEX Newsletter article entitled “Tribunal Hearing on Safety of Mucking under Loaded Holes in Long Hole Mining” which calls for IME to update SLP 4 to distinguish blasting agents and other high explosives prompted the subcommittee to review both the SLP and other IME documents. The subcommittee agreed that in practice blasting agents are handled, stored, and used in very different ways compared to other high explosives and are addressed in other IME documents and SLPs. Based on this the committee has removed Blasting Agents, Slurries, Water gels, and Emulsions from the revised draft of SLP 4.

Since the spring meeting, the subcommittee resolved the final outstanding items in the oilfield services section of the SLP, it was approved by the Technical Committee in August and is currently being reviewed by the Legal Affairs Committee.

SLP-12: *Glossary of Commercial Explosives Industry Terms* – Chair: Mike Curtis, Vice Chair: Nicholas Harrington

SLP 12 was last revised in March 2018.

SLP-17: *Safety in the Transportation, Storage, Handling & Use of Commercial Explosive Materials* – Chair: Bobby Van Rensburg, Vice Chair: Mike Curtis

SLP 17 was last revised in January 2021.

SLP-20: *Safety Guide for Prevention of Radio Frequency Radiation Hazards in the Use of Commercial Electric Detonators* – Chair: Robert McClure, Vice Chair: Seth Burns

The revised SLP 20 draft has been compiled and all changes have been approved by the subcommittee. The revised draft was reviewed by IME's consultant Dr. Leidel and additional edits were identified. Staff is working to compile and format the SLP for approval by the full Committee.

Accident Investigation Subcommittee – Chair: Tim O'Brien, Vice Chair: Vacant
No issues are being addressed by the subcommittee at this time.

AN Module – Chair: Vacant, Vice Chair: Vacant
No issues are being addressed by the subcommittee at this time.

Ammonium Nitrate Subcommittee – Chair: Noel Hsu, Vice Chair: Clint Fritz
The subcommittee is involved with IME's UN efforts on waving Test Series 8(d) for specific Ammonium Nitrate Emulsions. This item is also under the preview of the UN subcommittee. IME's proposal was not accepted during the 60th session of the United Nations TDG Sub-committee and the UN Team is currently developing the next steps to move the initiative forward.

The subcommittee may also be asked to assist with proposing changes to NFPA 400: Hazardous Materials Code. IME successfully convinced the NFPA 400 Technical Committee of the need to revise NFPA 400 to recognize the unique properties of ANEs as it relates to storage. IME will propose edits for the current revision cycle. This is important as members have encountered local authorities who are applying unnecessary and costly NFPA 400 requirements for liquid ammonium nitrate solutions to ANEs.

Electronic Detonators – Chair: Robert McClure, Vice Chair: Joao Roorda
AEISG continues to develop its code of practice on the use of electronic detonators in Australasia, and the handling of misfires is included in its scope.

There remains a tabled issue regarding guidance for radio frequency hazards around electronic detonators. This is in response to requests for wireless equipment manufacturers with products used in mine environments and the fact that SLP 20 explicitly states it does not apply to electronic detonators. IME's current guidance is to refer to manufacturers' recommendations.

IMESA FR

- **IMESA FR Science Panel (Independent of IME)** – Co-Chair: Noel Hsu, Co-Chair: Mike O'Lena (ATF)

The science panel has not met since August 26, 2021. IME is in discussions with the co-chairs to reconvene the panel.

- **IMESA FR Development Team** – Chair: Clint Fritz, Vice Chair: Verlène Lovell

The team has not met since December 2020. The nature of participation has changed under IMESA FR's new funding arrangement and voting participation is now associated with sponsorship of IMESA FR.

- **IMESA FR Sponsors Group** – The group met on May 26 & 27 where a demonstration of IMESA FR version 2.2 was made, probability values were evaluated, and regulatory issues were discussed with ATF and NRCan representatives. IME is a bronze-level sponsor for 2022 and is expected to remain so for 2023. IME has voting rights on the Development Group for future developments of the software.

The release of Version 2.2 is running behind schedule with an initial targeted release of August 2022. It is expected to be released before the user training course in Ottawa, Canada, October 25-28, 2022. An additional full training will be held at APT Research in Huntsville, AL, Nov. 29-Dec. 2. Two opportunities for upgrade webinars for users trained on Version 2.1 are scheduled for half days on November 8 and 9, 2022.

- **IMESA FR Subcommittee** – Chair: Clint Fritz, Vice Chair: Verlene Lovell
P(e) Survey and Frequency – The survey has been completed and all members relevant to the survey have responded. The data has not yet been shared with APT but will be at an undetermined time.

Lightning Response Working Group – Chair: Ed Zinsmeyer, Vice Chair: Brett Lehman

The working group is tasked with developing a publicly available guideline to cover lightning phenomenon, standard lightning protection systems, detection/notification technology, best practices for personnel protection, and recommendations. A second RFP went out to a broader selection of subject matter experts from the Technical Committee for NFPA 780: Standard for the Installation of Lightning Protection Systems with a deadline of October 14, 2022.

Metrics Subcommittee – Chair: Luke Provencher, Vice Chair: Vacant
No SLPs are under review for metric conversion.

MSHA Subcommittee – Chair: Alan Linden, Vice Chair: Mike Curtis

- Regulations Harmonization Project – The draft of the regulatory update document is ready for distribution for comments from similar industries.
- Safety Alert – The next alert to be created by the subcommittee will be on the density and sensitivity of bulk products. IME Staff has been in contact with its companies with gassed products to assess whether sensitivity data exists and the regimes for testing sensitivity.
- MSHA/IME Alliance – No in-person meeting has been held since the alliance was renewed. IME staff and its President virtually met with MSHA's new Secretary, Chris Williamston on May 25, 2022.
- Permissible Explosives – In 2019 MSHA approached IME for assistance in updating their list of approved permissible explosives. As not all products on the list are still being manufactured, or have changed ownership/tradename, MSHA would like to ensure their list is current and accurate. IME has since worked with those members with permissible products to assist in updating the list.

Power Tool – Chair: Seth Burns, Vice Chair: Vacant

The subcommittee maintains that periodic review of the video is necessary to ensure the video stays current and relevant. The chairman is keeping a record noting suggested fixes, additions, etc. which will be reviewed by the subcommittee.

Pumping Water Based Explosives – Chair: Vacant, Vice Chair: Vacant
No issues are being addressed by the subcommittee at this time.

Research Subcommittee – Chair: Tim O’Brien, Vice Chair: Vacant
No issues are being addressed by the subcommittee at this time.

UAV UAS Subcommittee – Chair: Seth Burns, Vice Chair: Ian McNally
No issues are being addressed by the subcommittee at this time.

IME PROJECTS AND PROGRAMS

Lawrence Livermore National Laboratory – CRADA for Information Sharing, Substitutions, AN Modeling – This project has been on hold pending an evaluation of if it supports IME’s strategic goals. An invitation to tour LLNL to learn of its capabilities has been extended to IME’s new president.

Blasting Incident Reports – Two of the participating companies have outstanding data requests for various quarters of 2021. Requests for 2022 information have been sent to all companies.

Explosives Consumption "Tonnage" Report – The data for 2020 was provided to USGS for its annual consumption report. Collection for 2021 is underway.

Harmonization of Lock Standards within SLPs – It is IME’s current stance that any recommendations for lock requirements and standards be included directly in SLPs and not advocated for in the regulation.

Commercial Explosives Recognition Program (Inert Training Aids) – As of October 2022 one Safety Training Kit was sold, and one custom order was filled from existing inventory. IME staff will be reviewing the content of the kit to ensure its well representative of IME members’ products, and useful to the training community.

INTERNATIONAL

UN Committee

- Since the 2022 Spring Meeting, the IME UN Committee and GHS Subcommittee have jointly met once on June 7, 2022, to review and approve IME comments and positions on UN documents for the 60th TDG & 42nd GHS. The leadership of the UN Committee and GHS/HCS Subcommittee was discussed and Noel Hsu and Gordon Rogers were approved as chairman and vice chairman (respectively) of the UN Committee and Lisa Nitschke and Gordon Rogers were approved as chairman and vice chairman (respectively) of the GHS/HCS Subcommittee.
- Since his retirement at the end of July 2021, Mr. Boston and Dr. Hoffman worked together to ensure a smooth transition upon the expiration of Mr. Boston’s consulting agreement with IME. This transition was completed in July 2022 and

Mr. Boston's UN consulting agreement was discontinued. Dr. Hoffman now serves as the UN Explosive Working Group secretariat and IME's head-of-delegation to the TDG and GHS subcommittees. Dr. Hsu continues serving as a subject matter expert on the UN team. IME entered a limited contract with Mr. Boston to allow for his availability to answer questions related to transportation or UN issues on an ad hoc basis.

IGUS/CIE – IGUS is the International Group of Experts on the Explosion Risks of Unstable Substances. It brings together independent experts on the risks of dangerous substances from all over the world. Much of the work at these meetings informs UN committee work. The next meeting is planned for the week of April 17, 2023, in Madrid, Spain right before the SAFEX Congress.

STATES/PROVINCES

LA Advisory Council – IME maintains a presence on the council through its Director of Technical Services however the council has not convened since October 2019 with no meeting scheduled in the future.

New England States – Blasting & Water Well Issues – IME continues to monitor this issue however there are no developments to report.

Urban Blasting Guide – ISEE Western Canada – IME continues to monitor this issue however there are no developments to report.

Washington State Code Update – Washington State Labor & Industries' code revisions are working their way through the public process and the draft revisions contain provisions to allow the use of IMESA FR for magazine siting.

New York Binary Explosives Law – IME continues to monitor this issue however there are no developments to report specific to New York.

FEDERAL AGENCIES

The Technical Committee is responsible for monitoring actions by federal agencies for activities that are technical in nature. This section of the report details the activities relating to these agencies.

Office of Surface Mining Reclamation and Enforcement – IME continues to participate in monthly technical calls held by OSMRE and state regulators and reports relevant discussions in the weekly report to members. Relevant discussions and updates from these meetings are provided to members in its weekly report.