

**Association of Chief Inspectors
61st Annual ACI Meeting - Charlottetown, Prince Edward Island
September 10th & 11th, 2024
8:30 - 16:30**

61.0 Call to Order - Chair

The meeting was called to order at 8:30am.

61.1 Welcome

61.1.1 Opening Remarks – Chair

The Chair opened the meeting. The members were welcomed and were thanked for their attendance. Acknowledged in memory having passed away in February, long standing ACI member, former Chief Inspector of Prince Edward Island, Kenny Hynes.

61.1.2 Welcome message from host jurisdiction - Nancy Chiasson

Nancy welcomed all attendees to the meeting and to Prince Edward Island.

61.1.3 Meeting Logistics and Announcements – Chair

The Chair reviewed the meeting logistics and the agenda.

- a) UA Canada & IPEIA Reception - Tuesday (5 pm thru 7 pm)
Provinces Room

*** All ACI meeting attendees welcome. ***

- b) ACI Central - ACI Members Historic Charlottetown Carriage Ride & Dinner –

Wednesday (5:30 pm) *** ACI Members Only ***

Founders Hall on Prince Street (Near Lobster on the Wharf)

- c) National Board - Lunches Tuesday and Wednesday

*** All meeting attendees welcome. ***

61.2 Appointment of a recording secretary – Chair appointed Jayd Landrigan, Province of PEI, as recording secretary with thanks.

61.2.1 Member and Guest Attendance Sheet

circulated and collected by secretary

61.2.3 Guest introductions (Name, Title, Affiliation)

A roundtable of introductions of gallery guests was completed.

61.3 Membership Review - Nomination / Election of New Member(s)

No new members to elect. One absent member: Blair Rawlings, Government of Yukon. Online attendee at present Mark Lower, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

61.4 Review of Draft Agenda - Call for Proposals Additional Action Items/Discussion Topics

Djordje Srnic:

1. Would like to add a link for CRN portal to ACI website (61.7.2)
2. CRN harmonization and endorse terms of reference (61.7.2)
3. Hydrogen mobile refueling stations and electrolyzers as pressure vessels (61.12.5)

Caslav Dinic:

1. CSA B51-24 Annexes O, N, F – Quality control programs, Design review organizations, and Certificate holders (61.12.1)
2. Name Plate, Data Report Issues – ASME Section IV Boilers (61.12.7)

61.5 Approval of the Agenda (Action Item)

Motion: To approve the agenda as presented.

Motion: David Brockerville

Second: Muhammad Wani

Approved Unanimously

61.6 Approval of Minutes 60th Annual ACI Meeting (Action Item) Halifax, NS September 12th & 13th 2023

Motion: To approve the meeting minutes from the 60th Annual ACI meeting.

Moved: Ryan Delury

Second: Matthias Mailman

Approved Unanimously

61.6.1 MoM Corrections/Additions/Clarification (Discussion re 61.6) (Reference MoMs previously circulated with draft agenda)

61.7 Old Business/Business Arising

61.7.1 National Board Registration - B51 Data Reports (info item) Joel Amato

Joel Amato described the Data Reports registration. Under JRS register system, they are starting to scan 6,500 microfiche rolls and in the last two weeks they scanned 126 rolls. They will be making them digitally available for NBBI members.

The following questions were asked by committee members following Joel's update:

Q: Djordje Srnic: If a shop in Canada has a chance to build ASME Vessel using data reports according to B51. To register, do they need to keep two logbooks?

A: Joel Amato: We may need to have a manufacturer identifying number as they may be making multiple things that we need to register. Whatever Code built to, should not matter, as NB intends to register any vessel.

Q: Chris Selinger: On a CSA B51 vessel, what qualifications does the inspector need to have?

A: Joel Amato: We are just storing your documents, that is a CSA B51 question.

Q: Don Ehler: You mentioned that you have 6,500 rolls and just for scale how many records are on each roll?

A: Joel Amato: It depends on when the roll was made. 2000 to 6000 images on each roll.

61.7.2 CRN - Design Registration National Portal (info item) Liliana/Lou

Update: Lou, Liliana

Lou: ACI TC, last year was quite busy; meetings were held on February 7, March 13, June 3 & 4, many items were discussed. Modular skid packages - items have been moved through to B51. Some items that will be covered are shop fabricated piping, modular boilers, electrical boilers, and refrigeration systems misalignments B52 and B31.5.

Liliana: A harmonized fitting checklist for design reviews/CRN portal was put together with some rules and qualifications. Knowledge sharing between provinces. Process

map for harmonization. They put together a committee project chart that will be presented later.

Motion: Add link for CRN portal to ACI webpage.

Moved: Djordje Srnica

Second: Don Ehler

Approved Unanimously

Adenike: Standardization of Rules for Design Evaluation Committee (SRDEC) Terms of Reference: The purpose of the committee is to promote consistency in the acceptance and registration of pressure equipment designs by any member jurisdiction which will meet the needs of industry and provide for protection of the public.

The scope includes making recommendations to ACI regarding the evaluation processes used by member jurisdictions to promote the consistency of pressure equipment design acceptance criteria and registration. To make recommendations to ACI regarding the use of tools needed to support the activities of the member jurisdictions.

Djordje: This is an important part to review design and harmonious approach. We need a standardized approach for review when we are reviewing design. We need to ensure when reviewing designs that we approach them from the same angle which will improve the portal in the long run.

Don Ehler: Does this apply to other agencies or just member jurisdictions?

Adenike: This applies to member jurisdictions but does tell other agencies what to do.

Don Ehler: There is another entity in Canada that has procedures and protocols in place. How will this roll in to what already is in place?

Djordje: ACI Central may have some things harmonized which is great but if one or two provinces are not aligned then they need to talk and tweak their policies or ACI Central will need to also.

Lou: Jurisdiction is used for all the members here and it's more for process aligns, but the decisions and authority is just with the jurisdiction. The end result will be subject to review and acceptance by the jurisdiction.

Shah: To make recommendations to ACI regarding the use of tools, are you looking to name the commercially available software which could be a concern as it could become a standard?

Adenike: We already came together to review, and the design is there. The design was created by the jurisdiction, but it is already there.

Shah: I looked at some of those applications that are already done. But if you are looking to name them, I have some concerns about that.

Lou: When we are talking about tools, we aren't talking about tools that engineers are using we are talking about digital tools like the CRN portal where it is a platform for technical work to be uploaded.

David Brockerville: I am still not clear on how this is proposed to work, say I accept ACI Central's recommendation, how is this going to be different in this new system?

Liliana: How the CRN portal works is that the first province does the first review, we then review the design and post our comments to the CRN portal for the other province to review, they come back and respond within two weeks. If they accept our comments or have additional to us, they summarize the comments and send them back to the clients. That way it is being reviewed in more than one province.

David: I understand that, but what is the charter achieving; that is how it works now already. So, it's not the approach that changed, it's just the process formalized?

Yes, that is correct.

Chris Selinger: They have been doing a lot of work together because of the portal to centrally have further harmonization. They are trying to be more formally recognized by ACI. They are trying to find a harmonized answer to any registration that comes into play. You can take all the advice from anybody giving feedback but to my understanding it's that formal recognition from ACI at this level from a provincial kind of table.

Djordje: When we get feedback from industry, industry is looking for design to be submitted to one place. They are looking for things to be done in a timely manner. That was guiding principles for the whole web portal as this group is looking to formalize the process today.

Ryan Delury: Is there any statistics available from the web portal group? Designs that are put through and how many registrations on a monthly and yearly basis, as well as by province? It will help me further evaluate.

Liliana: It is about 600 a year of applications. 400 processed by Ontario, 150 by Alberta, the remaining by Quebec and Saskatchewan. Rough statistics.

Djordje: The intent of the web portal, we will see more designs down the road that may go in 4-5 jurisdictions rather than all 13. Web portal for 9000 designs currently in Alberta, as there are 11-12,000 designs at peak. The web portal will have an increased number down the road.

Liam: The criteria this group is developing is applicable for the first reviewers, for those provinces?

Lou: The CRN portal is not limited to TSSA, ABSA, RBQ, ACI Central, it's for anybody that is the first reviewer is able to do so and can review. Alberta took advantage of it instead of building a separate portal. Alberta specific application is around 8000 designs per year and 150 for national distribution.

Eben: We only really have one subcommittee that has stood up, which is for power engineer examinations. It would sound to be as if we were to move forward with this that this would become another one and if that is the case I think it's something we would need to take into advice carefully as it does have implications as the provincial regulators have requirements and has a system that has been working for more than 3 decades. I am not sure where to go from here, this is a charter and first we've seen it. Work can continue to go on as we continue to take into advisement it. I will put this at next year's meeting as an action item so we can make an informed decision in an appropriate amount of time.

Joel: I think that is a great idea and a good discussion.

(Forward Charter to all members: Nancy)

Caslav: Quality Control program is one of the important things for this nationally recognized design review. I think the qualifications of the person who is doing the review are important.

Djordje: Each province is similar, but it is not synchronized as we don't all have the same process. That's why we are trying to find a way to synchronize and work together to have a standardized way to review designs. We all need to qualify people the same way.

Eben: The harmonization approach for the 7 jurisdictions is perfectly set up already as they all agree on the system and input. This has been going on for 30 years with respect to this. I like Chris' idea, and maybe we don't need to kick it down the road for a year, but I would like to table it for now and can bring it up tomorrow. What is the outcome?

Chris: Hoping it is a motion or to table it for next year.

Day 2:

Chris: We already recognize ACI TC without a charter. We could recognize this task group informally to report up to ACI. I don't know if we need to vet and approve their charter at this level.

Djordje: ACI TC has a broader scope than this group to harmonize items started in ACI TC. Could also be fabrication, installation. Need to empower to push toward harmonization and web portal.

Eben: So, where do we go from here? Can ACI TC chair create a task group that can be this?

Lou: You are correct we can do this, and we are trying to do this. The reason we brought this to the ACI meeting is to make people aware. It is a product based on the recommendations from ACI TC.

Djordje: Could ask ACI TC to create a charter and have this as a subgroup of ACI TC.

Eben: It highlights the fact that the ACI TC doesn't have a charter either. Maybe in the future we should have one that would describe what it is that they do and have task groups that will help them. I think there's work and may take longer than I will last in chair.

Don: I agree with Djordje on this. Formalize ACI TC and ACI relationship.

Brian: I always thought the reason that SOPEEC had a charter was that they receive funding, and they were able to communicate with jurisdictions rather than going through ACI. ACI TC is a work horse of all the ACI members so if only certain people are in a task group, that could limit the scope of work ACI TC does for you.

Eben: If you write down rules you have to follow them but if you don't then you can do more of what you want.

Chris: I will suggest after all this conversation that the minutes reflect that there was a discussion and that the item was closed.

Motion: Chris Sellinger

Second: Aziz

Approved Unanimously

~~61.7.3 National Standard for Plant Rating (info item)~~

~~Place holder item that can be closed—CSA B56 has been created~~

Old Business

61.7.4 SOPEEC Exam Translation (info item) David Brockerville

No funds are available for translation of SOPEEC exams from PTAC so far. Looking forward to getting this back on the PTAC agenda as it was not on last year.

61.7.5 EN 303-5 Bio-Mass Heating Boilers (info item) Eben Creaser

Eben: We haven't heard much talk any more on EN 303-5. I think they are finally done with us on this. They were going to try to sign with CSA a letter of intent to develop standard and nobody provided enough money to do it. From ACI perspective I will scratch this off our agenda.

Caslav Dinic: It's coming back from time to time with additional requirements and ideas. We should address in B51 these kinds of boilers. The differences between ASME and these boilers was put together in RFC which was sent to B51.

Eben: Some of the design elements on how the boilers are constructed would need to be modified. We had those discussions, and PTAC had the vote to support our approach putting into B51. And with that I am going to strike that off our list here.

~~Morning Break~~

61.7.6 SOPEEC online examination invigilation (info item) Tom Leming

Tom: I got notification 15-20 minutes ago that the SOPEEC system we want to use in Alberta is going to be up and running in the first week of November. We looked at lots of different options on this for online exams. One of the issues of Proctor Track was to load this onto someone's computer due to firewalls having to download their software. API recently canceled all online testing worldwide with concerns with AI technology. We are going with a program with Integrity Advocate where they have a person that watches the exam, and they don't ask you to download anything on your computer. In Alberta is we get permission we think we could be ready to deliver 4th and 5th class by the end of November/December and all of Canada by March 2025.

Eben: Is it going to be limited to 4th class only?

Tom: ACI direction was 4th, 5th, and Refrigeration. The benefit of this is to limit the travel for exams and can do this in the company's workstation.

Eben: Instead of an individual that signs up and writes his exams online having to forward his exam results, will all member jurisdictions have access to the system?

Tom: Ideally on the system it would say which jurisdiction you would need this exam transferred to. We are currently waiting regarding FOIPP requirements.

Ryan: I would like to see the policy that ACI moved for last year and have time to see and review as what I am hearing right now is different than what I heard last year.

Eben: This is an information session, and we would like to clearly understand more and personally I don't like that idea I would rather each person get a login. And that the person writing the exam would give permission to share exam results for what province.

Tom: This system will be limited to Canada which is a change. If someone wants to move the VPN and figure out that is on them. On the legal side to this we have to limit it to Canada.

Eben: What is stopping this from limiting to USA, and other countries?

Tom: There is legislation and policies in places where we can't be invasive. It's a different world than we are used to dealing with. We are looking more into them being watched and to limit cheating on exams.

Liam: What's the scope of the motion that is coming tomorrow or later?

Tom: If ACI Central wanted to look at doing something like this, the wording says vendor not jurisdiction. We don't know where someone is living. Right now we are forcing people to fly here (Alberta) to write the exam. The motion would be to authorize the delivery of supervised examinations - Guidelines motion later.

(Nancy to forward copy to everyone.)

61.7.7 Small Modular Reactor - Design Registration / Inspection (discussion item)

Yanpeng: Last year we had the first workshop with provincial jurisdictions working together for registration for small modular reactors. We had a similar workshop and formed a working group to develop a new registration portal. During the ACITC meeting we had a discussion on registration, where we plan to have a harmonized approach for new nuclear registration.

Don: I understand you were trying to arrange a two-day training session on Section III Division 5.

Yanpeng: We were planning for June, but the contract was not signed, and it was postponed. We are still trying to find a time that will fit for most people. I proposed November 11th and November 25th, but I would like to get feedback from this meeting to finalize the date. The meeting will be held in Ottawa at the head office, 280 Slater.

Eben: November 12th to travel; training November 13-14, workshop November 15 and online training will be available.

Liam: Is there a cost associated with the team members for this?

Yanpeng: No, just for your travel.

Lou: Is there going to be an option for this training to be provided remotely?

Yanpeng: Yes, there will be.

Djordje: I think it's important to have it recorded as it is a good approach, and I really support this to come back and read it at a later date.

Eben: The presenter will be getting a fee and there could be challenges to have it on video and be able to send it around.

61.8 Review of Correspondence Received / Sent

No official correspondence received or sent.

61.9 Member Updates / Incident Reports

61.9.1 NL,NS,PE,NB,QC,ON,MB,SK,AB,BC,NU,NT,YT

NL(David): Hydrogen projects reported with several large wind farms for electrolysis that are in the process of being approved. We've had many discussions regarding the codes and standards that need to be followed. Our main gap that has been identified is training as that is already an issue in the jurisdiction (ammonia and high pressures in new hydrogen systems.) We have an operator availability issue. We are finding a lot of pressure release operations are on the rise and we are working to address those things. Inspector turnover is an issue, and we are looking at market adjustments as we are trying to keep up with inspections and seats filled. Our quality process for contractors is dated, and we are doing some tweaking. The incident I reported in 2022 is now dealt with and there were 13 charges laid. There was unfortunately one fatality and there were two others who were badly burned but they survived. You can read online as there were improper work practices, not pressure boundary issue.

Don: Can you speak a bit about the plant shut down in Corner Brook?

David: It was the pressure relief valve issues we were having. We had to refuse to release certificates as too many violations; it was a plant wide problem.

Joel: Where is the copy of the investigation report?

David: I can send it around and it is publicly available through CBC News.

NS (Don): No organization changes and we have the same management structure. We are in the process of adopting the 2023 version of ASME codes, the current editions of B51 and B52, and 2023 edition of NBIC. We are not a province with automatic adoption, our process needs to be approved and signed off by our minister. We haven't had anything serious but had two ammonia incidents with plant wide evacuations, with no

injuries reported (due to equipment failure in both incidents.) One was at a seafood processing facility and one at an ice cream plant. ASME AIA triennial survey two weeks ago and was successful.

Ryan: Ammonia plant failures: what were the equipment failures?

Don: One failure at the ice cream plant was the liquid ammonia got into the compressor and ruptured the housing, and that caused a full evacuation. The second was the failure of the body cracked due to age.

Eben: Are you guys doing chiller barrel assessments and refrigerants and coolant checks in hockey arenas, etc.?

Don: We started doing that not necessarily laboratory analysis, but litmus tests, and we are being more proactive in those regards. Given these two failures that occurred recently we are doing a reevaluation into how we monitor and conduct our inspections by putting in new policies and training.

Eben: Is there a source to find out information for ammonia refrigeration for inspectors to gain further knowledge?

Don: It is hard to come by; we have had people come in that know refrigeration for a one and half day session, but not necessarily on how to inspect.

Glen: RC Mechanical, Bowmanville have been very adaptive to providing different levels of courses on refrigeration systems. I recommend contacting them. We also offer arena refrigeration training through ORFA. I will see if I can get their contact information to share.

Caslav: Another good source for refrigeration training is MASTERS; they are based in Quebec and are all around Canada and the USA.

PE (Nancy): We completed our ASME AIA survey in August and received some positive comments on the quality manual. We have three certificate holders in the province that are involved in the pressure vessel manufacturing. We completed a review and approval of our Boiler and Pressure Vessel regulations through Executive Council. We adopted the B52 – 2023 with additional vestibule clause in our regs. We are still reviewing B51-2024. In these regs we did adopt B51-2019. This is our first update since 2015 on these regulations. We had one inspector to NBBI in Columbus, Ohio on his In-Service Training and he has successfully passed that. Potato Peeler with cyclic loading from last year that had one vessel that came out of service, it is currently being monitored every month until they get their new unit in place. Duplex stainless steel equipment.

Djordje: How do you and all of us monitor vessels in cyclic service? Cycles should be notified in data report as per code requirement, but manufacturers and some inspectors

not well attuned to that. Do you monitor vessel cycles in service from day one from when it is installed?

Nancy: That is our intention, as we want to monitor from the beginning based on what the manufacturer has indicated.

Eben: No way currently in NB data base to note cyclic service to be monitored.

Djordje: Cases of sterilizers where cycles not being counted causing concerns and may have surgeries cancelled as a result.

Don: In NS, we have Section VIII, Div.3 vessels and we make them count their cycles.

NB (Eben): We went through a code adoption cycle; code adoption regulation 84.177, have to get it on Executive Council agenda to look at it. Adopted NBIC 2023, ASME BPVC 2021 (can utilize 2023 but only enforce 2021.) Waiting to see on B51 and B52. We are fully staffed and there are no organizational changes. One of our major industrial manufacturers will be building the largest black liquor recovery boiler in North America, in Saint John, N.B. Converting our one and only remaining coal fired electrical generation station over to biomass/torrefied wood pellets.

Djordje: On B52 process of adoption: On December 31st of this year the USA law will kick in that ozone depleting refrigerants will not be allowed to be produced/imported/exported. If we don't adopt 2023 addition, then we cannot use A2L or new generation refrigerants. How are you approaching this situation?

Eben: The regulatory requirement is mandatory that I can enforce, and if you comply with the latest edition, we can accept it but can't make you comply with latest edition. From what I understand the biggest worries people are having are appliances like heat pumps, mini splits, etc. These are things that I don't regulate anyway. They aren't subject to the boiler & pressure vessel act; it is more of an issue for the National Building Code of Canada. I find the concern is a little bit unfounded in New Brunswick, if it would be a commercial place like a grocery store to bring equipment using the 2023 code refrigerant into that store, we would allow it, but we can't make them do it that way.

Ryan: The National Building Code adopts 2018 edition of B52, so a conflict with the BPV regulations there which adopt 2023 edition.

Liam: It may be an installation concern where if the 2023 code is not adopted, then the installation requirements for A2Ls are more restrictive under 2018 code (treat A2L same as A2 if using 2013 edition but more restricted.) The installers can't take advantage of loosened requirements of 2023 if not adopted.

QC (Aziz Khssassi): It is positive that we are still under the Ministry of Labour is progress on the qualification of the power engineering, pressure welders, and BPV inspectors. NBIC commission now qualifies their inspectors automatically for provincial

certification. You only need to do the regulatory part of the exam for inspectors. We hired 5 new inspectors and 3 of them already did their IS Commission/provincial certification with the National Board. Two others are doing OJT for AI Commission and two others starting training. We still need to hire 8 inspectors (salary constraint.) We have a new provincial government union contract that helped increase salaries. We have a few interviews lined up for inspectors in October. We have been working on BPV regulation updates. We have become aware of operational issues missed in 2018 regulations, a few articles will be improved on operational side. We will be getting French editions for NBIC part 1 and 2 (already have parts 3 & 4.) Most of the Installers are only French speaking. We do have an issue with the code adoption system we have now with automatic adoption. RBQ needs to find a legal solution for the code adoption system. Cannot adopt B51 and B52 as they are. The ammonia technical committee is working on addendum. The impact testing requirement of B51 issue will not make it as we are getting negative comments from industry. Incidents two boiler explosions, no injuries just minor damage to the equipment. 3000-5000 psi. It was maintenance/repair related not operational. One case where fire started in other equipment. One case with compressed breathing air system at fire department where fitting blew off at 3000 psi due to corrosion. Systems run at 3000-5000 psi. Nothing in their regulations about CSA Z180, which covers these. Their main issue is the quality of air, and it needs to be monitored every 6 months. Most fall under fitting category. We are not always aware of their installation. They still have to abide by CSA Z180, and QC is adding it to their regs. Most other jurisdictions have not referenced it yet. Still working on a second mass production facility with the same certificate holder. We are working with a new N type ASME certificate applicant which had it before, until Gentilly plant closed. Training new inspectors is an ongoing effort and we are still clearing up our database. We have the inspection and insurance companies helping us now by sending us a clear list and helping us compare our list.

Brian: What percentage of your inventory does licensed inspection companies inspect?

Aziz: Very small 20%, RBQ does other 80%. We are focusing more on hockey arenas, hospitals and bigger venues. Our government is aware of this issue and is trying to hire more inspectors.

Eben: Is that the NB369 program?

Aziz: Yes, we have two inspection companies (not insurance companies) located in QC, and we have four or five coming from Ontario.

Eben: Can you explain to me when a company would choose a private company to come to their facility to come for a cost?

Aziz: They are cheaper than the RBQ. However, government facilities prefer using RBQ for ease of use.

ON (Caslav): We have two engineer managers now. Liliana is the new one. We have a new supervisor for region one. We also have a new supervisor (Kevin) for region 8 and this region is solely for training. We additionally have a spare supervisor for when the other supervisors are busy who is covering regions 1, 7, and a little bit of 2. We are planning to hire more than 10% of new BPV inspectors, which is mostly to cover nuclear renaissance 2.0. This is to cover the Pickering refurbishment, Darlington, and Bruce, new modular reactors. NB380 (new construction not recognized) would take too long to get their inspectors OJT. 5 points of RCI-1 works better for us. We have a new licensing initiative that is related to B56. We adopted the B52. We planned on adopting B52 and B51 next year as there were issues with A2L and high pressure refrigerant, so we were able to adopt B52 faster. UL 207 tubing and fitting accepted for CRN. We are working on B51 adoption now, but we have a significant issue there regarding quality control annexes and impact testing and we don't know how we can adopt that one. AIA Manual, concrete supervisors and inspectors need to be added to it, so it's more complicated. We still have mostly A1 refrigeration leaks occurring, maintenance, not equipment failure. Alternate piping inspection, the contractor qualifies their own guys to perform the inspection, they send us their inspection reports, we then review those reports. We are investing time and efforts into database clean up. In the past, the insurance companies were issuing certificates of inspection, and we did not know what was happening; they are now reporting. We have 70,000 vessels that we don't know exist or not, so it is a massive cleanup. We are introducing late payment fees. We are working on standardized training program. We had some difficulties with the portal that we are fixing. Difficult to monitor cycling service when 95% of inspection by insurance companies which do not have access to report cycles, so cannot enforce cycling service. CSD -1 adoption, reviewing if should enforce it.

Eben: Does the JRS system have an input spot for vessels that are subject to cycle service?

Joel: I don't think we have it at this time, but it is something we could add.

Don: You indicated that you are having difficulty with training for your AI's. I sit on the task group for NB-381 and there is a program being developed specifically for authorized inspections.

Caslav: Yes, that is for AI, but I am looking for In Service. When it comes to AI I don't have a problem, it's just the In Service. The only applicable ones are the installation inspection and piping.

Glen: We are hoping to get feedback on who is using CSD-1.

Eben: Show of hands who adopts CSD-1.

Lunch break

MB (Ryan): No major organizational changes. We've hired two BPB inspectors but still 3 positions short. 6 inspectors have In Service commission. We will be sending one of the inspectors to Columbus for In Service course. Still trying to push forward our technical safety act and regulations. We are working on the elevator and amusement rides regulations. Once that is done then we can start looking at the remaining regulations, steam and pressure plants act. We have proposed changes posted on our portal for the power engineer regulations. Definition for ice facility plant we are looking at for clarifying a 4th class or refrigeration certificate holder can act as the Chief Engineer. We will be introducing an ice class facility operator certificate. Our stakeholders are wanting a tiered license approach similar to BC. We will have a Chief Engineer and shift engineer. No significant incidents last year, just minor ammonia releases. Micro ammonia processing plant that is located on a private farm, we came across this on a media report, making ammonia with electrolysis; equipment was not certified, coming from Europe.

Joel: Is the certification you are creating for ice rinks only for ammonia?

Ryan: Other refrigeration, but new certification is just for rinks.

Shaun: Is the end product of the micro ammonia plant designed for agricultural uses?

Ryan: Yes, I believe it is just on a private farm.

SK (Chris): No regulatory changes this past year. Code adoption is not automatic, we are still in B52 2013 & B51 2014. No organizational changes in our boiler and pressure vessel unit. We have revised our inspection follow-up procedures and ensure orders are complied with and dealt with properly. No accidents reported in the province, only two incidentals such as fire by lightning strikes. Four SMR's announced in the province. We are continuing to do a lot of training for nuclear equipment inspection. We had our ASME/ AIA review that went well for us, but our nuclear will be in a year or two from now.

AB (Djordje): We changed our pressure equipment safety regulations last November. We changed a few things, so design submission does not need to be submitted in duplicate as they are coming in electronically. No changes in scope, small changes in management. One manager left and one new on-board as IT manager. 4.77% fee increase for inflation catch-up. Our fees increased on November 1st, and owners for annual fees increased on March 1st. New inspectors and design surveyors are going through the training. Looking at keeping up with digital technology, hydrogen service, storage, and transportation. Converting ammonia back to hydrogen. Online seminar/activities/exams we are trying to do. We have several shops that are looking into nuclear. We have tracking of accidents on our websites and form that describes the incident and what needs to be reported. 8 injuries in the last 12 months in 5 incidents, 5 people exposed to burns due to fires around equipment, one during the pneumatic test, one during maintenance next to someone doing work on feedwater line on the boiler. Hydrogen service, mobile refueling, and electrolyzers are topics that we should discuss.

Section VIII Division 1 information about cycles and other types of loads and something we should be aware of are major changes to Appendix 47.

Shah: 4.77% increase is that for all services across the board?

Djordje: Yes, as we are trying to keep up with inflation. Keep in mind it has been 10 years since we have increased our fees.

BC (Liam): Management structure remains the same. We brought on three safety officers and have completed their National Board this week. The TSBC is taking on a digital transformation project and moving our databases to new IT systems. We are working through permits and inspections. Code adoption by ministerial order, we will see all codes B51 & B52, ASME, API, etc. be updated to their newest editions which comes into effect December 31st, 2024. We have put out 4 new or revised directives in the last couple of months, from special (reduced supervision) plant registration, code adoption timelines, and decommissioning requirements. Significant incidents, no fatalities, a number of ammonia incidents from worker error and equipment failure. All incident reports are available on our website. Another project is hydrogen, increasing fueling stations to improve the network. LNG Canada still on target for production and shipment next year. Some LNG projects in planning and approval stages next year.

Eben: When will you expect the LNG project to leave the coast of BC?

Liam: Kitimat, planning to begin shipments in 2025, Phase 1 of project.

NU(Muhammad): No incidents occurred last year regarding boiler and pressure vessels. Three of the acts are being combined: elevator, electrical, and boiler/pressure vessels. The Technical Service Safety Act is what it will be named.

NT(Matthias): Not much to report, one inspector went down to Columbus for In Service and awaiting results. Two 1250 kilowatt boilers had internal damage due to quality of pellets and overheated the boilers and caused a significant amount of damage.

YT(Blair): Representative not present.

61.9.2 National Board

Joel Amato: New projects and number one project right now is JRS Inspect and JRS Register. JRS Inspect is rolling out its 5th jurisdiction this week. We are still waiting to roll out our first insurance company and hope that will happen in the last quarter of this year. The problem we are having is that many of the jurisdictions' data is organized differently (owners, locations, and objects in different order). We currently have all jurisdictional data in the US; 20 states filtered and put into JRS but need to do 30 more to get ready for insurance companies. It would be a burden on the insurance company if they had to dual data entry, that is why we are currently working on making it up to date. Currently scanning microfiche: 2000 to 6000 images per roll of film. 149 rolls of film

have been scanned so far. We will scan all of them and put them in a database. We will be making it searchable to make it quicker. NBIC 2025 fourth cycle was completed in July this year and is out for public comment. Scheduled to be published on July 1, 2025. Currently working on better ways to train inspectors, it seems in the US, insurance companies pay a lot better than the jurisdiction and are plucking people away. If anyone has ideas, I would love to hear them. NB380 program seems to be working very well, it is a work in progress, and I think it could be even better. A new training schedule is coming out in October for 2025, with many virtual options so students don't have to travel and can stay in their jurisdiction and save money. Commission renewals are coming up, make sure continuing education is done. Two new members from the state of Tennessee and Florida. Next general meeting in May in Salt Lake City, Utah. New dashboard for employees where each department gets to put in their own info on the intranet NBBI dashboard and different departments can see what others are doing, e.g. a training person can look at data reports and which insurance companies are online to create a better team on the National Board. VR program presentation will be later today.

Nordia: Do you have any plans to put new training programs on the portal?

Joel: Yes, we are rolling out new courses, one is combustion air for boiler rooms, one on historical boilers. We try to get out 3 new ones a year, if you do have an idea on what training courses you would like to see I will give you my business card before we leave as we would love feedback.

Aziz: Do you see any people from outside the commissioned inspector group taking these courses?

Joel: We are just now reaching out to API as they also have inspectors, and we are looking at providing them and them utilizing our training courses for their continuing education. There is also a push to get boiler installers to take these training courses. 85 courses there now at \$100 a training course.

Eben: Possibly PEI – Pressure Equipment Inspection could be issued to increase uptake of courses and develop more inspectors.

Joel: Seeing interest in Argentina for PEI for those not able to get commission.

Aziz: From the authorized inspection side of things, we are seeing issues with welding supervisors and quality control managers, and we point them to the courses to start by taking three National Board welding courses to know about section IX and welding samples, etc. These are things we are trying to do with these certificate holders.

Joel: I appreciate you helping the National Board by supporting these training programs. We are trying to let our members know about these programs to utilize.

61.9.3 CNSC

Yanpeng Wang – Our technical service has a new chief scientist; we now have 18 vice presidents. We have had a new director since January this year. No change in regulation on pressure boundary. Darlington is in license renewal process. In 2025, plants can apply for a 10 or more-year license. Pickering at end of 2024 will shut down some units. Units 5-8 are to extend until the end of 2026 with public hearings before final decision. Bruce Power licensed to 2028. Point Lepreau is licensed to 2032. OPG Darlington is working on an application for SMR, new build for 300 megawatts boiling water reactor (BWR). Public hearing part 1 in October 2024 and part 2 in January 2025 for construction license. Canadian Nuclear Lab at Chalk River is model reactor of 5 MW, may go to 15 MW. New Brunswick power has ACR, clean technology project, 100 SMR which is still in the environmental assessment stage. Last year in May, we had our first workshop and then in September and November, we had two other workshops to promote safety through provincial and federal collaboration. We formed a working group. With the feedback we got back from the working group we prepared a memo to provide legal service for clarification on a few questions. Based on feedback we will have training on ASME Section III, Divisions 5, November 11th week. Wednesday & Thursday training and Friday will be in person workshop in Ottawa or remote is available.

Shah: When you mention the nuclear upgrades, are the power lines part of that upgrade?

Yanpeng: I don't think it is under the mandate, as it is outside of our scope.

Eben: There is an international treaty on power that regulates the costs and service. It is way beyond our scope.

Muhammad: Could you please send those dates in an email with locations?

Yanpeng: Yes, after this meeting.

61.9.4 CER

Shah Ahmad: CER Jurisdiction Report (document attached.)

1. Regulatory changes – work related to improvements and list of acts and regulations (links are provided to the document.)
2. Compliance and Enforcement: Compliance Verification Activities: 58
3. Major applications and projects before the CER (listed on document.)
4. Safety and Environmental performance: The CER regulates approximately 73,000 kilometers of interprovincial and international pipelines.

5. Pipeline and Facilities Incidents: A total of 55 incidents were reported. No major incidents, however, were related to pressure equipment and/or CSA B51/B52 Codes. Link provided to see diagram of incidents and when they occurred.

61.10 Committee and Task Force Reports

61.10.1 ASME BPVC

Djordje: When we talk about ASME it will continue next year with the hybrid meeting concept of two virtual and two in person. Next year Feb and August will be virtual. May meeting in Salt Lake City and November meeting in Dallas. TOMC still keeping an eye on additive manufacturing as each section is looking at a code case. The task group is preparing packages. Section A division 2 will add some parts to 2025 division. Section I there are a few items they are looking for: creep fatigue and working on clarity items. Section I's progress is going slower than expected. B31 is looking to tweak the process to go back to a faster pace. Additive manufacturing, code case 3072 has been issued for pressure relief valve bonnets or yokes. There is a task group Section I and VIII working on unfired steam boilers. Section II is looking to extend yield strength values for commonly used materials. Section II is considering moving stress tables from B31.1. Some talk about defining materials for safety valves instead of using current code case. Section IV is working on clarity and rules for gender neutral language. Section IV incorporating code cases. Section IX provides work support materials for additive manufacturing arc metal energy deposit. B31 piping code. Section XIII looking to follow the approach in B31 code. Section VIII next year will be 100 years. 100-year anniversary we need a new suit for the 100-year-old book, will have a new suit for the second century. We should not put exemption in code, instead we should put rules in the code. We are close to having a 2025 scope. In reshape project there are 6 areas we would like to cover; clarity VIII, Div 1 rules, we would like to introduce new subsection D for specific types of vessels. Common rules to have one set of rules in one place in the book. This project may not be completed in this 2025 edition. There is an initiative that we remove class 1 vessels from division 2, this will create a lot of changes.

Brian: Has there been any discussion of Appendix 47 Section VIII Division 1?

Djordje: It will not be removed but it will be substantially changed. We are revising Appendix 47; it is currently waiting to be administratively approved.

61.10.2 CSA Z662

Djordje: Z662 is working on the new edition and in the middle of the work for 2027 edition. The biggest area of discussion is requirements for hydrogen. We are hoping in June 2025 that we will see the first draft. They're focusing on new construction, blend of hydrogen and natural gas, and the repurposing of the existing pipelines to become

hydrogen pipelines. They are carefully looking at B31.12, at this moment work is focused on B31.3 and B31.8.

61.10.3 ACI Technical Committee

Lou: There were three meetings held February 7, March 13, June 3 & 4. Many items from the agenda and a few we have already brought to some sort of completion are moved to CSA B51. One item was related to skid packages and when is it completed/ how is it documented. The task group was formed, and some draft resolution was created and forwarded to the license plate technical committee... The second item is B31.3, .1, and .5 regarding piping. What kind of inspection requirements are required, there is still confusion between jurisdictions. A task group was formed on this. Modular boilers are an item from the previous year section I and section IV we understand there are some differences. Another task group was formed to resolve this. Electrical boilers is another topic we are discussing, what certification and documentation is required. There are still questions in the components manufactured by different entities. Refrigeration systems are a big topic and misalignment with B52 and B31.5 provisions. Lengthy discussions were held but we don't have finalized outcomes. We are hoping to be able to present to this group once we have the outcome. Many new items were discussed: Pressure welders across jurisdictions, inspector competency exams, ACI website (make better use), regulatory alignment, and harmonized design review process. If you are interested in more details and specifics refer to the report.

Djordje: When we talk about modular boilers, we need to understand that section IV is not going well on modular boilers, having an omission. In August, there was a suggestion that it should be scrapped. Where is the safety valve? My suggestion is that we should push these rules to go into B51. We need to watch that we don't go in two different directions.

Caslav: This issue is much bigger than modular boilers. Looking at the inspectors' duties, we have the same issue with modular as well as regular boilers. Is the inspector doing the heat exchanger or full boiler including safety valve and controls? The code in section IV is specific that the inspector needs to inspect the full boiler.

Eben: I agree with you in terms of modular boilers but in our jurisdiction, we see factory made modular boilers and field assembly modular boiler manufacture. We are having this issue as well and you point out a good point if it was inspected as a boiler by the manufacturer or some boiler manufacturers do not even buy heat exchanger on the continent. The only data report is coming from 3000 miles away for the heat exchanger only. There is a disconnect here. We are mixing boilers and appliances in some cases. The data report is not in compliance with what Section IV should be.

Djordje: Are you aware that section IV wants to remove the master data report from the code book? They want to remove the concept of modular boilers from the book. Heavy cyclic regime in modular boiler. ACITC could look at including in CSA B51 if not covered in Section IV.

Caslav: It is not anywhere in ASME Section IV. We have some issues there and I would like the technical committee to propose some RFC's.

Aziz: When it comes to electrical boilers this is also an issue with Section IV, not so much with Section I. Do we now sign off on partial data reports? Test without flange, using blank flange, and not testing a complete vessel. For B51 if ASME doesn't deal with it.

Eben: The certification of inspectors and you talked about utilizing CWB. No longer have ASME AIA. Inspectors hold PEI card from NBBI after taking courses. As qualified as with the AI credential. ACITC look into the PEI commission as credential to use, also includes continuing education.

Lou: Yes, we still need to discuss this.

Joel: I meet with ASME upper management, and I bring up Section IV issue of MDR for partial boiler. They have kept saying for the past 5 years but I think it's time to act by coming to Section IV meeting.

Eben: It's our NBBI inspectors and why can't we provide some directions on RCI-1; we could add another thing when inspectors sign the data report, to note in remarks what parts are being inspected if not full boiler.

Joel: You could do that but it's just a band aid. The issue is Section IV. They need to hear it from us as a group. It is a construction code only. Controls are in CSD-1.

Rob Troutt: I did bring this up at ASME, when I was on Section IV, a couple of people determined an item has to be in, and we said no to it. I went to Joel and ended up lining the walls of Section IV. There's another option: I think we need to write an article on Section IV and put it in the National Board Bulletin that inspectors should not continue to sign off on data reports that are not correct, and put pressure on ASME, AIAs, that they are not following the code, and they are signing documents that are not to code.

Eben: Well, that could happen.

Rob: If we put it in the Bulletin then we will have a document that we can use to go to Section IV: they aren't meeting the code. AIAs push back to avoid their inspectors misusing their commissions.

Eben: Here's the thing, this is an ACI meeting, and we will discuss this at the National Board meeting.

Caslav: Also, superheated boilers in Section IV issue, but need rules in Section IV. 2000F low pressure boiler that's very small.

61.10.4 SOPEEC Chair Report

Rajesh Kamboj: We had our 50th Annual General Meeting on July 4 & 5 in Halifax. We had discussions regarding the online exam policy. There were some issues brought up like B56 implications, hydrogen boilers, SMRs, etc. We are planning to meet in Winnipeg next in the first week of July 2025. We may have a virtual meeting in between. There was discussion with Pan Global, their group shared some Google drive links and reference material for power engineering. It will be nice if we can offer an online exam so we can use the handbook so students can't cheat. If we have online access to the candidate, it will enhance the safety and integrity of the exam.

61.10.5 SOPEEC Coordinator Report / Budget Approval

Tom: PowerPoint Presentation (ACI SOPEEC presentation 2024 chair notes, attached) Motions and budget in PowerPoint.

Motion 1: A motion was considered from IPECC to amend the 1st class 1B1 syllabus.

Current statement: 1.B1.05.g Power and Process Piping: ANSI B31.1 and B31.3
SOPEEC recommends to ACI to approve the following change to the 1B1 syllabus

New statement:

1.B1.05.g ASME B31.1 Power Piping and B31.3 Process Piping –

Passed unanimously.

Motion 2: SOPEEC recommends to ACI to approve the following addition to the 4B syllabus as put forward by IPECC

B9.xx (to be determined)

Describe Refrigeration Plant Safety, including Refrigerant properties, CSA-B52 Machinery Room requirements, safe practices in operation and maintenance, and emergency procedures for leaks. -

Passed unanimously.

Budget 2024 presented - passed unanimously

Tom will send the Budget copy out to everyone.

David: Do you have any data by province for percentage passed?

Tom: If you want to send me an email, I can send that to each province individually.

Day 2:

Attached: Online Exams Motions Draft2

Ryan: Last year there was a motion to create that policy, but I don't know how this group can move forward with the new motion without clearing the motion from last year.

To me that motion must be completed before more are put forward. It was supposed to be two weeks from last year's meeting.

Chris: The SOPEEC policy is operated in the fact that we trust each other in this room to follow the policy in using the exams at SOPEEC in your jurisdictions. Online exams are now acceptable is the guidance from SOPEEC, and so why wouldn't we continue to trust each other to do the SOPEEC exams online for Motion 1. Motion 2 gives an option for those jurisdictions that don't have the capacity to do online exams. Even in the vendor concept I have a lot of questions that aren't addressed in that SOPEEC document. Like describing what an application from a vendor would look like. I don't see why we can't just say that SOPEEC will keep online exams secure and why we can't all agree on that.

Liam: There are reputable vendors for online invigilation. We use Proctor Track in BC for non-SOPEEC exams. There are different tiers of security whether you will have AI or a live person to monitor taking exams. The vendor college component is an interesting one as well. We invigilate them ourselves with our computers and our security protocols. May expand that in future.

Chris: When I said vendor, I trust that for any jurisdiction in this room if they want to do online exams in the province, they will do the proper vetting, and cover all SOPEEC policy, whatever application they use. I use the word "vendor" for whatever online software.

Eben: I don't agree with leaving us all as jurisdictions to find different platforms. I like this idea, that you can challenge SOPEEC exams through the SOPEEC website. Why are we talking about a jurisdiction setting up a website to invigilate online exams, when there is already a place you can do that.

Tom: Some provinces want to have the option.

Ryan: Don't get me wrong I want this to move forward too, it's last year's motion I don't want to have it washed aside. As a group, we decided to have a policy for online exams created. If the policy isn't required because of trust, I also don't agree with that, because if it was only on trust then we wouldn't need other SOPEEC policies. There needs to be follow up on what we agreed last year. We agreed to have a policy.

Eben: To reach a resolution here today, how many want to have their own ability to have online exams. Ontario and British Columbia want to have their own ability to deliver this virtually. Is there anybody else other than them?

Chris: Can't say no but if I create an online portal for provincial exams then could also do SOPEEC exams on that format, but I am not actively pursuing it.

Eben: Are the rules, which we don't have, are the rules going to be that someone in AB can take an exam in BC.

Liam: No, we don't know necessarily.

Q: Why does it matter?

Eben: Well, how does the guy in NB bring his exam results to someone in ON. Comes down to how we will manage the exam results.

Tom: I understand but it's something to flesh out, it does not have to be at this time.

Eben: If we don't then someone who writes an exam in BC and comes to NB may not be accepted if the rules have not been worked out.

Nancy: I agree with what Ryan is saying. It's not clear why the policy was not presented or developed to conduct online examination. Motion 1 doesn't really get into how that's vetted by ACI and to me it seems like that could inadvertently weaken SOPEEC going forward by having that. Maybe if we had the policy, we could feel more confident on what exactly we are committing to here. There are a few questions marks that aren't being addressed. What happens in various scenarios. It would be great to have the policy.

Tom: It is in your inbox; the framework is there.

Chris: There's nothing in the SOPEEC policy that talks about how we are invigilating now, so we're just doing it all off the handshake. Why do we have to have a higher standard for the online exam? Why can't the handshake continue for the online exam? In looking at that SOPEEC policy there's nothing stopping me from offering the exams online in the province of SK.

Ryan: What is the point of making any motions if we are not going to follow through on them? We made a motion to have a policy created and that hasn't been done.

Eben: In the minutes from last year that we approved yesterday, item 60.8.4, motion 1 was SOPEEC to create a set of online examinations policies and rules for ACI approval. Was unanimously approved.

Tom: It fell behind schedule. I don't want one jurisdiction to do this before all can do this. I want a national system for everyone in the country to do this.

Eben: I am going to ask you to provide the policy which you mentioned you have already. We as a group of chief boiler inspectors will be together and could do a letter ballot on this policy or a Teams meeting as we are not going to solve this today.

Tabled.

61.11 CSA B51 TSC Reports

Izak: We don't have any technical sub committees working in B51 currently. We now have to look at standards and look at life cycle. We are going to discuss this in an upcoming meeting on Friday and propose a new structure. We need to get people to sign up for these sub committees. You aren't going to sign up just for boilers, we need to know if you are interested in the design side, administrative side, manufacturing side, etc. The technical subcommittee overall will focus on clause #5. We propose clause 1-3 as editorial for modernization and French translation. Clause #4 will be administrative. Also, we are allowing for future technology. Clause #5 will focus on design. There will not be a technical subcommittee on the annex as there is one on the standard clause already. We have one technical subcommittee that we call unnamed technical subcommittee. We still have a need for hydrogen working group. We have put out the first step on how to approach hydrogen, however, there is still a lot of work needing to be done. There is a need for leadership, as there is no opportunity for leadership development if same people do it always, and we are looking for other people to step forward to take on these roles. We need a coordinator for every technical subcommittee.

Eben: What is the remainder of your term as chair of the B51 committee?

Izak: I am open, but I asked that they check how long to continue.

Don: I've been on the license plate committee since 2007 and at that time it was organized by clause numbers. We've had some recent discussions about what the subcommittees will look like but until we get further direction from the executives, we are waiting for that. I would assume the people on the license plate committee will still be focused on design and registration.

Caslav: Even though it looks like a big cycle for 5 years, the time is flying. One of the things is we really need to start these subcommittees now.

Lou: While other technical subcommittees were on pause, the license plate TSC had three meetings. Lots of RFC's and committees were discussed and moved forward for standing items.

Djordje: At the last executive meeting, it was discussed that each chair would need to provide a list of items on where they stopped. They parked some items partly finished or that have not been started for the 2025 year. Which will be discussed in the meeting on Friday. We need to decide whether to continue with them or not (if not touched in 10 years for example.)

Eben: Does B51 have a formal parking lot process?

Djordje: As far as I know we don't have that. We have a less formal list of items; each subcommittee has those items.

Eben: Could use a system like N285 uses.

61.11.1 License Plate

61.11.2 Clause 6

Manufacturing, and other working groups that will focus on different pieces of equipment.

61.11.3 Clause 7

Will focus on owner equipment.

61.11.4 Clause 12

61.11.5 Clause 13

61.12 New Business

61.12.1 CSA B51-24 Adoption (Discussion Item)

*Boilers in Cyclic Service, MDMT/Impact Test Requirements, High Energy Piping Systems, Criteria used to define these, Other ...
Will National Registration (CRN) issuance be affected?*

Eben: New Brunswick is not adopting, and it is not being talked about.

Chris: Same for Saskatchewan.

Ryan: I am not sure what our answer is as we do have auto adoption and enforce it 6 months after it is released. We adopt the latest edition and ASME BPVC is also adopted, so conflicts with CSA B51: 2024. Impact testing won't affect design; it's a fabrication requirement.

Aziz: We have automatic adoption 6 months after French edition release and are going through the BPV regulations update. We need a solution to not adopt certain articles from the 2024 edition. We are getting a lot of push back from industry. I have a partial solution, either legal solution that the department will come up with or just have a variance exempting the impact test portion. There is talk of going back to non-automatic adoption for CSA codes. Any ASME stamped vessel will be accepted for installation in QC regardless of its B51 status.

Don Ehler: The trend of responses from industry is somewhat negative in a lot of aspects of the changes. We are fortunate that we have a regulation process that allows us to adopt a code in whole or in part.

Caslav: We need to adopt some of the things of B51. We finished some issues of B52 but B51 has huge issues. For impact test, we need to change the requirements as they are too harsh for the industry. Quality control in nonmandatory annexes is a discussion we need to have among us because if one province adopts them as mandatory then they won't be able to accept boiler from other jurisdictions who need to prove to me that they are abiding by that. I was thinking why we ended up with this problem that quite a few jurisdictions don't like. I see that as a CSA problem, for B51 and B52. If the majority of chiefs votes negatively then an item should be rejected. In ASME ballot can see what other people's ballot comments and votes are and can change my mind. We should bring back to CSA that we need to talk about the current process of B51.

Nancy: In PEI we are just now adopting the 2019 edition of B51. We don't have any intention to adopt the 2024 without changes.

Liam: This 2024 edition is coming into force in the new year without any changes. Hearing from industry that impact testing is an issue and working with industry on supporting implementation. If this is an unacceptable issue for industry and the jurisdictions, then it is something that needs to go back to CSA for review.

David: We are fortunate enough that we directly adopt the ASME code in our regulations. We can change regulations in terms of testing, etc. Right now, it is more of a legal discussion in our jurisdiction. An ASME stamped vessel should meet regulations as we adopt both B51 and ASME we are getting legal opinion.

Ryan: Eben, in your province you only apply B51 to Canadian items?

Eben: Manitoba shop could send ASME stamped vessel to NB. For B51 items, you don't need to register the design because B51 says so, it's because the regulation says so.

David: It depends on the code of construction that the manufacturer uses.

Djordje: In Alberta we have a system of automatic adoption unless the minister issues a ministerial order to change the process. We are looking to see how we will implement that. It is complicated between B51 and ASME, B51 prevails. Some owners think B51 didn't go far enough while other manufacturers think it is too much. I have more questions than I have answers at this moment.

Eben: How will a manufacturer of an ASME section VIII Division 1 vessel document that they have met the 2024 version of B51 requirements?

Djordje: I don't have the answer for that at this time.

Caslav: Manufacturers are building in one shop for the entire world and won't build for only a few provinces if the requirements are different in those provinces. We cannot implement the B51. It is a good idea for some but difficult for others.

Mark Lower: In ASME discussions, there is no intent to bring in any of these impact test requirements in ASME BPVC. It may not be a bad decision for incorporating some of these impact test requirements. There is some confusion in industry on what you guys are wanting in terms of verification. The biggest thing is manufacturers don't understand what tests you want, acceptance criteria, etc. Expensive flanges, forgings, etc. What does that look like to use material from stock. If you had a bigger design facility, you would be looking at a longer lead time, etc. But there are a lot of smaller vessels that get supplied in smaller quantities, what do you do about those if don't have impact tests for them? In one case we wanted tell Canada they need to figure that out, but other manufacturers are concerned with their business models on if they can still ship to Canada and what to do with them in the short term.

Eben: There is some good in the requirements and I don't think it's all bad, but it became an all or nothing. How do you go about the acceptance criteria as that's all missing.

Mark: I would like to suggest to at least have the communication of when this implementation date will take place and not be an immediate implementation. We need to iron out the toughness requirements, location of toughness measurements, minimum energy requirements, and these types of things. The manufacturers aren't going to have any idea what to give you.

Chris: BC is first in adopting it in its entirety, what does that mean for a CRN from 6 years ago? Is that no longer valid? What if a previous CRN was registered first in SK and then in BC; part is no longer valid? How does it get communicated? Perhaps a variance would be issued but the criteria of variance would change between provinces.

Aziz: We are trying to gather technical objective information on variances and may be able to provide a more specific answer in a couple of months.

Eben: Does anyone have a suggestion on what we might do? Maybe having a jurisdictional matrix on who will implement it? Does anyone object?

Caslav: Yes, because I think we are too small to have two different approaches if not multiple approaches. I am looking that we have an approach that all provinces will accept and not different as it will cause more issues.

Eben: At some point we need to provide to industry as they will want to know what they need to do to supply a pressure vessel come January. What do you want to do?

Caslav: I would like to change B51. If I had a solution I would love to say it.

Rob Troutt: As I sit here and listen to you talk about this, I see you are in a similar boat that the Chiefs in the USA are. Example: B31.1 requirement for visual examination. Our solution to that was a code case. Are you able to do that in the meantime?

Eben: Supplement maybe?

Joel: National Board is happy to help in any way that may be needed.

61.12.2 CSA B52-23 Ballot 9391 Paragraph 6.3 Class T Machine Rooms

Wording requiring outside access doors and vestibules for Ammonia were removed from the RFC proposal which was approved under Ballot 9391.

Nancy: We were looking at B52:2023 for our new regulations that have now been published on September 7th. We had some concerns but felt it was important to get the B52 code adopted in the 2023 edition for what it had to offer on A2Ls. Main change carried into our regulations was to include a vestibule from the previous editions.

Myriam: During the adoption of B52 and after when we were working on the handbook we found that 6.3 has some problems mainly with ammonia applications. The ammonia regulation based in the USA, IIAR, which is a new standard, we are referring to that standard, but the problem is that it is a new standard. The new people are not very knowledgeable about that, but we are working on incorporating that. It will be up to discussion tomorrow. IIAR-2 standard is not available in French, people will not buy it in Quebec or maybe even in New Brunswick. I can provide the file to Eben for jurisdictions to state if they have adopted B52 or with exceptions.

Glen: I spent most of my committee time arguing about what happened to that edition. I had a lot of consultations with Refrigeration Mechanics, operators and they were all in total agreement that this was a huge mistake. Credit to the B52 committee they have listened and have tried to make changes to alleviate the concerns. I think this will work and change over time. Will keep vestibule requirement in Ontario as well.

Eben: Show of hands who will be adopting in the next 12 months for Myriam: Nunavut, NL, BC, MB, Canadian Energy Regulator, NWT.

Eben: Who will adopt within the next year with some modifications: QC, ON, NS, AB, PE

Grace: Pushpinder has been receiving a lot of requests from industry for new guidelines for B52 around volume calculations with A2L; we wanted to see if any group is already working on or an example presentation?

Glen: No.

Lou: ACI TC has been working on various questions.

Eben: We don't have enough info from Pushpinder on what clause he is asking about.

61.12.3 CSA B56 Power Engineering (Discussion Item)

Implications and challenges related to jurisdictional adoption

(This is discussed under the presentation section)

61.12.4 National Board "VR" Program Initiative (Discussion Item)

Training and Authorization that will allow jurisdictional inspection staff to perform shop reviews for issuance of National Board "VR" (Not applicable to organizations that are ASME valve assemblers/manufacturers)

(VR Benefits PowerPoint Presentation was presented by Joel Amato.)

VR and T/O accreditation programs are limited to NB Certified Pressure Relief Valves.

Brian Krasiun has been trained and appointed as Team Leader for this program and others.

Q: In the T/O program, is there the ability of the program to make set point adjustments and if tests they can make an adjustment?

A: Correct if it is in the code adjustment.

Once every three years (Certification Process)

Eben thanked Joel and Brian for presenting.

Caslav: I want to confirm the costs, does it include the testing of the valves?

Joel: I will send that info to you, probably about \$250 per steam valve. It's \$1150 USD per three years for the certification, cost of the audit, shipping and testing of valves.

Aziz: Are you looking at a Canadian lab?

Joel: We could be. Many petrochemical locations here could use it.

Ryan: Is there a cost for the tri annual audit of jurisdictional auditor?

Joel: It won't be on you; the National Board will take care of that. You would cover sending the people for training to National Board.

Liam: Qualifying auditors within each jurisdiction to perform shop audits, the training for that is three-day training at national board and observe 3 audits in jurisdiction?

Eben/Brian: Correct, they would take VR program and team leader training also.

Liam: What would be the typical cost for National Board to come in and perform those audits on those shops?

Joel: Around \$200 an hour for our team leaders to travel to do an audit. It starts around \$4000 for audit instead of doing your own as team leaders.

Eben: It will be good for larger jurisdictions.

Caslav: How long is team lead training?

Brian: Two days.

61.12.5 Hydrogen - Design - Production - Plant Operations

Distribution - Dispensing - Utilization

*Relevant Codes and Standards, Design Registration
Training/Qualification for Operational Staff*

Eben: We have a couple of small projects; one is a refueling station at the oil refinery of a pilot project in our jurisdiction for refueling their employee vehicles at their site. We also have a small pilot project with 5 MW electrolyzer hydrogen from cars in Quebec. 3.13 and Section VIII will be used.

David: We got a renewable energy hub like a refueling station, as well as a shipping hub of ammonia to Europe. We have large wind power generation farms that will power electrolyzers that will create liquid ammonia. Large liquid ammonia tanks that go up to 13,000 psi. (Division 3 vessels.) Essential we have three potential projects like that, quite a bit of activity in the province. Ready to regulate these but still gaps on end use side.

Djordje: Hydrogen is not new in AB. There are some new things that have become quite interesting, there are a lot of companies that are making electrolyzers that don't understand what it's all about. Electrolyzer looks like a plate heat exchanger but instead of plates they have membranes. Code case 3078 has been issued a few months ago and the position of Section VIII committee is electrolyzers are pressure vessels. We now have rules that we can use, and I think they are good rules. It allows those materials for membranes to be used following the code case. We have a few requests in AB to build electrolyzers and none of them meet the minimum code requirements, and no QC program. Europeans are doing the same and bring here, but it is not fitting to ASME. Another thing that is popping up in AB is our refueling stations, they would like to convert some locomotives to use hydrogen. Which means on federal land near railways, but it is a debate if it is provincial or federal. May be no jurisdiction for province. 13,000 psi pressure on these systems. Seeing tendency to use B31.3 Chapter 9 for 10,000 psi and more. Until recently Chapter 9 required 2/3 of the yield stress. Which means we are going up 80% of the yield. Some are using Chapter 9 but don't

follow all the rules. For mobile units, will it stay on site and be refueled by another truck and Transport Canada will not know about and who will inspect it? Mobile situation, Concept: Truck A storage vessel 500-600 bars pressure, Truck B mobile compressor skid boosting to 900 bars, and Truck C will receive for fuel. How that will work I would say A & C is Transport Canada but B will be stationary so how to deal with it? We should ask ACI TC to investigate this further, as mobile units will go across Canada.

Eben: Sounds like we need to bring this to PTAC, the federal government, as they are traveling in provincial and international borders. This sector of transportation and vehicle refueling we don't regulate. I wonder if there is a way that this is something we don't have to worry about as there are a lot of dangerous things we currently have to worry about. We want to make sure our government oversight bodies regulate it. We will look after the technical aspects on how they build the cylinder, pressure piping. ACI TC is working on the high-pressure skid right now.

Caslav: It makes sense what Djordje was presenting but previous projects were Transport Canada, and I was never getting clear direction on what is Transport Canada and what is us. It's not that simple as refueling, it's the whole process.

Eben: I'm not saying don't worry because Transport Canada is involved, but it is their responsibility as Transport Canada.

Djordje: There can be hydrogen appliances installed in a house. We understand that we have hundreds and thousands of those vessels in Canada for natural gas at 250 psi. In the future if people replace them with 13,000 psi hydrogen vessel, would you feel comfortable if your neighbor installs appliances for hydrogen and near your fence, that is very flammable?

Liam: Echoing a lot of the same challenges especially in the refueling station sector, with about 6 hydrogen refueling stations now. Seeing both on site hydrogen electrolysis production and replaceable ISO Transport Canada skids, where once empty, they remove and replace with a full one. There are government incentives and a push to put in more station development. There is a lot more European entirely complete dispensing equipment that companies would like to bring in, but none is CSA approved. CSA has the HGV-4 standard for fuel dispensing equipment, but we are not seeing anything trying to be certified to this. In most cases none were designed with CSA/ASME in mind; it's all compliant with PED. This falls under different branches: us in some respects for pressure, it falls under gas for fuel, and in BC it falls under the BC energy regulator as well whose acts were just updated to include hydrogen. So there's a network of different requirements. I don't have any wonderful answers to fix the problem. It's B31.3 piping, ASME vessels, with the exception that Part 3 does accept certain Transport Canada standards. So you can run into a scenario where a piece of equipment may be acceptable under one piece of provincial legislation but not under another.

Eben: The regulations have not been developed to regulate these items. We have no regulations yet and that is what we are discussing and our concerns. It is not new

technology, but it is new use of the technology of hydrogen gas. We should report to our senior people as we talk with each other that we need a regulation to adopt to keep people safe.

61.12.6 Carbon Dioxide - Capitation and ground storage

Discussion item on how installations may be subject to BPV regulations may be and seeking input from members that have knowledge on this subject

Aziz: We are getting a lot of questions with these types of projects and the issue we have is we don't have anything in our regulations that looks over these types of projects. My question is to my friends in SK and AB regarding transportation side of CO₂, the pipelines.

Djordje: Within AB, pipelines are under Alberta Energy Regulators. If going to SK, it is under Canada Energy Regulator. Interest in using existing pipelines for CO₂. We usually aren't involved except for a pressure vessel or some compressor stations with vessels. For well site, what is going underground we don't know and don't want to know.

Aziz: Thank you for your comments Djordje.

Chris: Basically, same thing, if you want any contacts just let me know. I think when it comes to relief protection, they were using relief valves as essentially control valves. We had some issues where they didn't have proper relief because they selected vessels without enough room between operating and design conditions. That's the only thing I would say is to caution and watch some of that. I don't think it will be an issue now as it's been a decade of that knowledge.

Aziz: Thanks Chris. Our problem in QC is we have no regulation that takes care of transportation of CO₂. Told them CSA Z662 needs to be referenced and monitor pipelines.

Djordje: CSA Z662:2023 has updated scope to include CO₂ as acceptable gas, and CO₂ pipelines are included. Reg bodies would need to adopt this part of Z662.

Eben: In NB, if there's a processing plant, we have a line of authority at a given flange and use Z662 for the piping.

61.12.7 ASME – Section 4 Name plate stamping and Data reports

(Discussed in Section 61.10.3)

Nomination of Vice Chair

Matthias Mailman nominated David Brockerville as Vice Chair of ACI.

Chris Selinger seconded.
Passed unanimously.

61.13 Presentations - Provided at 15:00 on both Days 1 & 2

61.13.1 Day 1 - CSA B56 Power Engineer Facility Rating and Staffing

Overview of progress to date on development of the Standard

Committee structure and makeup

Scope, terminology, incorporation of seed document

Next steps, timelines, challenges

Note: (During Presentation Q&A for clarifications only

On Day 2 Under Item 61.12.3 ACI will further discuss

the content of the presentation and provide ACI feedback)

(B56 presentation 2024 attached)

Eben: Could you touch on minimum and reduced attendance?

Tom/Glen: Minimum = Certified operator on site 8 hours a day

Reduced = Someone needs to check once every 24 hours or once a shift

Eben: The concept of redundant boilers should be captured somehow.

Tom: The reason for not capturing it is because in winter they may all be running, and plant size is larger then.

Glen: You can run your daily operation but if it is minus 40 out you would need to have higher capacity to run it. If you have comments go to CSA to provide them.

Eben: Any thoughts that we can have these links on our ACI website?

Tom: Yes, we can look into that.

Note: Closing date October 20th for comments on CSA website.

Brian: Slide #19 Boiler facility and classification, I noticed that it varies in the bottom end from the 4th and the 5th. Is there an option for the organization to do a substitution to go with the reduced attendance rather than a minimum attendance?

Tom/Glen: If you take the 5th class out then it makes sense. But I will be perfectly honest that if we were to adopt this, we would not be doing a 5th class (not in ON regs.) We very quickly realized when making this that this was going to be solely adoptable for everybody as no province is on the same page in doing this.

David: Guarded plant status would fit into this new system, is there any allowance for that?

Tom: You have to have a guarded plant to not have full attendance.

Caslav: I just found out that you are talking only about steam boilers and water boilers, not other fluid e.g. glycol?

Tom: This is only in reference to steam boilers. Annex for hot water and low volume boilers. In our regulations we treat a boiler as a boiler.

Djordje: When you are making a rating of those complex boilers that are part fired after the hydrogen performance, how are you treating them in that case? Fired or not fired? Or combining them?

Eben: Sounds like a steam boiler.

Tom: I would think that the higher number was the one that got used. And for the most part it is irrelevant as they are first class plants.

Eben: The whole work of the steam boiler part and for the country to get on board could be using it for how they are going to man steam fired boilers. This could be the first way to get the country to adopt B56.

Liam: Very similar on the refrigeration side in terms of calculations are concerned. Very similar challenges that the group worked through and all the jurisdictions. Looking forward to seeing what comes out after the public review. Probably still some tweaking but it's been a good process.

Aziz: We do have stakeholders reviewing the French version?

Tom: Yes, and we do apologize as it was a mess.

Aziz: And we need them to make comments and suggestions and not just criticize everything. Will we consider redundancy on the safety side of it?

Tom: One of the opportunities for improvement in this document is that there is no give or take on this just take, there are no bonus points on the hazard score for having a low water cut off, etc. We are going to try and ensure we have the right calculation with the hazard score. And we want to ensure we get it right the first time and not have to change it 5 years down the road.

Chris: Just to clarify the seed document that came that the ACI forwarded had nothing to do with path 1 or path 2. Just as background ACI had nothing to do with path 1 or path 2.

Liam: CSA and the committee put together some good excel calculators for this. Is that something that can be shared with this group?

Tom: Yes, that is not a problem, I think we can get that sent out.

Tom: What do you all as chief inspectors think about solely adopting the kW ratings only for now or the full document with hazard scores?

Eben: This is almost 20 years in the making and it is not far off. I don't disagree on the 30,000 kW and the dividing. I think this has been very beneficial and I will have to take on as public review comments. From what I heard there could be a redundant boiler allowance. There should be an asterisk that doesn't penalize someone for having a redundant boiler. Also, campuses with boilers 20-minute drive apart. We need ways to make provision to have a way to take off hazards/ incentive.

Brian: Has there been any thought given for jurisdictions to modify and make some of these changes?

Glen: Yes they could in regulations but we are just trying to provide a standard to bring everyone together to not push every jurisdiction apart again.

Chris: The standard will be assessed by Saskatchewan, but you may want to consider some guidance documentation, to help the government understand the technical terms of this document. 5th class is confusing as it only applies in some locations.

Glen: If the line of 5th class wasn't there would that make it better?

Chris: Yes.

(Grace to send to Nancy to forward excel calculators to everyone.)

61.13.2 Day 2 - Lokring Presentation - Tom Brown (Technical Director) & Donal Heery (Technical Manager)

*Innovative solutions for piping repair and maintenance
Overview of potential uses in various scenarios where
Lokring fittings could be installed without having to perform
"Hot-Work" welding.*

Presentation on screen.

Eben: Is there limitation on what schedule of pipe you can put that fitting on?

Tom: For stainless steel fittings, they're qualified for schedule 10, 40, & 80, for carbon steel it's schedule 40 & 80 and at some sizes, schedule 180 and XX.

Caslav: When he was installing, he just dropped the fitting on the tube, there was nothing else stopping it going down.

Tom: That was a carbon steel fitting which has an extra shoulder fitting in the middle. If there is no shoulder, you would use an insert to hold it.
The stainless steel uses a slip coupling. There's the option of a slip or a shoulder coupling.

Caslav: You were talking about qualification, do you have ASME N type certificates?

A: No we do not have an N type certification.

Caslav: Do you have CRN number in any province?

A: Yes, just recertified a few days ago.

Caslav: How can my inspector ensure this is properly assembled?

A: There are three visual external checks that it is installed correctly and it depends what type of system. We mentioned that you'll have one and a half marks and these marks confirm the pipe is correctly centered. If you have not been there for the installation, you can check the marks to ensure it is tightened. Also check that drive ring is tight to center collar. Third, if the lip is not showing it means it is not tightened. Once it is installed correctly you will do a service test such as hydro test. You can also use digitally enhanced radiography down the road to inspect the pipe.

Aziz: Wonderful presentation, thank you. The paper that was published, can we get the paper that was published in 2020?

A: We can certainly share that with you.

Don: Thanks for this presentation. You mentioned trained installers have a unique Lokring identification number. When an installer installs these, is there a way to identify that they were trained? Do they record their Lokring number on the Lokring fitting?

A: Yes, so typically the operators will have that process in their quality procedure, adopting Lokring's installation procedure. You would have a check sheet and fill in your Lokring installer ID.

Yanpeng: How do you disassemble or rework the fitting?

A: The rework rate is remarkably lowly, 1 in 10,000, but if it was done wrong, there's no way to remove; it's not reusable. You would need to cut out a slightly larger section and replace it with a pipe and fittings or use a different repair method at that time.

Brian: Is this technology also available for tubing?

A: Yes, there are tubing fittings available mainly stainless steel, depending on the industry sector, but primarily in the automotive industry. 1/4" to 2-1/2" od tubing range, 316 stainless steel.

Djordje: Beside Ontario, do you have CRN from any other province?

A: Historically we have it stamped by all provinces. The only province we haven't sold to is PEI. It was first registered in 1998.

Shah: The drive ring, what percentage of specified minimum yield stress do you consider safe?

A: I wouldn't be able to give you that myself, but that is the secret ingredient around the technology. It's not beyond the elastic limit.

Eben: The presentation exceeded expectations. It's a really interesting product. Many applications in new construction and in nuclear as well. Thank you very much.

61.14 Future Meeting Locations and Dates -

Attached: ACI and SOPEEC Meeting Host and Location Proposal

Discussion of possible locations, after being in the East last year and this year.

Motion: Chris, to go to Ontario next year and NL the following year

Second: Liam

Approved Unanimously

Caslav: Niagara Falls, September 9th & 10th, 2025

61.15 Adjournment

Eben: It has been a lot of fun and I really appreciate your support.

Djordje: Thank you for leading the meetings over the last two years and I appreciate your support.

Muhammad: Round of applause for both Eben as Chair and Liam as Vice Chair.

Eben: Thank you to Jayd for taking the minutes and Nancy for hosting, also National Board for lunches and all the sponsors.

Motion to adjourn. Passed.

Day 1 adjourned at 4:30pm

Day 2 adjourned at 4:00pm