Agenda

American Petroleum Institute
COMMITTEE ON REFINERY EQUIPMENT
SUBCOMMITTEE ON INSPECTION

Steve Bolinger, Chairman

1. INTRODUCTIONS, ATTENDANCE SHEET, ROSTER, AND RECOGNITION

2. APPROVAL OF AGENDA
   a. Approval motion: John Reynolds // Second: Joe Kryniki // voice unanimous

3. APPROVAL OF MINUTES FROM SPRING 2016 MEETING
   a. Approval motion: John Reynolds // Second: Josh Yoakum // voice unanimous

4. SCI EXECUTIVE & CRE ISSUES
   • Publication
     o RP 572, 4th edition, published Nov. 2016 - under review
       ▪ Going out for publication
     o RP 574, 4th edition, published Nov. 2016 - proof completed
       ▪ Going out for publication
   • Document update:
     o Terms and Definitions Document – Study Group formed led by Chad Patchke
       ▪ The study group will look at the subject matter. It will come back with a recommendation and scope of work. (Study group was formed at SCI Executive meeting.
       ▪ The thought is this would be an electronic data base. It would aid in consistency of terminology and definition.
       ▪ John Harville: SR3 was done in 2015. Chad is leading, with Greg Alvarado helping out. A lot of what we do depends on what API allows us to do. Several different ideas are being discussed. Should be a centralized location.
       ▪ Greg Alvarado: Should help us keep in sync across all the document.
       ▪ Steve Bolinger: This is only for our group first, and we would probably be leading all other API groups. Should be something the other groups can duplicate.
- John Reynolds: We have monies for master editor? (Steve Bolinger: We have money approved. It has come up in the executive meetings, and it was held to the budget for 2017 and 2018.)
- Steve Bolinger: Chad should be reporting on this at the next Standards/Codes meeting in May. If you have interest, reach out to Chad.
- Chad Patchke: We have many definitions (750+) and acronyms (250+). Similar and duplicates will be narrowed to one solution. Study group will come up with the solution to get to this point.

- SCCM
  - RP 934-H/I – SCI Co-ballot & Co-Chair
    - Still looking for an SCI co-chair.
    - Brent Ray: Did we find out if these are combined? (John Reynolds: They will be combine these. Ben Bambrila: That is what is happening.)
    - Ben Bambrila: 934H was geared as maintenance and 934I was inspection. SCCM decided too much overlap existed and should be combined. Approved at Fall meeting of those groups. They will be merged.
    - Mark Geisenhoff will be the SCI co-chair.
    - Brent Ray: Asking the question if we have enough presence to develop similar documents inspection/mechanical integrity issues in those areas? Consensus was yes, with the co-chairs, that is an okay method.

- 10 Year Plan
  - Copy of API SCI Document - Ongoing
    - A work in progress to ‘load level’ the documents. Not too many documents in one year. An effort in improving efficiency.
    - Next meeting we will try to have a plan on load leveling. Extensions will be required in some cases, but others may be pulled forward.
    - John Reynolds: Will also help with planning the meetings, and possibly moving this meeting (SCI Joint) back to Wednesday afternoon. (SB: Agreed, and it may help ICP also.)
    - Straw Vote: How many want to move this back to Wednesday afternoon?
      - By show of hands, the move back attempt will be made. That is our goal.
    - Peter Hunt: How are we interacting with API 653. (SB: there is a coordination meeting on Sundays.) (Floor: API 653 has a meeting on Tuesdays that leaves a time for inspection discussion.)
    - Mark Geisenhoff: Would moving our meeting to Wednesday conflict with the OPS Symposium? It used to meet on Tuesday, but has moved to Wednesday. (SB: That could be a conflict. It has been a shift, and it is unknown if it will change back.) (MG: What about us on Tuesday afternoon? SB: Too many changes in the information from the task groups.)
    - ACTION: SB to check if OPS Symposium is now permanently moved to Wednesdays.
5. STATUS REPORTS OF THE SUBCOMMITTEE CODES & RECOMMENDED PRACTICE DOCUMENTS

<table>
<thead>
<tr>
<th>RP 571, Damage Mechanisms</th>
<th>T Harrington</th>
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<tr>
<td>- Very energetic meeting and reviewed some write-ups.</td>
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<td>- 75% of damage mechanisms have been written up.</td>
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<td>- Half of those write-ups have been reviewed.</td>
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<td>- Continuing forward to write up remaining, and be done in 1st Quarter 2017 in order to provide to SCCM chair of RP 571.</td>
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<thead>
<tr>
<th>RP 572, Inspection Practices for Pressure Vessels</th>
<th>R Konet</th>
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<tr>
<td>- 2nd page proofs approved this week and provided back to API.</td>
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<td>- May be published this year.</td>
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<tr>
<th>RP 573, Inspection of Fired Boilers and Heaters</th>
<th>T Harrington</th>
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<tr>
<td>- Generated a list of scorecard items which have been assigned and worked on by spring meeting.</td>
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<td>- Ballot out after that meeting.</td>
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<tr>
<th>RP 576 Pressure Relief Devices</th>
<th>R Schubert</th>
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<td>- Page proof is being reviewed, and publication may occur late 2016 or early 2017.</td>
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<tr>
<th>RP 577, Welding Inspection and Metallurgy</th>
<th>S Bolinger</th>
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<td>- No scorecard items initially, but many good ideas have led to several items.</td>
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<tr>
<td>- Document will be reformatted and each section will be reviewed (assigned).</td>
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<td>- On track for 2018 publication date.</td>
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<tr>
<th>RP 578, Materials Verification Program</th>
<th>J Yoakam</th>
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<td>- Reviewed remainder of ballot resolution. Items will be cleaned up and added to the draft document. Ballot anticipated in spring.</td>
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<thead>
<tr>
<th>RP 581, RBI Methodology</th>
<th>B Ray</th>
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<td>- Resolved all ballots (11, with 2 on recirculation). On track to issue Addendum in October 2017.</td>
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<td>- Very good re-energized group.</td>
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<tr>
<th>RP 586, NDE Methods</th>
<th>J. Krynicki</th>
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<td>- Meeting covered the initial scope of the document. And found the structure acceptable.</td>
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<td>- Moving forward, it will be an NDE resource complimenting API 571 and the other SCI documents.</td>
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<td>- New Vice-Chair: Mike Sens (Chevron)</td>
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### Codes and Standards Task Group

- **RP 574**: Final page proof reviewed, in API’s hands, and should be published this year.
- Restated the scope of the group: responsible for only API 510, 571, 572, 574, and 580 documents.
- Officially kicked off the next update for API 510/572 (2019 publication). Please take a look at these documents to submit things to the TG.
- Worked on scorecard items, with one in particular that deals deferral terminology. Trying to rework that topic. Common language for deferral for API 510, 570, and such, with hope it could be in API 653. Will be balloted soon.
  - Documents currently allow 6-mos or 10% of interval (short term). We need guidance on items that fall out of this, which in the proposal includes risk analysis for example. Nothing with a ‘shall’. There is no formal deferral process, as this was decided to be removed. API 510 has a section that could be adopted. Still in development.

### 6. API INDIVIDUAL CERTIFICATION PROGRAMS

**a. Status of the Current Programs**

- 15 programs, with 24000+ persons around the world.
- 14% growth in each year that Tina has been tracking.
- Seeing a slump this year against the anticipated growth.
- Developed several items for certification, as a growth area. Source inspection exams are now available in 3 areas (fixed, electrical, and rotating equipment).

**b. Specialized Exam Development**

- API 576 certification was rejected last time, but the ICP TG is looking into heater/boiler certification (API 573). Travis Harrington is leading this effort.

**c. Advance Certification Program – Inspection of PRD’s Other Items**

- Discounts to member companies is being discontinued.
- From 1989, it was an appropriate to move in the direction of certification the TG report to the SCI was correct. These days the ICP covers many issues and areas, and the TG needs to be evolved to represent those areas and should move out from the SCI oversight. Tina has been written a whitepaper on this and API is considering it. Suggestion is for ICP to become its own entity and make its own destiny.
- JH has concerns with this, and worries that the SCI decisions such as not wanting API 576 certification, would not be followed. TB says that if the ‘new’ ICP reports to SCI, that those type of
decisions should not be any different. Justin Monroe also suggests the same concern. Oversight by the specific TG’s and even SCI should remain. [Discussion ensued, and was heated.] We should retain our ‘sphere of influence’ over our documents and their respective certifications/ICP relationship, was a theme discussed.

- SB/JR: We would like to thank Tina Briskin on the tremendous growth and success of the ICP during her tenure at API. We will miss you!
- Introduction: Andri will be taking over as Tina retires this year.

7. REPORT FROM THE MANUFACTURERS’ AND CONTRACTORS’ SUBCOMMITTEE ON INSPECTION

- In the meeting, discussions are free and spirited about what is happening in the industry.
- Started discussion on what the group does. Decided to have a small group that comes up with things. They would like to present items, lessons learned, etc.
- Encourage the owner/users to participate with the group.

D Holder

8. NDE REPORTS

a. NDE TASK GROUP

- Spoke mostly about HTHA with a presentation from BP.
- John Nyholt discussed the community programs.
- Dave Bajula provided a proposal linking API QUTE and ASNT. This will be discussed at the API Inspection Summit with a good cross-team.

J Krynicki

b. ASNT LIAISON REPORT

- above

D Bajula

9. API INSPECTION SUMMIT

- January 30-February 2nd, 2017
- Ray provided a presentation of items that will be provided for training. Highlighting new items on tanks and crude unit inspection (P66 folks).
- Ray showed the panel discussions that will occur. Highlighted that there will be new panels on PCC-1 Bolted Joints, one on drones, and one on HTHA. Panelists are predominantly owner/users talking about their experiences.
- Currently we have been finalizing the program, with over 270 abstracts to review, and now we will have over 170 presentations. Draft program just went up today, but it will be updated, with full development within a week.
- Attendee preregistration is down as compared to previous years. And we still have 7 vendor booths available. “PLEASE help encourage attendance.”
- JR: Suggest API provide an electronic flyer we (the SCI membership) can provide to our companies.
- The 2017 Super Bowl is set for Feb. 5, 2017 at NRG Stadium in Houston.

R Konet
Texas. This means rooms will be at a premium! Get your reservations for travel done very soon.

## 10. LIASON REPORTS

### a. National Board/NBIC, API Regulatory Action Program

- Provided information on the NBIC
- JM asked for a table on the codes and versions of those codes per state. Phil replied he didn’t have something available. JM reports that California is restricting API 510 and 579 for example, to previous editions (not the most current). It was mentioned by Clay Rodery that sometimes these type of groups don’t have the resources to look at the changes, or even review them and understand them. JR mentions the state of Washington after ‘education’ by a group from API accepted the ‘current edition’ language.
  
  i. OPPORTUNITY: Develop presentations on the codes/standards for those groups/states that need the education on standards and current documents.

- No changes in the jurisdiction regulations for API 510 chart.
- ASTM has a committee on (environmental issues) underground storage tanks, sub committee E50.04, dealing with RBI of tanks. The document is now 142 pages in length and deals with the measurement of failure. Phil finds many things wrong with this document. Document may be prepared this spring, and Phil will give it to the SCI for review.

### b. ASME Standards On Design

- BPV Section VIII: the 2017 edition of Div 2 will include the introduction of Class 1 vessels that are based on a design factor of ‘3’; the common rules will show up also (working out details of certification of Class 1 vessels; NDE requirements in Table 7.2 have been changed.

### c. ASME Post Construction Codes

- PCC-1: continue with monthly teleconferences; anticipate publishing new edition in 2017; new appendix for powered equipment guidance; revisions to App M (washers) and D (flange flatness and defects); movement of Tables 1M/1 to App O, to help with the guidance.

- PCC-1: Emerging issue regarding training/qualification of bolted joint assemblers. ASME Training & Development has a branded program, but it has a risk of creating an uneven playing field due to the “ASME brand”.

- PCC-2: Continues to work toward the publication of the next
revision in 2018.

- **PCC-3**: Continues to work toward the publication of the next revision in 2017.

- **Tom Folk**: Has ASME been addressing the carbon steel toughness issue brought forward by Fluor? **CR**: Board on Pressure Technology has formed a task group and they are reviewing the Fluor data. Nothing has come out of the task group review, other than there is questions about the data.

d. **Upstream Liaison**

- **Nothing to report.**

e. **API RP on Corrosion Control Diagrams (API 970)**

- **Worked on at NACE Corrosion Technology Week.**

- **JR**: Reports that this is the 2nd time ballot resolution has been worked. Feel good progress has been made, and almost all negative issues have been addressed. Hoping to have a document by the end of the 2017.

11. **OLD BUSINESS**

- **Qualification of UT Personnel for HTHA Inspection**

  - **Discussed below and elsewhere in the notes.**

- **HTHA CSB Report**

  - **API-CSB 4-11-16**
  
  Letter re Tesoro R 20

  - **CSB**

  - **Recommendation Tes**

  - **SB**: Provided the background on the API response to the CSB findings which included refuting the CSB finding on carbon steel temperature/pressure limit. **CSB** has now found the API solution unacceptable, and has closed the issue. So, API is in conflict with **CSB**. And this means industry is also in conflict. The question is on a local level: What are we going to do about it?

  - **Vance McCray (941 Chair)**: API is still going to have a response to the latest CSB decision. At the Fall meeting of 941, they plan to use current industry information to discuss design life according to the curves. It is anticipated that with life cycle analysis, the curves may shift with age. But the group still believes the 400F/50psig is still too low, and have models to prove it. The group thinks that the
models and information point to good developments that should eventually be acceptable to the CSB.

- **REQUEST**: API 941 would like a liaison from SCI, but would also like SCI to form a TG to look at the inspection part of the document, and make improvements.

  - **JR**: Does Vance know anything about inadequacy of the inspection part of API 941? (Joe Krynicki: Consensus is we have areas that need improvement and need to address, such as qualification. Fair amount comes from the JIP’s and from owner/user experience.)

  - **Ray Konet**: Also saw a letter that includes API 581 disagreement. (Brent Ray: Our TG would rather not put any ‘shall’ in the document, and would rather reference API 941 as the final decision maker in design.)

  - **Ray Konet**: The CSB document says one shall not use carbon steel over 400F/50psig. Shouldn’t we have a policy statement? (Discussion from various centered on approaches and thoughts on how the SCI could respond or could address the concerns.)

  - **JK**: The need for qualification of technicians, and the availability of good samples for testing is critical. (JR: This could be a long discussion, and it will be taken on at Inspection Summit.) (JR: Probably half of the technicians out there inspecting for HTHA are not doing so satisfactorily.) [Discussion on this thought ensued, nothing to really report.] (JK: Says that AUBT isn’t the only technique, and others are being worked and developed.)

- **Motion (Joe Krynicki)**: Create a scoping team to propose wording for API 941 in the area of inspection. (SB has full text.) (Second – John Reynolds)

  - **TB**: Suggests that according to API, the formation of certain team recommendations may not be approved without addressing the need and justification. The program has to be self-sufficient, with regards to qualification and certification of inspectors. So, please follow the API guidelines.

  - **Vance**: Really think a task group is needed, as the changes and such are warranted. (SB: After several discussions, a study group is needed to primarily scope out the issue and come up with a direction with parameters for success. A task group would be the outcome.)

  - **John Harville**: It may be appropriate for API to issue an alert concerning the use of inadequate inspections, in order to address this issue according to the CSB concerns. Andrew Morey agreed with this, as it seemed the room did also.

  - **Mark Carte**: Stress Engineering is at the cusp of introducing a method to qualify samples, and techniques to detect HTHA damage. Open to work with anyone here to complete the work. Will be providing more information as the work progresses.

  - **Vance**: SR3 is planned for spring 2017, with new curves to
be developed. Work through 2018, and publication in 2019.
- RK: change the motion to ‘shall include guidance’ → accepted by JK.
- Vote Called: Unanimous.
- **Study Lead:** Joe Krynicki
- **Study Team:** Mark Carte, Michael Odigie, Greg Alvarado, Ray Konet, John Nyholt, Justin Monroe, Mike Farris, Mike Sens, BP(?).
- **Goal:** Proposal for path forward for SCI at spring meeting, in order to kick off then. Includes SR3.

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<th>12. NEW BUSINESS</th>
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<tr>
<td><strong>a.</strong> SCI Voting Members and Voting/Meeting Attendance Requirements</td>
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<td>- Will be worked on within the two documents we discuss below.</td>
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<td><strong>b.</strong> Task Groups - Roles and Responsibilities</td>
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<td><img src="image" alt="Roles and Responsibilities for Ta" /></td>
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<tr>
<td>- This is a document that was developed by Clay White. It should be read/reviewed by each TG chair.</td>
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<tr>
<td>- Brent Ray noted that you need to make sure you access to the API SharePoint site. Send requests to Steve Crimaudo.</td>
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<tr>
<td>- Leslie Ward mentions make sure you contact API when you switch companies or change any information.</td>
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<td>- <strong>ACTION:</strong> BDRay and John Harville to take this document and revamp it for some ‘ease of reading’, combining it with items he has developed for API 581.</td>
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<td>- i. Josh Yoakum suggests a defining of co-chair</td>
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<td>- ii. SB suggests we put it on SCI website</td>
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<td>- iii. Volunteers: Leslie Ward, John Harville</td>
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<td><strong>c.</strong> Chair/Vice-Chair nomination process</td>
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<td>- TGs go through SCI Executive review.</td>
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<td><strong>d.</strong> Task Groups - Agenda submitted in advance</td>
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<td>- Expectation is 2-weeks prior to the meeting, put it on the API SharePoint site.</td>
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<td><strong>e.</strong> Steam Methane Reformer Furnace RP (SCHTE)</td>
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<td>- Ray Konet: has been getting updates, and their group is working on an inspection section.</td>
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<td><strong>f.</strong> Voting members and contact information spreadsheet</td>
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SCI Roster and Voting Records 2016-

- Needs to be updated.
- Lots of problem with not enough people are voting. Some of the problem may be that the voting status is wrong.
- JR says there are rules that API has, that need to be followed.
- **MOTION:** JR would like to form a study group to formulate a document on how we handle voters, membership, etc. – Second – Brent Ray.
  
  i. JH suggests this is really a CRE issue? Discussion said we needed to handle it ourselves first.
  
  ii. Floor suggested guidance on how one becomes a voting member.

- Approved.
- **Study Group Members** – Brent Ray, John Harville, Justin Monroe, John Reynolds. ➔ Same as other TG R&R document group!
- Clay Rodery said he would forward some ASME procedures on this type of action.
- **ACTION:** SB will address access issues concerning the API SharePoint sites, including membership listing and status, with the API representative/leadership. Will report back to this group at next meeting.
  
  i. BR wanted to note that it is very difficult when working with CRE to get changes made, especially done quickly. API RP 581 TG for example has been pursuing changes over many years, and we still aren’t getting things right.
  
  ii. **SUGGEST:** API provide a direct liaison with the SharePoint sites, and not rely on the other API liaisons to interface with them. We need actions, not wait and see type attitudes.

g. API RP 588 – Source Inspection of Fixed Equipment

- This is a proposal at this time. It is currently only a study guide.
- JR provided some information on the background on source inspection document that is available now. At the time, the recognition was this should become an RP-type document in the future. This document is on the API website for anyone to download and read.
- BR brought up that Instrument & Control Systems –
Mechanical Equipment is having a full day meeting on source inspection.

- SB said the executive group had decided the movement to an RP-type document is a good path forward.

  **MOTION:** Set up the study group to see if this is needed.  
  **second:** Peter Hunt

  i. No further discussion

  **Study Group Lead:** John Reynolds

  ii. With Travis Harrington and Peter Hunt as members.

  iii. Goal to provide a recommendation for path forward at the Spring meeting.

- **h.** Change the name of the committee from SCI to SCIMI - Inspection & Mechanical Integrity

  - SB presented the SCI EC comments on the change in the name of our sub-committee.

  - **JR:** About 15yrs ago, SCAST was named SCPVT (pressure vessels and tanks), and someone realized they didn’t handle pressure vessels.

  - **JM:** Agreed we need a change. Some of our documents actually address MI as well as Inspection.

  - **JH:** Suggests that MI is a bit too broad as any group under the CRE really deals with aspects of MI.

  - **Greg Alvarado:** Suggests this is a good idea in consideration of industry and regulation.

  - **JM:** Sub Committee of Mechanical Integrity for Inspection

  **MOTION:** **JR** – Steve Bolinger should take the name change SCIMI to the CRE this afternoon.  
  **second:** Greg Alvarado

  i. Several suggested we may be thinking a little too broad and including MI in the title may be too encompassing and vague.

  ii. Approved.

  iii. **ACTION:** SB to address this with CRE.

- **i.** **ADDED:** API 971 Design, Operation and Maintenance of Injection Points and Mixing Points – what is this document? Who is the chairman?

  - Handled by SCCM. SB was the chairman, and he thinks it rolled over to NACE.

  - The current NACE document needed some ‘shall’ and more teeth. It is 5-6 years old. There are gaps to address. NACE
wanted to do this, and remain in control of the document.

### 13. PRESENTATIONS/INFORMATION SHARING

**a. Advancing Process Safety Program**
- Runs the OPS Symposium group.
- Effort underway with AFPM and API concerning advancing process safety.
- Several programs, and there is a Task Group on Mechanical Integrity. They are trying to create a work plan to improve the MI areas, as well as improve awareness and performance.
- Work to date: SBP, Dead legs, etc.
- Future work: Corrosion control, IOWs, DM reviews; CUI/CUF; Critical Check valves; and Training opportunities. The emphasis for 2017 will be CC/IOW/DM reviews as well as an education program for site leadership on ‘what is MI and why you should care’.
- Mechanical Integrity and Human Reliability groups have been upgraded to full sub-group to get the work completed.
- JH: Where can we find your group’s information? RC: Look at the AFPM website, the safety portal there. Must be an AFPM member. Limited to the member companies.
- Meeting this afternoon, and other owner/users are welcome to join in the meeting.

**b. Remotely Operated Aerial Vehicle (ROAV) Inspection**
- Presentation provided for the group.
- British company, which utilizes drones to screen areas needing inspection to help plan and carryout efficient and effective inspection.

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### 14. NEXT MEETING

- Caesars Palace, Las Vegas, May 11, 2017

### 14. Adjournment

- 12:01pm

See EVERYONE at the 2017 INSPECTION SUMMIT!
*(John Reynolds shout-out)*