MESSAGE FROM THE CHAIR

Welcome to the Fall 2019 newsletter. It has been a privilege to be chair this year. It’s still is a challenging time for the member leaders of the Design and Construction Division. Over the past year we have seen a number of major policy changes (to include a whole new Finance system) at the ASQ Headquarters level. Our division Member Leaders (see last page of the newsletter) have done a great job in transforming the division into a division that is working for our members and is giving them what we think is necessary for the future of the division. We are still asking ourselves the question of where we go as a Technical Community to provide real member value. One of keys to our success is going to be beyond the borders of ASQ and to reaching out to other engineering industry groups to spread the message of quality.

This year the Design and Construction Division again has been represented in a speaker capacity and sponsorships at the following conferences:

- May 2019 - ASQ World Conference on Quality and Improvement in Ft. Worth, TX
- September 2019 – Construction Management Association of America (CMAA) National Conference in Orlando, FL
- October 2019 – Advancing Construction Quality Conference in Nashville, TN

All of these have been documented in our archives and available to members. There are a few examples in this newsletter. As our past chair, Ben Trujillo has said, “All these efforts allow the Division to demonstrate its relevance to the greater industry, placing Design and Construction members in a position to educate and inform leaders and change agents from multiple organizations”.

I will continue to endorse these concepts in 2020 and look forward to continuing the division in this direction.

The challenges facing the Society and the Division continue as the transformation of ASQ continues to unfold. We must stick to our core value of providing actionable tools and ideas to the industry and giving our members opportunities to shine.

The division leadership will remain in place for 2020 and look forward to working with some truly great members and other Technical Communities within ASQ.

Next year the Design and Construction Division will be represented again with speakers and sponsorship at the following conferences:

- March 2020 - AASHTO Resource Technical Exchange in Minneapolis, MN
- May 2020 - ASQ World Conference on Quality and Improvement in Columbus, OH
- September 2020 – Advancing Construction Quality Conference in Denver, CO
- October 2020 – Construction Management Association of America National Conference in San Francisco, CA

Please visit our new MyASQ web site and join the discussions and information we provide. If you have any ideas for improving the web site or future newsletter articles you would like to see or provide please send them to us and give us your thoughts on how to make the Design and Construction Division the voice for quality in the engineering community.

Ray Crawford – Division Chair 2019-2020
Membership Update

ASQ-DCD offers tremendous construction industry-specific networking opportunities and a community of likeminded professionals where you can discuss industry-related hot topics with your peers and discover informational case studies, practical advice, and in-depth articles every month in ASQ's Quality Progress magazine and DCD’s periodic newsletter. Our participation in the up-coming conferences shows our commitment to our current members to provide the most current information about Quality in the industry. As a member, you can upload and share files, provide feedback, and even create your own network to share your own expertise. Your company can build and nurture your organization's culture of quality with the support of an ASQ Organizational Membership. The value it will bring your bottom line is immeasurable.

Every sector of the construction industry seems to be experiencing a shortage in human resources but it may come as a surprise that our Design and Construction Division is experiencing a slow steady growth and retention. Become an ASQ Member today and join the Design and Construction Division (DCD). If you are already an ASQ member, then we need your help in recruiting new members and retaining current members to help us grow and keep all our members active and renewing when the time to renew comes around. If you have questions please contact the ASQ-DCD Membership Chair, Larry Owen, at larry.owen@acig.com.

"We can’t solve problems by using the same kind of thinking we used when we created them." - Albert Einstein. Rework - Activities which must be done more than once.

Figure 1 Membership Numbers
UPCOMING EVENTS & CONFERENCES

ASQ Audit Division Complimentary Webinar: Valid or NOT? - Verifying Management System Certifications

January 21, 2020
11:00 a.m. Eastern

Learn about the new IAF database and how it can be used to support audits!

Click here to register.

After registering, you will receive a confirmation email containing information about joining the webinar.

Verifying and evaluating certificates to ISO 9001, ISO 14001, and ISO 27001 can be challenging. The International Accreditation Forum (IAF) wants to make it easier to quickly evaluate an organization's certification status. Find out how the IAF Database of Accredited Certification (IAF Cert) search can be used to help you evaluate whether an organization's claim to holding certification to ISO 9001, ISO 14001, ISO 27001, and other management system standards is "Valid or NOT".

To view a video containing information about the webinar content, click here.
About the Presenter - Sheronda Jeffries

Sheronda Jeffries is an industry leader at TIA’s Business Performance Community (formerly QuEST Forum), an industry collaboration of companies dedicated to information and communications technology (ICT) supply chain quality and performance. As TIA’s representative, she represents the ICT industry at global collaboration organizations including the US TAG ISO/TC 176, ISO/TC 176, ISO CASCO STAR, and the IAF, where she serves as the director representing users and industry and the chair of the User Advisory Committee.

Sheronda holds a B.S. in electrical engineering from North Carolina A&T State University. She is a TIA Fellow, a certified TL 9000 expert, a key developer of the sanctioned TL 9000 training courses, and a supervisory master trainer. As a long-time member of the leadership council, Sheronda co-leads the IGQ Working Group and is a former member representative and multi-year recipient of the COO/CEO award. In addition, she is an Exemplar Global Principal Auditor, an ASQ Certified Quality Auditor, a charter member of ASQ’s Quality Audit Division, a former ASQ Audit Division Regional Councilor and an ASQ Fellow.
UPCOMING EVENTS & CONFERENCES
Lean Construction Ireland Webinar

“Magic mirror on the wall, who is the fairest one of all? Putting the spotlight on quality.”
Free Lean Construction Ireland Webinar, 22nd January 2020 at 2.00pm. (subtract 5 hours for Eastern Standard Time, 6 for Central, 7 for Mountain and 8 for Pacific)
Title: “Magic mirror on the wall, who is the fairest one of all?”: Putting the spotlight on quality.
By: Prof Peter E.D Love from Curtin University, Australia
When: 2.00pm, 22nd January 2020.
Overview:
A symbiotic relationship exists between quality and safety. In construction, however, there has been a tendency for organizations to frame these competing demands in either/or terms. During construction, preference is often given to safety, which has resulted in fewer resources being used to manage quality. As result, the likelihood of non-conformances (NCRs) and engineering failures increases. Rework is required to ensure the NCRs and failures conform to functional to specification and standards. Yet, it is during the process of undertaking rework that most safety incidents materialize. In this webinar, Professor Love aims to address the following question: “How can construction organizations improve quality in their projects and mitigate the risk of defects, engineering failures and rework?”
Register at https://register.gotowebinar.com/register/8057823043770237953

The National Conference & Trade Show in the fall is CMAA's flagship event which includes a comprehensive exhibit hall, plenary and breakout sessions, and the annual Industry Recognition Awards Dinner where our annual Project Achievement Awards, Person of the Year, and other individual honors are presented.

April 26 - 28, 2020: San Antonio Marriott Rivercenter, San Antonio, Texas
UPCOMING EVENTS & CONFERENCES

ACQ will be returning
September 21-23, 2020
Denver, CO
Stay tuned for updates...

ABOUT THE MEETING

This event brings together laboratory managers, quality managers, supervisors and technicians to learn more about quality and testing in the construction materials testing industry. Sessions will be presented by AASHTO re:source staff, industry leaders, and other subject matter experts. Attendees will have many opportunities to interact and learn from each other in a workshop and open forum setting.

Participation in AASHTO re:source programs is not a requirement for attendees.

Download this editable Sample Request for Attendance Letter to use when seeking approval to attend this event.

When
Monday, March 23, 2020 - Thursday, March 26, 2020

Where
Renaissance Minneapolis Hotel, The Depot
225 3rd Avenue South
Minneapolis, Minnesota 55401
USA
612-375-1700
Internal Auditing: Just the Facts, Ma’am!
By Tracy Barnhart, Quality Manager, AASHTO re:source

What?
Hearing the word “audit” may strike fear in you at tax time, right? Various quality management system (QMS) standards such as ISO 9001 and ISO/IEC 17025 require that agencies perform internal audits, but it’s not something to fear. What exactly IS an internal audit? The terms “examination” or “review” usually come to mind when you hear the word “audit.” However, the Analytic Quality Glossary definition of an internal, or quality, audit may scrambly your brain: “A systematic and independent examination to determine whether quality activities and related results comply with planned arrangements and whether those arrangements are implemented effectively and are suitable to achieve objectives.” Now it’s crystal clear, right? Fear not – I will break it down into manageable pieces for you.

Where?
Internal audits, or 1st party audits, are audits that an organization performs on itself at that particular location. Your organization may already be audited by various external agencies, but those are 3rd party, or external, audits. Regardless of the type of audit it is, all audits involve some sort of review process. And, believe it or not, audits (at least in the internal auditing sense), don’t have to have a negative connotation. Quite the contrary, in fact! More on that in a moment…

Why?
Although the quick answer is “because you have to,” the meaningful answer lies in the goals of performing internal audits, which are: (1) verify that your QMS has been effectively implemented and maintained, and (2) find improvement opportunities. Simply put… (1) are you doing what your QMS states you are doing, and, perhaps more importantly, (2) how can you do it better? All this ties into the “determine whether quality activities and related results comply with planned arrangements…” part of that complicated internal audit definition.

You may be asking yourself why internal (1st party) audits are necessary if your organization is already subjected to multiple external (3rd party) audits by various agencies. The primary objective of 3rd party audits is to assess a QMS for conformance to standards, usually resulting in certification, registration or accreditation of the organization. These audits are performed by individuals independent of your organization. Alternatively, 1st party audits are generally referred to as “self-assessments.” The primary objective of 1st party audits is to improve an organization’s operations. Nobody knows your business better than you do, and that’s why you should perform audits too. Simply put, conducting internal audits is good business practice.

You shouldn’t start the internal audit process with negative thoughts like “What are we doing wrong?” or “Who screwed up this time?” Switch gears and think about the greatest benefit of the activity instead, which is making your organization the very best it can be. In other words, (going back to that crazy definition again), is your QMS suitable to achieve your organization’s quality-related objectives? For example, if one of those objectives is to achieve 100% customer satisfaction, does your QMS have the “teeth” to get you there? If not, it’s time to make some adjustments.

When?
Most QMS standards, such as ISO 9001 and ISO/IEC 17025, require that internal audits be conducted at “planned intervals.” That means your organization gets to determine the frequency of the audits. Keep in mind that if, for example, your organization conducts internal audits every 12 months, you don’t necessarily have to audit your entire QMS all at once, every 12 months. This is particularly applicable to larger organizations that have a lot of ground to cover during an internal audit. It may be more effective to audit each QMS area (leadership,
planning, support, operation, etc.) separately throughout the year instead of trying to jam everything into one huge audit. This is perfectly acceptable if the organization’s entire QMS is audited at least once every 12 months.

Who?

Before we get into the How, let’s talk about The Who. Anyone, even Roger Daltrey, can perform an internal audit. There are, however, some criteria to consider. First, internal audits should ideally be performed by your organization’s employees because, as I mentioned early, nobody knows your business better than you do. Using contractors for this purpose is also acceptable. Audits can be performed by one person or a team of individuals.

Now the hard(er) part – to maximize the effectiveness of the audit, auditors should be selected to ensure objectivity and impartiality during the audit process. In a nutshell, that means your auditors shouldn’t audit their own activities. Keep in mind that internal audits are not required to be performed by managerial personnel. Administrative or other non-managerial staff can certainly perform the auditors if they are (1) trained, and (2) independent of the activity or area being audited, and (3) sufficiently knowledgeable about the area being audited. While most organizations have ample personnel from which to select “independent” auditors, it may not be possible at some small organizations. If so, the auditor should do their best to be as unbiased as possible when performing the audit.

How?

Getting started isn’t as hard as you might think, and there are tools you can use to make the internal audit process much easier. Since internal auditing is a continuous improvement process, the Deming cycle of PDCA (Plan-Do-Check-Act) is a great way to manage the process. Let's start with the planning part of the cycle.

PLAN

Planning an internal audit involves scheduling the audit date, selecting the audit team, preparing an audit plan, and reviewing the applicable documentation. Audits should not be a surprise to those involved. Select a mutually agreeable date and stick with it. Preparing an audit plan or agenda lets people know when you will be working in their area(s), preventing wasted time from potential backtracking and repeat visits, and leading to a more efficient audit. Prior to the audit, be sure to gather and review the documentation for the specific areas that you will be auditing. This will help you develop questions to ask while simultaneously familiarizing you with the processes to be audited. Does the quality manual include all documentation required by the applicable QMS standards? Don’t forget to review the previous internal audit report and any corrective actions resulting from those findings. Prepare checklists during this review process to help map out your audit trail. Checklists take the guesswork out of what you need to review and what questions to ask during the audit, and can be retained with the final audit report as part of the audit record.

DO

Now it’s time to conduct the audit. During this process, you will be gathering objective evidence upon which you will base your final audit findings. Objective evidence is information about the QMS that can be verified by observation, measurement, or test. DORS are the primary sources of objective evidence – Documents (reviewed before and during the audit), Observations (of work activities), Records (that are examined to determine conformity to requirements), and Statements (made by personnel during the audit). Keep in mind that auditing is an exercise in sampling. It is not necessary (or logical) to check every single QMS process step-by-step, review each record, or interview every employee. Random samples should be selected by the auditor, not the auditee, for review. If you are satisfied with what you see, and your organization is doing what it says it is doing, move on. If not, look at some more examples before you draw any conclusions. Be sure to ask open-ended questions. Open-ended questions give the auditee a chance to explain processes step-by-step, allowing you to determine if those processes are described accurately in the QMS.
Check randomly drawn samples of records for activities such as training of personnel, equipment calibration, and purchasing. Is the information being recorded as described in the QMS? Are records retained for the applicable period?

CHECK

It’s time to draw some conclusions, or findings, based on the objective evidence you have gathered. This is the Check part of the PDCA process. Your audit findings must be factual statements that can be substantiated by objective evidence. At this point, you may need to follow up on your notes and observations to ensure your conclusions are based in fact. Findings are usually categorized in two ways – nonconformities and observations. Nonconformities are just that – something that is not in conformance with stated requirements. Observations can be improvement opportunities, recommendations, or even statements of excellence. Be sure that improvement opportunities and recommendations are also based on requirements rather than just the opinion of the auditor. Nonconformities should include three parts: (1) the requirement [i.e. what is required by the applicable QMS standard or the organization’s QMS], (2) the finding [a description of the nonconforming issue], and (3) the objective evidence that backs up the finding.

The internal audit report should include other important information such as the audit date, the standard(s) on which the audit is based (such as ISO 9001), the name(s) of the auditor, the names of the employees that were interviewed, etc. Once the findings have been presented to the organization’s applicable management staff, it’s on to the last stage of the internal audit process.

ACT

What to do with the nonconformities? Act on them! Corrective action must be taken for nonconformities noted during internal audits. Findings categorized as observations typically won’t require corrective action. The corrective action task is often assigned to the “owner” of the process identified in the nonconformity, such as the Quality Manager. Correction actions should begin with an investigation to determine the underlying cause, or root cause, of the nonconformity and the corrective action steps. Depending on the nonconformity, the corrective action process may also involve follow-up audits to ensure effectiveness of the actions taken.

Smiles, Everyone, Smiles!

It is a fact that the true intent of internal auditing is to verify conformance to requirements – “Are we actually doing what we say we are doing?” However, auditing also allows you the opportunity to do something just as important – identify weaknesses within your QMS. Fixing those weaknesses will drive continual improvement throughout your organization, and will ultimately help ensure that all of your goals are being met. So, the next time you hear the word “audit”, just smile!
### Executive Board

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Email</th>
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</thead>
<tbody>
<tr>
<td>Chair</td>
<td>Ray Crawford</td>
<td><a href="mailto:benjamin.trujillo16@gmail.com">benjamin.trujillo16@gmail.com</a></td>
</tr>
<tr>
<td>Chair-Elect</td>
<td>John Mascaro</td>
<td><a href="mailto:jfmasaro@hotmail.com">jfmasaro@hotmail.com</a></td>
</tr>
<tr>
<td>Past Chair</td>
<td>Benjamin Trujillo</td>
<td><a href="mailto:Benjamin.trujillo16@hotmail.com">Benjamin.trujillo16@hotmail.com</a></td>
</tr>
<tr>
<td>Secretary</td>
<td>Anita McReynolds-Lidbury</td>
<td><a href="mailto:amlidbury@bart.gov">amlidbury@bart.gov</a></td>
</tr>
<tr>
<td>Treasurer</td>
<td>Ron Swerdon</td>
<td><a href="mailto:rswerdon@gfnet.com">rswerdon@gfnet.com</a></td>
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### Operational Chairs

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<th>Role</th>
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<tbody>
<tr>
<td>Membership</td>
<td>Larry Owen</td>
<td><a href="mailto:larry.owen@acig.com">larry.owen@acig.com</a></td>
</tr>
<tr>
<td>Newsletter</td>
<td>Keith Powell</td>
<td><a href="mailto:Keith.powell@wsp.com">Keith.powell@wsp.com</a></td>
</tr>
<tr>
<td></td>
<td>Eileen Gee</td>
<td><a href="mailto:eileen.kee@wsp.com">eileen.kee@wsp.com</a></td>
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<tr>
<td>Programs</td>
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<tr>
<td>Exhibitor</td>
<td>Shannon Kelly</td>
<td><a href="mailto:skelly@bart.gov">skelly@bart.gov</a></td>
</tr>
<tr>
<td>Marketing</td>
<td>Carl Johansen</td>
<td><a href="mailto:johansenc@coned.com">johansenc@coned.com</a></td>
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<tr>
<td>Audit</td>
<td>Rick Simon</td>
<td><a href="mailto:rcsimon@urbanengineers.com">rcsimon@urbanengineers.com</a></td>
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<tr>
<td>Awards</td>
<td>Jeff Williams</td>
<td><a href="mailto:jeffery.williams@cbi.com">jeffery.williams@cbi.com</a></td>
</tr>
<tr>
<td>Web Liaison</td>
<td>Olakunle Akande</td>
<td><a href="mailto:alakunleande@ymail.com">alakunleande@ymail.com</a></td>
</tr>
<tr>
<td>Student Liaison</td>
<td>Lawrence Mossman</td>
<td><a href="mailto:lmossman@netins.net">lmossman@netins.net</a></td>
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<tr>
<td>VOC</td>
<td>Peter Stamps</td>
<td><a href="mailto:pstamps@thompsonpipegroup.com">pstamps@thompsonpipegroup.com</a></td>
</tr>
<tr>
<td>ASQ Comm. Rep.</td>
<td>Katie Chitwood</td>
<td><a href="mailto:kchitwood@asq.org">kchitwood@asq.org</a></td>
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### Subject Leads

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<tr>
<td>AASHTO</td>
<td>Tracy Barnhart</td>
<td><a href="mailto:barnhart@aashtoresource.org">barnhart@aashtoresource.org</a></td>
</tr>
<tr>
<td>CMAA</td>
<td>Don Archer</td>
<td><a href="mailto:don.archer@pqminc.com">don.archer@pqminc.com</a></td>
</tr>
<tr>
<td></td>
<td>Bianet Camacho</td>
<td><a href="mailto:Bianet.camacho@pqminc.com">Bianet.camacho@pqminc.com</a></td>
</tr>
<tr>
<td>DCD International</td>
<td>Dr. Abdul Razzak Rumane</td>
<td><a href="mailto:arazak@yahoo.com">arazak@yahoo.com</a></td>
</tr>
</tbody>
</table>

### Websites

- DCD ASQ Web Site: [http://asq.org/design](http://asq.org/design)
- DCD LinkedIn Web Site: [https://www.linkedin.com/groups/76805](https://www.linkedin.com/groups/76805)