THE QUALITY AUDIT DIVISION STORY
by Paul R. Gauthier

DEDICATION

"As I put this little history together I became struck by how much impact two people have made to keep a professional group of auditors pointed in the right direction to get tasks completed and how much effective leadership each of them provided when effective leadership was critical. Not enough can be said of the contributions made by Jim Thresh in those early formative years of the organization and by the leadership and knowledgeable participation of Ken Love."

"To these two, I am of the opinion that anyone who has benefited from any QATC or QAD program has them to thank for the ultimate availability of such programs whether they be training courses, CQA certifications, publications, conferences, etc. My hope is that others will recognize them in the same light."

Paul R. Gauthier

THE QUALITY ASSURANCE EVOLUTION

Dr. Joseph Juran was able to identify the role of Quality Inspectors in the building of the great pyramids. The cover of his 2nd Edition of *The Quality Control Handbook* shows the inspector going about the task of inspecting. There is no significant event to document when, or where, Quality Audit developed into a key Quality discipline and a necessary and valued ingredient in the management tool bag.

We do know that Walter Shewhart of Western Electric introduced Statistical Quality Control in 1924 and that in 1928 George Edwards brought the quality discipline off of the factory floor and into the engineering discipline.

It would appear that what was being identified as auditing prior to that time was, in fact, the implementation of sampling inspection. These inspections were often conducted by personnel other than inspectors; sometimes identified as auditors.

People like Shewhart and Edwards and many others such as W. Edwards Deming, Harry Romig, L. E. Simon, and Eugene Grant were champions of the quality technology advances being implemented.

Sampling came to the fore during World War II as the army needed to develop methods to test the acceptability of canon shells. Obviously, every shell could not be test fired and the old "sample 10%" method was not statistically valid.

EARLY AUDITS

George Edwards implemented an assurance program at the Bell Telephone Laboratories (BTL) to apply statistical sampling for the purpose of gathering objective Quality Assurance

data. The data was analyzed by engineers, arrayed in chart form, and used by management to make decisions relative to the process.

The BTL system consisted of sampling finished product and was considered to be "audit" of outgoing quality. Specific auditor persons (not unlike inspectors) were placed at the end of an assembly line to measure, using sampling principles, the accuracy of workers in performing their tasks and the accuracy of inspectors in identifying nonconformances. This organization is most likely an early application of formal audit as it began to grow and be further refined in later years.

Jim Thresh indicates "This method of statistical sampling and analysis was the first application of audit in Quality Assurance". Jim believes that a fundamental principle found here is that "All auditing is sampling and must be considered under the laws of probability, like it or not. There is no assurance in QA without audit."

Thresh now enjoys telling of his own personal "horror" story. A crisis had occurred at Rockwell Autonetics because of poor workmanship and subsequent inspection escapes. Jim examined the BTL process and realized that there was no data on the outgoing quality at his plant. His job in jeopardy, he implemented a sampling program similar to that used at BTL. The new process was successful in catching problems thereby enabling Jim to enjoy a long career with Rockwell. This technique became known as a "continuous product audit."

AUDITOR TRAINING

Dr. Max Astrachan, Professor of Management and Statistics, Univ. of California was the first director of ETI. He found that American Motors, General Motors, Collins Radio, Rockwell and a few other companies had introduced a form of Quality Audit. He concluded that Quality Audit constituted the single most significant new technology of the time and he sought practitioners to teach the subject for the ASQC.

The ASQC was involved in offering auditing courses as early as 1967. Except for in-house auditor training conducted by some companies, Quality Auditor training courses were not generally available to the public. ASQC offered their first training course for auditors titled *Product Quality Auditing* under the auspices of the now defunct Education and Training Institute (ETI) of the Society.

Since his successful implementation of audits at Rockwell, Jim Thresh has been the disciple for spreading the good news about Quality Auditing. He developed what was probably the first comprehensive training course for Quality Audit. At first the focus was entirely on product assurance audits. Over the next 20 years however, the audiences for the course began to change. Where at first people came to find out "how to spell audit" and how audits could be used, the interests of the audience had spread to food, pharmaceutical, banking, and other industries. The role of Quality Audit was moving from the factory floor and into the mainstream of business.

These courses under the auspices of ETI were offered on a three per year schedule but were limited to 50 people. And for many years there were no other training programs available for Quality Auditors.

Because of his trail blazing efforts Jim Thresh was recognized by the Society in 1974 when he was presented with a Fellow Award for "...the development and teaching of the Quality Audit course and for services to his section."

Since 1989 the most popular training offered by the ASQC has been the Quality Audit course given by Dennis Arter. Its popularity has grown such that Dennis has enlisted Dave Kildal and JP Russell to also be course providers.

Since that time there has been a proliferation of auditor training courses. The need for these courses has been driven by the positive feed back from those who implemented Quality Audit programs, by the regulatory agencies adding quality audit requirements in their contracts, by the introduction of the ASQC Certified Quality Audit program, and by adoption of ISO Quality Standards.

But wait, we're getting ahead of ourselves. Let's drop back to 1975 and see what was going on.

STEERING COMMITTEE ESTABLISHED

Most of the people involved with audit development were members of the ASQC Vendor/Vendee Technical Committee. For reasons not clear, some of those members began to agitate for an organization dedicated solely to Quality Audit. Some felt that the main thrust of the committee should have been limited to examining the various practices between industries.

The ASQC General Technical Council (GTC) took action in February of 1975 to establish a steering committee on Quality Auditing. The steering committee was led by Hardy M. Cook Jr.

Robert (Bud) Abbott, in a 1975 *Quality Progress* article, wrote "there has been a growing need to coordinate the various practices of auditing within the quality function. The early days of aerospace and military requirements for vendor surveillance and control have come full circle with the internal auditing practices emanating from the financial function. In today's corporate structure, quality assurance as defined in ASQC standard A3 now includes all forms of quality auditing—process, product, vendor surveys, and external and internal quality systems reviews."

In that same 1975 article Bud Abbott predicted that the next step in professional development in the Society would be the certification of Quality Auditors. Little did he realize at the time that the march toward CQA would take a long and arduous 12 years .

John McDermond and Dana M. Cound, a Society Vice President, advised the Society's Board of Directors, at a special evening meeting, that the GTC had approved the formation of a committed ATC .

It is interesting to note that the growing interest in Quality Audit was exemplified by the large crowd that attended the Audit Tutorial Session offered at the 1975 Annual Technical Program. That session, which was moderated by John McDermond of Honeywell, offered a full program segment. R.S. Turley of Honeywell provided a paper titled *Quality Auditing*, and Jim Thresh presented a paper titled *Quality Audit in the 80's*.

These papers, no doubt, provided weight to the legitimacy of audit as a separate technology and John McDermond emphasized "the umbrella aspect of the new group to coordinate and draw upon the expertise already developed".

Although preceded by some lively discussion as to the need for a separate audit group. The GTC wasted no time in accepting the work of the steering committee and in May of 1975 approved the formation of the Audit Technical Committee (ATC). There were strong feelings within the GTC that an separate audit group might be an overlap of ongoing audit related projects in some of the other GTC organizations.

John S. McDermond, then a Society Vice President, presided at the first meeting which was held immediately following GTC approval of the Committee. He drafted Jack Fitzgerald to be the first chairman. A charter was adopted and an agenda developed. Contributing to the discussion were representatives from Vendor-Vendee, and Systems Engineering Technical Committees, from the Nuclear, Inspection, and Administrative Applications Divisions, and representatives from ETI.

In the final Steering Committee report the following scope of operation was proposed and adopted;

<p style="text-align:center"><strong style="color:blue">OUR FIRST MISSION STATEMENT</p>

- *To identify, develop, and—through research, publication and technical discussion promulgate criteria related to planning, organizing, directing and controlling quality auditing as it relates to parts, components, products, subsystems, systems, processes, functions, organizations and operations.*
- *To identify and assist the ETI of the Society in developing and establishing educational materials, programs and courses that will serve as a basis for education, training and testing in the field of quality auditing.*
- *To propose and recommend to the Professional Development Council additions or changes in the Society's certification program as they relate to quality auditing and the quality auditor.*
- *To monitor and maintain continuing cognizance of the business, social and government environments as they may relate to and affect quality auditing, and to take appropriate action commensurate with such changes.*

AUDIT TECHNICAL COMMITTEE IS ESTABLISHED AND BEGINS TO FUNCTION

At that point an Audit Technical Committee was now part of the Society's organization and the members started the business of attempting to implement the steps necessary to satisfy the original scope of operation.

Assignments were made during those May 1975 meetings to develop Audit Terms and Definitions (Jim Thresh), to review the ETI audit course syllabus (Committee), and to comment on a Nuclear Systems Auditor Training Manual being developed by the Nuclear Committee.

It is not clear as to what degree of success the ATC achieved in attaining their goals. Information is very sketchy. At some point the ATC became the Quality Audit Technical Committee (QATC). However, Quality Audit now had reached the point where the Society was paying attention. The ASQC Annual Conferences regularly had sessions dedicated to Quality Audits and these sessions were typically "standing room only". And our members and associates we busy as the next section indicates.

PUBLICATIONS

While many eyes were focused on developing a CQA program an effort got under way in the late 70s to publish a *Compendium of Audit Standards*. Dr. Walter Willborn, a professor at the University of Manitoba in Winnipeg, led the effort to get this document into print. He showed that the Quality Audit is one of the key facets of an effective Quality System. Dr. Willborn examined many Quality Standards and provided correlation of their commonalties. The publication was published in 1982 by Quality Press and is still listed in their catalog.

Dr. Willborn also took on the effort to develop a national standard for auditing. He had been active on the Canadian Standards Association and he recognized the need for a document of a generic nature that would apply to all aspects of Quality Auditing.

QATC members who provided significant input to the task included Ken Love, A.P. Deacon, Jim Kelker, D.G. Lamb, Charlie Mills, Gus Mundel, Wally Uhorchak, G. Warnock, Bob Wathen, and C.K. Welton. The first draft was introduced at a meeting in San Francisco in 1981. In 1982 the QATC decided to pursue publishing the Generic Guidelines as a formal ANSI/ASQC document.

Dr. Willborn presented a paper, The Generic Guidelines at the 1983 AQC in Boston and finally in 1986 ANSI published *The Generic Guidelines for Auditing of Quality Systems* as ANSI/ASQC Q1-1986.

Meanwhile, in 1981, Wally Uhorchak appointed a committee to publish "How-To" booklets. The issue was kept on the front burner by the QATC by making it an agenda item for all of the meetings, but little progress was achieved. In 1985 at a meeting in Binghamton, N.Y., the group was asked again to consider writing "How to " pamphlets or booklets. The decision was that three should be undertaken. These were "How to Plan", "How to Conduct" and "How to Report an Audit". At the May 1986 meeting in Anaheim, Ca., Charlie Robinson, then with Garrett, undertook to lead the effort to develop a booklet entitled "How To Plan An Audit. Volunteers were unsuccessfully sought for the other two booklets. Charlie had the booklet published by Quality Press in 1987, a remarkably short period in which to move a committee to accomplish such a task.

These publications are significant since they started to put more published literature into the public domain. This was necessary to satisfy the desires of the many people who were being assigned to the task of Quality Auditor. Up to that point there was little reference material with which auditors could be trained and more significantly there was little material available in the public domain on which to build a Body of Knowledge and subsequently a question bank for the planned CQA program. In fact, there was such a paucity of published audit literature that the first draft of the CQA Bibliography referenced such works as military standards and regulatory standards

Published audit material was pretty much limited to Jim Thresh's *Quality Audit and Administration*, the QATC's *Compendium of Audit Standards* and their National Standard *Generic Guidelines for Auditing Quality Systems*, Allan Sayle's *Management Audits, the assessment of quality management systems* published in 1981, and Marvin Johnson's *Quality Assurance Program Evaluation* published in 1982.

Since then, Dennis Arter published the popular *Quality Audits for Improved Performance* and Charlie Mills published *The Quality Audit* in 1989. The Quality Audit Division's *The Quality Audit Handbook* edited by J.P.Russell in now in its second edition.

Implementation of the CQA caused many audit primers and study guides to be offered by various authors and the adoption of the ISO 9000 Series caused another surge of published reference materials to be made available in the public domain.

CERTIFIED QUALITY AUDITOR

Since the formation of the Technical Committee in 1975 a paramount goal seemed to be the establishment of a certification program for quality auditors. In fact, the Committee got to work very early in their existence to develop such a program. By the Fall of 1980 the Committee had reached a point where they felt that they could have a proposal ready for the GTC at the Society's annual meeting the following May.

A proposal was made to the ASQC in 1982. The ASQC provided some major criticisms of the approach offered. There were negative comments dealing with requirements for peer evaluations, the necessity for CQE or CRE as a prerequisite, and the requirement for the candidate to have attended a course on auditing.

Al Slawuta, QATC Chair, at the time, started to refocus the Committee towards making CQA a reality. In 1985 a redirected QATC began a renewed drive towards CQA implementation. Steve Gordy, the ASQC headquarters representative to the QATC made the CQA effort a major focus of his activities.

Ken Love of Gillette picked up from Al Slawuta and intensified the QATC effort for a CQA. Ken had been involved with Don McNeill in getting GTC approval for the concept of the CQA. Ken pushed the entire Committee towards a common goal; CQA. Most of the meetings thereafter were devoted to workshops. First, Ken and Steve arranged for the entire Committee to receive training in question writing. Bob Brown of Kodak provided the training.

Thereafter the task became three pronged; agree on the Body of Knowledge, build a question bank, and identify the Bibliography. Of course each of these activities had many sub-elements.

Finally in September of 1986 Ken Love reported that the PDC favorably reviewed the QATC proposal for CQA along with the Body of Knowledge. Not surprisingly, "grand fathering" was disallowed.

Twenty-eight members of the QATC sat for the first CQA examination in Richland, Washington in October of 1987. The first certification number issued by the ASQC was 101 and was assigned to Ken Love.

Twelve long years after the Audit Technical Committee took on the task to develop the CQA the effort became reality!

Originally, there was concern regarding the ability of the CQA test to discriminate between those people who had a grasp on the understanding of Quality Audit from those who had need for more training.

As the results of more tests became available it became apparent that the CQA, in fact, as Steve Gordy pointed out, did "separate the sheep from the goats."

The applications for CQA grew at a remarkable rate. In 1968 there were 468 applicants. As of the end of 1995 there have been over 13,000 people designated as CQA. In 1999, 847 new Quality Auditors passed the test to be certified.

This entire process was the culmination of 12 years of effort by a host a people. Worthy of note however, is the contribution by Jim Thresh in keeping the program moving and on track in the early years and by Ken Love who had the ability to mobilize the QATC and refocus the project such that ambition became reality.

ENHANCEMENT OF CQA

Ron Kingen moved from being the Secretary of the QATC to being the Chair of the Society's Certification Committee in 1990. Immediately he set upon the task of "validating" the various certifications. The QATC, which had by now become the Quality Audit Division (QAD) volunteered to work with Kingen as the "guinea pig" to enhance the CQA process and thereby provide the model for existing and future ASQC certifications.

Ron contracted with Educational Testing Services (ETS) of Princeton, N.J. to work with the CQA examination. ETS has a proven process for putting together any type of examination but it was quite clear that the technical expertise resided in the QAD.

Literally hundreds of people, giving up thousands of hours, were involved with ETS and with the ASQC Certification Department, superbly led by Sally Harthun, to revamp the CQA examination. Today the CQA is the model for all other certifications within the Society.

THE PATH TO A QUALITY AUDIT DIVISION

One of the nice things about being a Technical Committee is that no one expects great things to happen. The QATC opened some eyes by developing an ANSI/ASQC national standard, by publishing a couple of items, by continually having "sell-outs" at the Annual Quality Conference, and by developing "their own" certification. It is not surprising then that the leadership of the GTC began to urge the QATC to become a Division of the ASQC.

Such talk had taken place a number of times within the QATC. Back in 1985 the Administrative and Applications Division proposed a merger with the QATC. In 1990 the Inspection Division chair approached officers of the QATC regarding discussions that would lead to a merger.

At the AQC in Milwaukee the President of the ASQC and the President-elect met with Charlie Robinson and Paul Gauthier to urge that we seek Division status.

Each of these instances led to heated debate within the Committee relative to the merits of becoming a Division or of even becoming associated with a Division.

Those who were pro cited the ability to do more to raise the professionalism of the Quality Auditor while the cons were concerned about the administrative burdens and loss of cohesiveness. Each side raised valid concerns.

"When I was chair of the QATC I became convinced that the best path was the one that led to Division status." Paul Gauthier wrote in the September '91 issue of *Quality Audit News* ;
> "We have taken on tasks of enormous proportions for a group of our size and limited resources. However we have reached a point where as a Technical Committee the limitations put in place by the ASQC have been exceeded in every aspect of

measurement. We're larger than a Technical Committee should be. We do more things than what Technical Committees are formed to address. We strive to be independent in an organizational structure that is limiting."

Finally, in 1991 there was sufficient support for becoming a Division. Charlie Robinson was assigned the task of putting together the formal petition and organization plan which had to be approved by the GTC and subsequently by the Society's Board of Directors.

The Board approved the petition in November of 1991 and thus the QAD began with 300 members. Many on the Board said that the petition and plan put together by Charlie Robinosn was "easy to approve" since it laid out specifically the goals and objectives for the new Division. In 1996, five short years later, there were about 15,000 members!

In a letter to new members, Paul Gauthier set out a vision of what the QAD must always strive towards. "I believe, and we of the Quality Audit Division believe, that the true test of a Division's value is the degree to which the work of the Division elevates the level of competence for all those within the Division and within the profession. We in the QAD are confident that what we have done and what we are attempting to accomplish will elevate competence levels of auditors all over the world".

QUALITY AUDIT CONFERENCES

Never a group to be satisfied with the status quo or focus on only one area, while the debate for Division Status continued, others ideas were surfacing.

In May of 1991 someone innocently asked, "Why don't we have an Audit Conference?" Of course technical committees did not have the capability to sponsor any project of this type since they did not have treasuries, were not allowed to raise moneys, and could not enter into contracts.

In his own words, Paul Gauthier relates the "start of something big". "I was assigned by chairman Bruce Campbell of 3M to look into the feasibility of having the QATC put on an Audit Conference. Hal Greenberg, then a Society Vice-President, and the late Lou Jones, then a Deputy within the GTC, offered solid encouragement and demonstrated that they were truly friends of the QATC. Hal and Lou solicited from the QATC a proposal that was presented to the Society''s Board of Directors. After the Board had their meeting Hal gave me a call and the conversation, which I shall never forget, went something like this;

Hal: "Paul, the Board reviewed your proposal and they were concerned about how much money the Society would risk if the project absolutely bombed".

Me: "Well gee Hal, I think that if everything turned to .... then the Society could be out as much as $45,000."

Hal: "Well Paul, we think the number is closer to $53,000. But the Board voted to provide the funds for the conference, so go ahead with it."

The rest is history. That first conference in St. Louis was successful beyond our wildest dreams. People came, literally, from all over the world to attend the world's first Quality Audit Conference.

The Groundbreakers that helped in pulling it all together in an incredibly short period of time were Ken Love (Program), Dennis Arter (Publicity) and Quitman White (Arrangements). Of course, there were dozens of people who contributed time and talent. The subsequent conferences that followed were all increasingly successful. All of these conferences have reached the maximum attendance (of 500+) prior to the end of the registration period and we always have a list of anxious stand bys.

Ken Love chaired the 1993 conference in Charlotte and the 1994 conference in Seattle. Charlie Robinson chaired the 1995 Baltimore conference and Norm Frank had a hugh success in Kansas City in 1996. The 6th annual conference was chaired by Dave Kildahl in Los Angeles. The 1998 conference Dennis Arter has us swinging in Louisville, 1999 found us in Houston with Linda Rienhart and Doug Burg's 2000 conference was a big winner in Reno. Janet Muschlitz chairs the 2001 Audit Odyssey set for Atlanta.

These conferences require huge amounts of support from a lot of busy people. Nevertheless, the consistent high turnout demonstrates that they provide a needed service to our constituents and that they do provide a tool with which attendees are able to improve their own professionalism.

Striving to practice what we preach, what many people don't realize is the good job of process improvement past committees have done. The committees meet on the night of the final day of the conference and do an intense and critical review of what took place. These reviews have been most effective and have caused many positive changes to the conference process.

QAD ACTIVITIES

The QAD membership also got involved in other areas of the Quality Community. For example, members have served on the Society's Certification Committee (Jim Thresh, Bob Love, Dave Kingen and Dave Kildahl) and the Annual Quality Conference Committee (Bernie Carpenter, John Farrow, Quitman White). The QAD has had representation on the Operations Council of The Registration Accreditation Board (RAB) (Jim Dunn), on the ANSI TC 176 committee dealing with international standards (Wally Uhorchak, and John Stratton). Members have attended international meetings dealing with development of the ISO Quality Standards (John Stratton and Bruce Campbell), have had an influence on national standards through the Standards Committee (Archie Bice and Dennis Arter) and John Stratton has been very active with RAB and kept the ties between the RAB and the QAD strong.

THE FUTURE

There is an old saying; "What goes around, comes around." So it seems with the group of professional Quality Auditors. They got their start as the ATC after separating from the Vendor/Vendee Technical Committee in 1975. In 1995, 20 years later, the QAD and the Customer Supplier Division (formerly Vendor/Vendee) started discussions of a merger between the two organizations. With over 5,000 members that belong to both groups the officers of the two organizations sought to realize the benefits and strengths that would be derived from such a merger. While such a merger didn't take place, the Division is always open to new ideas and suggestions. At the 2000 Division Business Meeting in Reno, a representative of the Management Division addressed the gathering with a proposal to investigate future joint activities. Much of the discussion centered on the already overlapping of the two disciplines, especially as Quality Management and Auditing move further into the Business Management arena. With membership in both divisions stagnating, it is time once again to look to new avenues to stimulate growth and renew our vigor. Perhaps we will start a new cycle of consolidation within the Divisions of ASQ. We will have to wait and see. However there is no doubt that the Audit Division membership will continue to follow the fine traditions of our founders and exert their leadership within the Division, the Society and the world.

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"This summary is based on information provided by a number of people. They include Dennis Arter, Norm Frank, Ken Love, Don McNeill, Jim Thresh, Ben Silver, Wally Uhorchak, and Walter Willborn. To each I give my most sincere thanks." Paul Gauthier -1997
This current revision was untaken by Mary Flath with assistance from Bernie Carpenter and Dennis Arter. "My thanks and appreciation for your input and support" Mary Flath - 2000