



# *The Lighthouse*

**February 2004**

Elyria/Lorain Section 814

## **Mission Statement**

*To advance community and member quality excellence thorough educational opportunities, non-competitive information exchange, networking, forming alliances and leadership growth*



---

## **Chair's Message**

Brrrr! First, I would like to thank all those who braved the bad weather and came to the January meeting. Your continued support of the section is greatly appreciated.

At the last meeting, we discussed teaching a class on searching for a job. It would include writing effective resumes and how to use recruiters rather than having them use you. Because of that discussion, a class is currently being assembled. It is tentatively being scheduled for a Saturday session of approximately 4 hours. It will cover information on writing a resume, using the Internet, having recruiters work for you, interviewing techniques. Additional details will be forthcoming.

In addition to the certification courses, on the calendar in this newsletter, we would like to offer additional courses. We continue to offer certification courses, as shown on the calendar, but we need to have at least six students for the class to be economical. The courses we offer can cover both the hard and soft skills such as statistics, DOE, SPC on the hard side and teamwork, leadership and managing change on the soft side. We are also open to half day or full day seminars in addition to evening classes. This is the time to sign up for the Quality Auditor Certification (CQA), Quality Engineer Certification (CQE), Quality Improvement Associate Certification (CQIA), Software Quality Engineer Certification (CSQE), and Calibration Technician Certification (CCT). The test will be on Jun. 5, 2004 with registration with ASQ on Apr. 2, 2004

Please check out our web site at [www.eriecoast.com/~asq0814](http://www.eriecoast.com/~asq0814). Currently it only contains the newsletter but hopefully it will also soon have additional pages. If you have ideas for content please contact myself or any member of the executive committee.

We would like your input into what additional courses you would like to see offered. Please e-mail your suggestions at [haessly@myepath.com](mailto:haessly@myepath.com).

---

## **Meeting Announcement - February 11, 2004**

Networking @ 6:00 PM. Meeting @ 6:30 PM

**6<sup>th</sup> Law of Teamwork: The Law Of The Catalyst  
and 5<sup>th</sup> Statistics Episode "Normal Calculations"**

Presentation of the 6<sup>th</sup> law "The law of the Catalyst" of the 17 Indisputable Laws of Teamwork by John Maxwell. Following that presentation, we will have a group discussion regarding that law and how it applies or should apply in our respective organizations.

After the discussion, we will be presenting the 5<sup>th</sup> episode in the "Against All Odds" series. This episode will cover "Normal Calculations". With this program, students will discover how to convert the standard normal and use the standard deviation; how to use a table of areas to compute relative frequencies; how to find any percentile; and how a computer creates a normal quartile plot to determine whether a distribution is normal. Vehicle emissions standards and medical studies of cholesterol provide real-life examples

### Your Executive Committee

Position	Name	e-mail
Chair/Education Chair	Michael Haessly	<a href="mailto:Haessly@myepath.com">Haessly@myepath.com</a>
Chair Elect/Program Chair	Marc Kelemen	<a href="mailto:Mjk99@earthlink.com">Mjk99@earthlink.com</a> <a href="mailto:MarcP.Kelemen@energizer.com">MarcP.Kelemen@energizer.com</a>
Secretary/Treasurer	Mark Murphy	<a href="mailto:Mark.murphy@sunmed.com">Mark.murphy@sunmed.com</a>
Recertification Chair	Thomas Copeland	<a href="mailto:Thomascopeland@juno.com">Thomascopeland@juno.com</a>
Newsletter Editor/Internet Liason	Kevin Ziegman	<a href="mailto:Kziegman@beckettair.com">Kziegman@beckettair.com</a>

### Statistics Corner

All too frequently during product development or improvement activities an insufficient sample size is used to make a decision on the validity of the changes being implemented. Frequently, this is a result of a lack of understanding of statistics.

*Obviously, if one takes a sample of 10 pieces and tests them and there are no failures (i.e. 0/10) then 100% of the product manufactured will be good. We can approve the change based on this data. Right? Then how come when we implement this change into production is everyone surprised when the long term failure rate is 20%. Obviously someone screwed up when the product was ramped up for production.*

Hopefully, everyone reading this is nodding their head remembering being in this situation and trying to explain the true significance of the initial 0/10 result and the implications of this small sample size to management. The truth is that we all realize is that 0 failures out of a 10 piece sample size does not mean a 0% population defect rate. It only means that the populations defect rate is somewhere between 0% and approximately 31% at a 95% confidence level.

Therefore, with this additional information it does not appear to be a good decision to implement this change. From the table below one can see the effect of sample size on the confidence interval. Even a 100 piece sample size will not guarantee that the populations defect rate is less than 1% to a 95% confidence level.

### Lower and Upper Population Defect Levels at a 95% Confidence Level

		Sample Size									
Defects	%	2	3	4	5	10	20	30	40	50	100
0	Lower	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Upper	84.2%	70.8%	60.2%	52.2%	30.8%	16.8%	11.6%	8.8%	7.1%	3.6%

This simple example shows how important sample size is when making decisions to either introduce a new product or improve an existing product. The sample size for attribute sampling is  $n = \frac{Z^2 \bar{p}(1 - \bar{p})}{(\Delta p)^2}$ . For example, to determine a 1% decrease in a failure rate of a population with

a 5% failure rate to a 95% confidence level  $n = \frac{1.96^2 \cdot .05(1 - .05)}{(.01)^2} = 1824.688$ . In order to achieve a 95% confidence level 1825 samples would need to be taken.

There are several on-line statistics handbook references, which can help you both to learn statistics and also help you solve problems at work. One good choice is the *NIST/SEMATECH e-Handbook of Statistical Methods*, located at <http://www.itl.nist.gov/div898/handbook/>. As you can see below it is broken up into sections on *Explore, Measure, Characterize, Model, Improve, Monitor, Compare* and *Reliability*. It also has an excellent section on various distributions and shows graphical representations of the distributions and describes their uses. In addition to this site there are other handbooks located at <http://www.statsoftinc.com/textbook/stathome.html> by StatSoft the makers of Statistica and at <http://davidmlane.com/hyperstat/> by David Lane at Rice University

---

#### Statistics Humor

There was this statistics professor who, when driving his car, would always accelerate hard before coming to any Intersection, whip straight through it , then slow down again once he'd got past it. One day, he took a passenger, who was understandably unnerved by his driving style, and asked him why he went so fast over intersections. The statistics professor replied, "Well, statistically speaking, you are far more likely to have an accident at an intersection, so I just make sure that I spend less time there."

# The Lighthouse - Calendar 2003-2004

Elyria/Lorain Section 814

## Newsletter/Meeting Schedule

### Meetings at Holiday Inn, Elyria (by the mall) 6:00 PM - 9:00 PM

Newsletter	Meeting	Teamwork Topic	Against All Odds
September 1, 2003	September 10, 2003	1. THE LAW OF SIGNIFICANCE - One Is Too Small a Number to Achieve Greatness	1. What Is Statistics?
October 1, 2003	October 8, 2003	2. THE LAW OF THE BIG PICTURE - The Goal Is More Important Than the Role	2. Picturing Distributions
November 1, 2003	November 12, 2003	3. THE LAW OF THE NICHE- All Players Have a Place Where They Add the Most Value	Speaker Jim Yost
December 1, 2003	December 10, 2003	4. THE LAW OF MOUNT EVEREST - As the Challenge Escalates, the Need for Teamwork Elevates	3. Describing Distributions
January 1, 2004	January 14, 2004	5. THE LAW OF THE CHAIN - The Strength of the Team Is Impacted by Its Weakest Link	4. Normal Distributions
February 1, 2004	February 11, 2004	6. THE LAW OF THE CATALYST - Winning Teams Have Players Who Make Things Happen	5. Normal Calculations
March 1, 2004	March 10, 2004	7. THE LAW OF THE COMPASS - Vision Gives Team Members Direction and Confidence	6. Time Series
April 1, 2004	April 7, 2004 (NOTE CHANGE)	8. THE LAW OF THE BAD APPLE - Rotten Attitudes Ruin a Team	7. Models for Growth
May 1, 2004	May 12, 2004	9. THE LAW OF COUNTABILITY - Teammates Must Be Able to Count on Each Other when it Counts	8. Describing Relationships
June ,1 2004	June ,9 2004	PICNIC	PICNIC
	2004-2005	Laws 10-17	Episodes 9 - 26

This program is open to all Section members and their associates or friends. You don't have to purchase the text book or workbook to participate but to truly apply the principles they are a must. The cost is \$34 for the Book and \$26 for the Workbook or \$44 for both for each participant. (Pay at the meeting, make check out to Elyria/Lorain Section #0814). You may also order them online at [www.injoy.com](http://www.injoy.com). The prices above include a \$5 handling fee for the section.

(Note: any missed laws will be made up at a TBA).

Leadership Program Disclaimer: Dr. John C. Maxwell is a Pastor and does reference his religious experience to provide examples for the laws. We selected Dr. Maxwell because of the quality of his leadership training program not his religion. Therefore ASQ National nor our Section #0814 promote his or any other religion and only provide this opportunity for our members, and/or associates to help you move along your leadership trail.

# The Lighthouse - Certification Calendar 2003-2004

Elyria/Lorain Section 814

## Certification/Exam Dates

Classes are always offered in conjunction with the certification and require a minimum of 6 students.  
If less than 6 students register for a class it may be canceled.

Exam Date	Oct. 18, 2003	Dec. 6, 2003	Mar. 6, 2004	Jun. 5, 2004	Oct. 16, 2004	Dec. 4, 2004
Registration Date	Sept. 5, 2003	Oct. 3, 2003	Jan. 9, 2004	Apr. 2, 2004	Aug. 20, 2004	Oct. 1, 2004
Mechanical Inspector Certification (CMI)	XXXXXX		XXXXXX		XXXXXX	
Quality Auditor Certification (CQA)		XXXXXX		XXXXXX		XXXXXX
Quality Auditor Certification-Biomedical (CQA-Biomedical)	XXXXXX		XXXXXX		XXXXXX	
Quality Auditor Certification-HACCP (CQA-HACCP)	XXXXXX		XXXXXX		XXXXXX	
Quality Engineer Certification (CQE)		XXXXXX		XXXXXX		XXXXXX
Quality Improvement Associate Certification (CQIA)		XXXXXX		XXXXXX		XXXXXX
Quality Manager Certification (CQM)	XXXXXX		XXXXXX		XXXXXX	
Quality Technician Certification (CQT)	XXXXXX		XXXXXX		XXXXXX	
Reliability Engineer Certification (CRE)	XXXXXX		XXXXXX		XXXXXX	
Six Sigma Black Belt Certification (CSSBB)	XXXXXX		XXXXXX		XXXXXX	
Software Quality Engineer Certification (CSQE)		XXXXXX		XXXXXX		XXXXXX
Calibration Technician Certification (CCT)		XXXXXX		XXXXXX		XXXXXX

# Placement Section - Current Opportunities

Referred by: Michael Haessly - 440-725-1022

Position	Location	Contact
Regulatory Affairs Manager	Solon, Ohio	Mary Ann Trubisky <b>Fax:</b> 440-349-3576 <b>Email:</b> <a href="mailto:hr@amresco-inc.com">hr@amresco-inc.com</a> AMRESCO Inc. 30013 Solon Industrial Parkway Solon, OH 44139
Quality Engineer	Cleveland, Ohio	<a href="http://www.saint-gobain.com/us/">http://www.saint-gobain.com/us/</a>
Quality Engineer Assignment #2525	Cleveland, Ohio	Email: <a href="mailto:managementrecruiters@mri-richmond.com">managementrecruiters@mri-richmond.com</a> 2519 E. Main Street, Suite #101 Richmond, IN 47374
Senior Quality Engineer	US-OH-Northwest	Great Lakes Search Pat McCombs, CPC Email: <a href="mailto:pmccombs@staffmark.com">pmccombs@staffmark.com</a> 11118 Coldwater Road Fort Wayne, IN 46845 Phone: 260-637-1436 x322 Fax: 260-637-6903
Supplier Quality Engineer	US-OH-Northwest	Great Lakes Search Pat McCombs, CPC Email: <a href="mailto:pmccombs@staffmark.com">pmccombs@staffmark.com</a> 11118 Coldwater Road Fort Wayne, IN 46845 Phone: 260-637-1436 x322 Fax: 260-637-6903
Quality Assurance Engineer Ref ID: 53810	US-OH-Northwest	Belcan TechServices Email: <a href="mailto:lfout@tech.belcan.com">lfout@tech.belcan.com</a> 2494 Technical Drive Miamisburg, OH 45342 Phone: (937) 859-8880 Fax: (937) 859-3335
Quality Assurance Manager Ref ID: JJ/MV QA Mgr	US-OH-Northwest	Company: Management Recruiters International Contact: Joe Jiamachello Email: <a href="mailto:topgun@mrclevealndsw.com">topgun@mrclevealndsw.com</a>
Quality Control Black Belt	US-OH-Cleveland	Company: Management Recruiters International Contact: Ryan Hunter Email: <a href="mailto:ryan@benevagroup.com">ryan@benevagroup.com</a>
Supplier Quality Engineer	US-OH-Cleveland	PRG Toledo <a href="mailto:PRG-Toledo@spherion.com">PRG-Toledo@spherion.com</a> Spherion 1760 Manley Road Maumee OH 43537 Ph: NO PHONE CALLS PLEASE Fax: 419-893-2491

Volume 6, Issue 2  
February 2004



ASQ

AMERICAN SOCIETY  
FOR QUALITY™

**MEETING: February 11, 2004**