SECOND QUARTER 1992

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MARK THIS DATE!!!

OCTOBER 27-30, 1992

The NEHES Fall Seminar will be held in Portsmouth, New Hampshire at the Sheraton Portsmouth. A fantastic program is planned with the Einstein Consulting Group, a subsidiary of the Albert Einstein Health Care Foundation, conducting a two day management seminar on Quality Care Thru Focused Engineering. You cannot afford to miss this program so start making your plans now.

VA TOGUS: FIRST IN THE NATION

In 1865, as the Civil War was drawing to a close, President Lincoln signed an act establishing the National Asylum (later changed to Home) for Disabled Volunteer Soldiers. The Eastern Branch at Togus, Maine was the first of the facilities to open in the United States in November 1866.

Today the Department of Veterans Affairs Medical and Regional Office Center at Togus now combines three major functions under single management. The center complex consists of a Medical Center, a Regional Office, and a National Cemetery.

The Medical Center, with a staff of nearly 1000, consists of 282 medical, surgical, and psychiatric beds, a 60 bed Nursing Home Care Unit, and outpatient clinics. Veterans Outreach Centers in Portland and Bangor and a community based clinic in Aroostook County provide needed services to veterans in their communities.

The Regional Office, serving the entire State of Maine, is located adjacent to the hospital buildings of the Center. A staff of 56 employees provides services for veterans and their families in compensation and pension, education, and other related matters.

Don Garrison and his Facilities staff maintain a Department of Veterans Affairs Medical Center which consists of 56 buildings on 507 acres of land. Included are buildings with a wide diversity of function.

TOGUS (cont. on pg. 6)
PRESIDENT’S MESSAGE

Those of us who selected Plant Management and Engineering as our profession anticipated a challenging lifetime career doing the work that interests us most. In recent years, however, this goal has been put in increasing jeopardy by economic constraints and lack of job stability. From a personal perspective, the individual must assume full responsibility for career flexibility and technical advancement in order to confront this dilemma.

To prepare for these unanticipated factors and to keep on course, long term career planning is a fact that cannot be overstressed. Education is the major factor towards improving job stability and security. Some engineers are responding by enrolling in graduate or short course both in-company and at local universities. Self-financed programs are not to be considered unreasonable. Self-study programs are also beneficial where time or travel constraints are limiting factors. Looking ahead means determining what is necessary to hold a current position and what marketing skills are needed to prepare for the future.

As all of our readers know, the New England Hospital Engineers Society has always played a role in career advancement and educational programs. As an enhancement for our members, costs for these seminars has been kept low enough for all to afford. To quote from the objectives of our organization "To Promote the Professional Development of Hospital Engineers Through Continuous Education". Your future is in your hands, don't let it slip through your fingers!

Respectfully submitted,
Jack Berger, President - NEHES

COMPUTER AIDED FACILITIES MANAGEMENT

A concept dreamed of by some facilities managers and proposed by some computer software firms in facilities management is an integrated approach to managing a facility with extensive use of computer technology. This concept integrates the use of CADD systems to display and change building/asset diagrams and a database application to provide alphanumeric data useful for management. Bar code systems for asset tracking and inspections of systems may also be incorporated.

At the recent American Society for Hospital Engineering (ASHE) meeting in Nashville, TN, Ode Keil, Director of PTSM at the Joint Commission, discussed this topic in a talk entitled Using CAFM to Meet JCAHO PTSM Standards. Mr. Keil, who was formerly the director of the U. of Maine clinical engineering shared service, discussed the Joint Commission’s view of the usage of CAFM in relation to accreditation issues, and advantages and disadvantages of such a system. Applications for CAFM include inventory, scheduling, documenting, managing planned and unplanned shutdowns, and in the design process. The advantages of integration including financial systems and the presentation in a common language are tempered by the high cost, resource allocation and learning curve to establish such a system.

Systems are available now which integrate some of the components of a truly integrated system, but all have major omissions or weaknesses. Time will tell how soon or if CAFM becomes the standard facility management tool.

HEALTH CARE FACILITIES MANAGEMENT IN RURAL VERMONT

A majority of licensed hospitals in the United States are located in rural areas in order to provide health care services to as many communities as possible and, at the same time, make them readily accessible. With today’s health care technology more attainable, these institutions are rapidly advancing in terms of operational sophistication with their metropolitan counterparts. Due in part to this evolution, a unique set of challenges face the hospital engineer who is responsible for the facilities in a rural locale. The following narrative highlights facility operational and management issues which are typical to rural institutions. It also summarizes protocols dealing with them as experienced by the author.

For over a decade, I have been Director of Facilities in an eighty-bed acute care community hospital. The institution is located in a county of 45,000 people in rural Northern New England. In my tenure at the facility, I have observed first hand the evolution of health care facilities management move into a critical role in the survival of the rural institution. Many of the issues we face are typical of health care as an industry whereas other issues are, to some degree, affected by the geographic areas in which our facilities are located.

RURAL (continued on page 8)
NEW ENGLAND STATES REPORTS

MAINE REPORT

A meeting was held at the Department of Veterans Hospital at Togus on 2/20/92. The main focus of this meeting was a presentation by the fire chief from Togus on "Fire Fighting Tactics at Healthcare Facilities". The program was well received with several engineers asking if we could reschedule and invite other members from their respective hospitals to attend. This will be considered for a later meeting.

Several items of discussion were brought up.

a) Jack Berger’s idea to combine state memberships with the New England membership. Maine engineers were in support of this idea.

b) The move by companies such as the “Marriott” to take over maintenance at hospitals.

c) Job openings and who to contact if you are interested in a position.

d) The NEHES seminar held on 3/31/92 in Boston on "ADA".

A current membership list was passed out. Maine currently has 31 paid up engineers for 1992. The president will send letters to those hospitals not represented to try to sign up more members.

The next meeting for Maine was held on April 23rd 1992 in Waterville. It presentation from George Ames, Ames Engineering, on “Reflectors and Energy Saving Light Fixtures”. This talk was very well received by all in attendance.

Following this presentation, a discussion of the May and June meetings took place, a summer picnic was discussed and the NEHES board meeting was reviewed. The next meeting was held on May 21, 1992.

Respectfully submitted,
Don Garrison

CONNECTICUT REPORT

The Connecticut Hospital Engineers conducted their last two general meeting on January 16, 1992 at Saint Raphaels Hospital, New Haven, CT and March 19, 1992 at the Stamford Hospital, Stamford, CN.

The January meeting was well attended by the members despite a snowstorm. The members were pleased to welcome Mr. Jack Berger, the NEHES president as a special guest at the meeting.

A presentation on the American Disabilities Act was made by Mr. Ron Paila A.I.A a principle in the architectural firm of Stecker, Labau, Arnell & McManus. The presentation dealt with the potential impact of A.D.A. on hospital facilities and compliance strategies. The presentation was well received by all those in attendance.

The March 16, 1992 focused on the recent JCAHO inspections at various member hospitals. Additionally there was a discussion on the Health Care Finance Administration’s validation inspections which followed the JCAHO inspections at Stamford and Waterbury hospitals. In addition there was a short presentation on the use of ozone gas as a replacement treatment for traditional chemical water tower treatment by Edsin Nichols of Solutions Inc. of Bradford, CT.

On Wednesday, April 29, 1992, the Connecticut Hospital Engineers Society and the New England Society of Clinical Engineers co-sponsored a presentation on PTSD Standards: Current Issues. The key speaker was Ode Keil, Director PTSD at the Joint Commis-

sion. The meeting was held at the Cabin Restaurant, Meriden, CT. It was attended by over 100 people with a lively discussion following the seminar.

Respectfully submitted,
Edward Brown

NEW HAMPshire REPORT

The New Hampshire Society held meetings on February 20, 1992 at the New Hampshire Hospital Association in Concord, NH.

The meeting was well attended. The following items made up the agenda:

1. The group decided that the president and vice president should make a courtesy call to all the members. The reason is to expand a update the membership list. Results from this survey will be presented at the next meeting.

2. The group decided to have the logo enlarged and reworked so that it is camera ready. This decision is in keeping with the notion that a membership drive is a goal this year.

3. The treasurer reported that Quicken will be the accounting program for the society. The word processing program has not been selected.

4. The Fall seminar chairman reported that vendors are already signing up and that we have some leads on program speakers.

5. A list of hospitals that are scheduled to be surveyed by JCAHO was presented to the group. It appears that just about all of southern NH will be done in June this year.

A meeting was also held on April 4th at the Sheraton Inn in
Portsmouth. The meeting was well attended with the following agenda:

1. The group decided that the customary summer outing would be postponed until the New England Hospital Engineering Society Fall seminar took place. The resounding behind this was two fold, first to get more attendance at the Fall seminar, and second to reduce congestion in everyone's schedule.

2. The group was happy to receive another new member - Warm welcome to Derek Seeley, from Exeter Hospital. Additionally, Ken Waite formally of Wentworth Douglas has accepted a position at Frisbee Hospital.

3. The Fall seminar chairman reported the progress to date, and all is going according to the plan.

4. The notion of having a golf tournament was given up due to time constraints.

5. Most of the hospitals in southern New Hampshire would be surveyed by JCAHO this June.

6. As of July 1, 1992, all people handling Freon in the state of New Hampshire will be required to be licensed.

The next meeting was held in Cheshire on May 21, 1992.

Respectfully submitted,
Stephen Shaw

**MASSACHUSETTS REPORT**

Congratulations to the following persons who were accepted as members at the last board meeting:

Ms. Kathy Sherman, Austen Riggs Center, Stockbridge, MA.

Mr. William Charrette, Director of Plant Operations, Beverly Hospital, Beverly, MA.

Spring Seminar on "ADA" being sponsored by the Boston Hospital Plant Engineers' Club is all set for March 31, 1992.

The questionnaires sent out in January are in the process of being evaluated and will be ready with the results by the May meeting.

**TRANSITIONS/MILESTONES**

Bill Judd of Ludlow Hospital has gone into self-employment and works at the Ludlow Hospital on a contractual basis.

Barry Movits of Metrowest underwent surgery recently, and is now recovering.

Jerry Crouch left Goddard Memorial Hospital in Stoughton.

The 1992 NEHES Spring Seminar held in Boston on **Americans with Disability** had a very good turn out. The total number of Massachusetts attendees was 125 with an overall turnout of 159.

In January of this year, I sent out a questionnaire to all the Massachusetts members concerning different issues. The response (about a quarter of the members) was helpful in obtaining feedback from the group shown below:

- Average number of years in the field: 15.5
- Total gross square feet of the hospital: 619,520
- Number of employees: 36
- Have you attended NEHES seminars: 80% yes
- What is your opinion of the material presented: Excellent: 18%, Very good: 45%, Good: 32% and Fair: 5%

Most of the responders are members of a regional club. Ideas on future seminars were broad, and feedback on NEHES was very constructive.

On April 8th, I attended the South Shore Club meeting that was held at Dewey's Restaurant in Lakeville. Some of the highlights included:

- Milton Hospital is installing a MRI pad and adding on to the medical building.
- Nantucket Cottage Hospital is replacing x-ray equipment.
- Cape Cod Hospital is putting on a $7 million addition and replacing PCB transformers.
- St. Luke's is evaluating a surgical center.
- New England Sinai will complete a three story addition on September 1, 1992.
- Norwood Hospital closed down its laundry and saw its CEO resign.
- JCAHO inspections are due for St. Lukes, Cape Cod, Emerson and Sturdy Hospitals.

The Dana Farber Cancer Clinic replaced their underground storage tank recently. The results were very interesting and a couple of the members will be sharing their experience with us.

Respectfully submitted,
Terry Ringer

**RHODE ISLAND REPORT**

A meeting of the Rhode Island Engineers was held in January 17, 1992, dealing with current alternatives for EO sterilization, including their features and benefits as well as their limitations. Fifteen members attended and the question and answer period that followed was most helpful.

Friday, March 27, 1992 at Women & Infants Hospital, 101 Dudley St., Providence, Ri., Rick Kennedy, Vice President of Operations at...
Women & Infants Hospital, who also served as a Colonel, U.S.A.R. for the 804th Hospital Center, discussed the start up of a 2,000 bed field hospital in 60 days as part of operation Desert Storm. A great presentation was made, but unfortunately I must admit the attendance was poor.

Interest was noted, at our meeting, on the NEHES upcoming 1992 Fall seminar in Portsmouth, New Hampshire.

The Rhode Island group would like to commend Terry Ringer for the excellent presentation, Americans with Disabilities Act, at our Spring Seminar. Our organization's objective was again met with a fine presentation.

We look forward to some reports on the most recent JCAHO surveys. These surveys are always welcomed.

I would personally like to visit with each of my Rhode Island peers, and tour their facilities within the next four months. Some have asked, and I feel it would indeed be a worthwhile experience for me. I plan on writing a synopsis of each tour at a future date.

As noted on a fellow NEHES members desk: 
_Don't Waste Failures, Profit From Them_

Respectfully submitted,
Ken Boyer

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**VERMONT REPORT**

A meeting of the Vermont Hospital Engineer's Society was held at Copley Hospital in Morrisville, Vermont on Wednesday 2/26/92. The meeting's educational focus included variable speed controllers for electric motors and direct digital controllers (DDC) for H.V.A.C. Landis & Gyr Powers and Cutler-Hammer Corporation provided technical expertise and led the discussions. The meeting ended with a plant tour and a V.H.E.S. business meeting.

All participants were reminded of the NEHES spring seminar and encouraged to attend. The group then turned its attention to preparations for the 1993 NEHES fall seminar to be held in Vermont. Seminar chairwoman Dana Swenson presented a listing of a number of suitable facilities for our consideration. After some discussion the group voted to present the Sheraton Inn in Burlington to NEHES as our desired choice to hold the seminar.

The Sheraton itself is a new facility with ample provisions for lodging and events. Most attractive was the fact that the adjoining conference center can accommodate up to 150 vendors! Burlington also offers many attractions. Sheraton management suggested that we contact a couple of firms that they have worked with to begin shaping our "spouses" program. Our fall seminar committee will follow-up. The Sheraton has also offered to give interested representatives a "cooks tour" of the facility. V.E.H.E.S. would like to extend that offer to interested members of the NEHES board. More information will follow regarding when the tour will take place.

On April 29, 1992, we held a meeting at the Lake Morey Inn in Fairlee, VT in conjunction with the Technical Services Program at U. of Vermont. A management session was held on _Air Emissions Standards_ with the speaker being Simon Thomas of Atlantic Engineering and MG Industries. Mr. Thomas reviewed the various air emission regulations that hospital engineers need to be concerned with. The focus of his discussion centered on ETO and Freon. Also an update/review session on the

**Safe Medical Devices Act** was held in the afternoon. The technical tract contained a very strong biomedical engineering component centering around troubleshooting and basic electrical and electronic equipment maintenance. It was the feeling of those who attended that the TSP seminar was another strong success.

The V.H.E.S group devoted their attention to getting clarification from NFPA about a number of life safety code interpretation issues. Once received, these interpretations will be the basis of further discussions with the state fire marshal. Regarding NEHES, Vermont will be forwarding the membership applications of two individuals for consideration.

On May 28th, a meeting was held at Fanny Allen Hospital in Winooski, VT. A discussion of Vermont’s certificate of need process was made by David Jillison, VP at Fanny Allen. A discussion followed regarding the planning for the 93 Fall seminar at the Sheraton, and a tour of the hospital.

Our most recent meeting was held at the Cortina Inn in Rutland again sponsored by TSP. The topic was _Capital Equipment Planning_. The speakers included Rebecca Scholes, VP for Finance at the Vermont Hospital Association, John Buck, Emergency Care Research Institute (ECRI), Jack Gosselin, NEHES member from North Country Hospital and the TSP staff. This program followed nicely the previous meeting on CON.

Respectfully submitted,
Mark Cappello with update by Tobey Clark
TOGUS (cont. from page 1) 


tions which include specialized features such as a sewage treatment plant, a fire department, a gymnasium and pool, a greenhouse plus the medical care buildings. There are recreation facilities such as a baseball field, a tennis/basketball court, a miniature golf course and a 4 hole regular golf course. Two cemeteries with over 5,000 grave sites and an extensive set of nature trails are included in this complex facility which totals 1,000,000 square feet of floor space.

In 1975, Don Garrison arrived on the scene to find a facility in desperate need of repair and modernization. He began to systematically upgrade all buildings and utility systems. Working with a maintenance budget of $1,000,000 to $3,000,000 per year and a construction budget of $5,000,000 to 10,000,000 per year, this old facility has been transformed into a modern up to date high tech medical care facility that sets the standard for other Department of Veterans Affairs Hospitals. For example in 1977 this Department of Veterans Affairs Hospital ranked #156 out of 172 Veterans hospitals in the country in saving energy. Over the next 13-15 years, Don and his staff have raised their standing to #1 and in the process, over $5,000,000 in energy savings have been realized.

Don operates and maintains this Medical Center with a staff of approximately 90 employees. These consist of the traditional plumbers, electricians, painters, etc., but also includes many specialized employees such as a safety group with an industrial hygienist, a fire department, a clinical engineering group and a construction group. There is over $12,000,000 worth of medical equipment to maintain, and three times that amount of utility systems equipment to maintain. Don and his staff maintain the latest type of addressable simplex fire alarm system, two separate energy management systems; (a Honeywell Delta 1000 and a Johnson Controls JC85/40). They use a computerized preventative maintenance and work order system and all construction design drawings are done on a 486 personal computer using Autocad software.

This modernization of an old facility with most of the buildings of the early 1930's variety has now been completed. Togus hospital was recently inspected by the joint commission and was the first veterans hospital in the nation to receive accreditation with distinction. All scores for the PTSM section PL1 through PL4 received a rating of 1.

Don and his staff are to be congratulated and should serve as an example on how to upgrade a medical facility to include all the latest medical technology while providing an environment for the patients and staff that is comfortable and in full compliance with all JCAHO, ADA and OSHA regulations.

Medical/Surgical hospital wing at Togus, ME in 1990 prior to renovation

Clinical addition adding 157,500 square feet completed in 1991 at Togus
A HISTORY OF TOGUS
1866 - 1991

The name Togus comes from the Indian name Worromontogus, which means mineral water. The Togus property was originally a summer resort known as Togus Springs. It was owned and operated by Horace Beals, a wealthy granite merchant from Rockland, Maine who hoped to establish a second Saratoga Springs. He invested over $250,000 in a hotel, stables, a bowling alley, a farmhouse, a bathing house, driveways, and a race track. The resort opened in 1859 but failed to generate business during the Civil War years, closing in 1863. The resort was known locally as "Beals' Folly". Beals died shortly after this business failure and the government was able to obtain the land and buildings for $50,000. The spot was selected because of its isolation from large cities, its well-known spring, and because it was a bargain.

The first veteran was admitted to Togus on November 10, 1866. The veteran population of the home remained at under 400 until a building program began in 1888 which eventually provided accommodation for nearly 3000 veterans. The home was organized much like a military camp with the men living in barracks and wearing modified Army uniforms. Although a 100 bed hospital was completed in 1870, medical care at the home was limited, even by the standards of the day.

In 1890, a narrow gauge railroad from the Kennebec River in Randolph, and an electric trolley line from Augusta were completed. The relative isolation of Togus was ended and it became a popular excursion spot for Sunday picnics. There were band concerts, a zoo, a hotel, and a theater which brought shows directly from Broadway.

Togus became a Veterans Administration facility following the Consolidation Act of July 1930, which joined all agencies administering benefits to veterans and their dependents. Most of the buildings which make up our present facility were constructed in the decade which followed. The role of Togus changed gradually from a domiciliary or home to a full-service medical center with the greatest change occurring following World War II with the large number of returning veterans needing medical care.

The National Cemetery, now inactive but well-kept, is the final resting place of veterans from as early as The War of 1812.

The dedication of the clinical addition to Building 200, the medical surgical hospital, marks the completion of the largest building project undertaken at Togus since the 1930's. This four-story addition will provide critically needed space for outpatient treatment, clinics, and support functions enabling Togus to continue to serve the needs of an aging veteran population.

Combining new ideas, a professional staff, and up-to-date medical technology, the Togus VA Medical and Regional Office Center continues its tradition of serving those who have served.

FIRST DRAFT FROM THE AHA/ASHE/JCAHO TASK FORCE ON CONTINUOUS QUALITY IMPROVEMENT INDICATORS

The Joint Commission is planning on including Quality Indicators of Plant, Technology and Safety Management (PTS) in its 1994-1995 standards. A small committee has been formed consisting of AHA/ASHE/JCAHO representatives. Several meetings have been held and a first draft of the standard has been produced (dated April 21, 1992). The document discusses the development of indicators and the various indicator types: Process Design, Staff Knowledge, Performance, and Customer Service Satisfaction. If you desire further information contact one of the sponsoring organizations or Barney Bolton at New England Memorial Hospital (617) 665-1740.
RURAL HOSPITALS (Continued)

The plant operations function within a hospital today is responsible for a wide range of accountability. In a small, rural setting a greater dependency on in-house staffing exists—primarily due to limited support services available locally. Though a high density of tradesmen may be readily present, trained mechanics and technicians experienced in commercial systems are few. To develop effective staffing, training, and retention becomes critical because frequent turnover in support staff can rapidly become a liability to a small plant operations department. In an effort to counter this, moderate wages must be offered to local staff who demonstrate a commitment—an achievable goal realizing wages and opportunities in rural areas are low on the average.

All engineering personnel should be trained and exposed to all operational issues within the rural facility since single staff off-shift coverage is the norm. Although a refrigeration technician spends little time repairing patient beds, basic knowledge can allow a custodian to effectively cover power plant watch on third shift. As necessary as cross-training is, it should be noted that an individual’s primary trade should be encouraged and not be diluted to a point of little or no accountability.

Purchased services by design lend themselves to the needs of a rural hospital. A lack of local technical resources make service contracts attractive and viable if properly structured and monitored. However, travel expenses tend to inflate the contract cost. This can be minimized by promoting a service vendor with local industry or school district, for example, and can provide savings by sharing travel costs on scheduled service calls.

The proximity of service personnel is often of major consideration in selection of service vendors for rural facilities. Though headquartered hours away, a technician’s residence may cut that distance in half and, with permission, staff may be contacted and dispatched directly from home. During the cooling season, our chiller service technician will often check in prior to leaving the “neighborhood” when a heavy cooling load is forecast.

In addition, the negotiation of a callback clause in a contract can be an advantage for the hospital. A service call within a specified period of time subsequent to a P.M. visit would be no charge for labor and/or travel assuming the nature of the higher degree of quality in contracted P.M. programs as the fiscal liability to the vendor in increased.

In recent years the evolution of the shared service has dramatically helped the rural institution. These services, primarily in the bio-medical support area, provide cost effective programs where in-house and/or traditional purchased services are unaffordable. Largely non-profit, shared services have a base of client hospitals of similar size and scope and provide functional testing and repair. Equipment design/application and modification are available for a modest membership fee that includes purchase consulting and training. Additionally, many offer occupational safety surveys such as air quality monitoring and infra-red equipment and facility imaging.

The ability of a shared service to summarize the regional history of a particular vendor or device prior to purchase can provide useful information to those responsible for these decisions. Loarer equipment availability and shared medical device inventories enable the rural facility to possess added redundancy through involvement in shared services.

A bio-medical technology in health care advances, rural hospitals find this instrumentation readily affordable as well as necessary in providing an acceptable degree of patient care. The resulting increase in device inventories has put new pressures on the management of the clinical equipment function.

Interfaced with this, current equipment, though more sophisticated by design and function, is often self-diagnostic requiring programmed front line trouble shooting. Concise procedures should dictate the limits of in-house repair, and these protocols should be the responsibility of a defined staff within the engineering department. This individual should be accountable for maintaining an appropriate parts inventory and the tracking of all requested repairs, whether by contract, warranty, or in-house. Currently, I find this staff member generally needs sound organizational skills rather than in-depth knowledge of clinical technology.

The primary goal of the rural hospital’s bio-medical management program should be to provide a reasonable level of support considering the limited level of clinical equipment redundancy.

Due primarily to the physical isolation of rural hospitals, code enforcement activities on the state and local levels tend to be minimal in comparison. Aside from JCAHO surveys and construction occupations, rural facilities have little external motivation for ongoing code and regulatory compliance programs. Operational complacency is a by-product of this phenomenon and the rural engineer is challenged (and frustrated) in his or her efforts to maintain compliance from a regulatory and practical perspective. In an effort to alleviate
this issue, a periodic inspection program should be established on a voluntary basis through, for example, the local Fire Department or State Fire Marshall's office. The resulting recommendations will provide the engineer with the motivation and incentive to maintain some degree of effective code compliance building-wide. In addition, the perspective of an "outsider" is an effective means of dealing with complacency.

A rural hospital often is considered a major industry in a small community, as an employer and as a utility user. In line with this, utility providers traditionally work closely with large accounts, an asset for the institution. Acquisition of electrical power, for example, should be dealt with a higher degree of contingency in mind. Though considered an important customer in town, rural hospitals are supplied by rural utilities utilizing rural distribution grids. Supplied power can often fluctuate in quality and be marginal in system capacity.

Enhanced auxiliary power generation systems with a duration of several days rather than hours should be the norm for a rural institution. Keeping in mind that total evacuation of a rural facility may be almost impossible due to limited local facilities, added back-up systems for back-up systems can be a prudent investment. Large capacity fuel storage tanks, battery lighting in critical care areas in case of generator failure, and viable alternate fuel suppliers are examples of this type of preparation.

A three-day three-foot blizzard turned our facility into the only "powered" shelter in the county last fall, prompting a subsequent investment in linen and mattress inventories.

The downsized organizational structure of the rural hospital places limits on the availability of key management staff to regularly participate in capital purchase activities. Hospitals in this class lend themselves to capital purchase improprieties as a majority of investments are clinically driven.

Minimally, capital purchase approval forms should be signed off by an engineer prior to the issuance of purchase order. This policy is instrumental in safeguarding against the acquisition of non-compatible equipment and devices, as well as basic power requirements and physical dimensions. In addition, user preference can often sidetrack standardization of equipment, which can be so vital in the long-term support of medical instrumentation.

With the criticality of building systems in a rural setting, plant operations should strive to maintain its own capital replacement program. Not only does this activity provide administration with a fiscal plan for major life cycle costs, but enhances the overall coordination of project management.

The ability of a small rural hospital to develop a facility plan has and always will help keep the institution's future goals in perspective. More often than not, institutions "react" to the influences of technology rather than forecast and plan.

The hospital engineer is vital to this process and is, in many cases responsible for its continued development. With fiscal resources at a premium, planning for regeneration of facilities and service expansion must begin simply and evolve with input from all facets of the organization. Once the need is perceived, the project should become viable, and the approval process, though often lengthy, will reach fruition.

If in-house staff is considered for project work, consider not only the impact of the proposed work but also the effects on routine job functions that may suffer due to the project's demands. In the rural setting, skilled local trades can provide an effective result if the overall operation of the facility is evaluated on a project-by-project basis.

The challenges of health care facilities management today provides the hospital engineer with increased opportunity for innovation in dealing with their professional responsibility. It has been my attempt to focus and highlight the unique approaches to these challenges in the setting of a rural environment.

Submitted by
Jack Gosselin
North Country (VT) Hospital

Candidates for ASHE President Announced

Former NEHES President John Crowley, Administrative Engineer at St. John's Hospital in Lowell, MA is a candidate for President of the American Society of Hospital Engineer (ASHE). John is a former president of NEHES and is currently Region 1 (New England) representative to ASHE. Other candidates include James Shoemaker of Deborah Heart Institute (NJ) and Karen Dethloff of Case Western Reserve (OH). Biographical information, statements on ASHE issues and ballots will be sent to all ASHE members.
March 6, 1992

With the assistance and advice of President Jack Berger, a nominating committee for Region I has been formed to come up with a slate of candidates for Region I. Board Members included Ed Boyer, Chairman, Ovid Bordeianu and Tobey Clark. The submitted candidates included:

George Hawley  
Director of Engineering  
Hebrew Rehabilitation Center  
Roslindale, MA

Bob Loranger  
Director of Facilities  
New England Medical Center Hospital  
Boston, MA

Dana Swenson, P.E.  
Director of Facilities Management  
Medical Center Hospital of Vermont  
Burlington, VT

Further information on these candidates along with a ballot will be forwarded to all ASHE members.

ASHE Board Meeting  
The ASHE Board of Directors met on February 7 - 8, 1992 in Ingram, Texas to conduct the business of the Society.

To follow is a copy of the highlights of the meeting giving an overview of the subjects covered.

Respectfully submitted,  
John Crowley
Plans for reformatting the APEX program and developing the testing component are under way.

**ASHE Endorses “Green Lights” Program**

ASHE has endorsed the Green Lights Program of the U.S. Environmental Protection Agency. Green Lights is a voluntary, non-regulatory program that encourages organizations to use lighting in the most energy-efficient and cost-effective manner while improving lighting quality and performance. Green Lights is designed to achieve cleaner air through the reduction of pollution associated with the generation of electricity. Hospitals interested in becoming partners in the Green Lights program are encouraged to call the EPA at (202) 479-6936.

**Teleconferences planned**

In an attempt to bring education to the “backyards” of our members, ASHE is cooperating with three other AHA societies to produce a series of Facilities Management teleconferences, scheduled to begin in July of 1992. Topics include: The Americans With Disabilities Act; Safe Medical Devices Act; OSHA Compliance; and Waste Management - to highlight a few. Teleconferences will be sold individually and as a series. Watch for more information.

**Products and Services on the Horizon**

Some of the new products and services you will be seeing this year include:

- More than 20 educational programs, including Quality Indicators for PTSM and Incinerator Operator Training are scheduled in 1992 (reproduce the seminar list or those in your region);
- Facilities management publicity campaigns and membership recruitment in all disciplines represented by the society;
- A new bi-annual newsletter highlighting the people and the accomplishments in healthcare facilities management field;
- ADA compliance manual, directory of facilities management consulting services, and new books on waste management, hazard communication, electrical and mechanical systems, safety policies and procedures, BMET training II, and revised editions of Fire Safety and Maintenance Management for Medical Equipment;
- Technical documents on telecommunications;
- Development of a scholarship and enhancement of all recognition programs;
- Ongoing development of software and computer-based training products.

**WHY DO HOSPITAL ENGINEERS FAIL?**

There are several key reasons why I feel hospital engineers fail. If hospital engineers would analyze their situation in the following areas and make sure they are acting appropriately, they will be successful.

a) **Maintain visibility with hospital management**

Engineers are trained and schooled to solve problems. Usually when we are faced with a large volume of work we turn to ourselves, knuckle down, work long hours and usually produce high quality results. However, what we do not realize is that while we are doing this, we are too busy to determine what our hospital administration, medical staff and employees concerns are. These people look to us for direction, support or encouragement and if we are not available, we can easily be forgotten. Hospital engineers need to be visible to discuss things with management, other departments and our own employees. Without visibility we will not get resources, recognition or support from other members of the staff.

b) **Join the hospital’s management team**

Engineers are taught to maximize resources, read and interpret technical literature and use their training to interpret regulations which often produces conflict with the boss, other department heads and our subordinates. We enjoy being right and we believe that because of our academic training we are right consistently. Unfortunately explaining to our boss why we are right and he/she is not no matter how diplomatically we do it is a mistake and indicates that we are not a member of the hospital’s management team.

Other ways that hospital engineers can show a failure to join with hospital management team. Spend most of your time in your office without getting out to make yourself accessible to the medical staff and your employees. Insist that engineer’s problems are the most critical of the organization and should be solved first. Ignore all problems other than engineering problems. Encourage your staff to be difficult with other departments rather than to display teamwork. Be totally unaware of the most critical problems facing the hospital.

c) **Recognize things like JCAHO problems**

External reviews such as JCAHO are intended to disclose problems that should be corrected not to just increase workload with documentation, meetings, coordinations and actions. Reviews should be seen as
a challenge and embraced to correct our hospitals shortcomings. The ever changing requirements demand continuous education in order to run a very complex organization like a hospital. If hospital engineers are not aware of changes in criteria from review organizations then the hospital is vulnerable to serious problems which are the fault of the hospital engineer.

d) Do not attempt to use creative budgeting

By being creative in money matters, hospital engineers can sometimes place himself/herself and the hospital in a dangerous situation. Failing to correct problems by taking short cuts with repairs and maintenance, or by bypassing laws and regulations in the interest of economy and efficiency can seriously backfire if someone gets hurt or it is discovered and reported. Of course, if a hospital engineer is personally benefiting from his/her creative budgeting and gets caught there is not much hospital management can do but discharge you.

e) Do not get caught up with your own output while your staff is in disarray.

It is very easy to get caught up in our engineering tasks to the point that we take precious time away from managing our staff. If we are so busy with our work that we fail to direct the many other employees that are our responsibility then the efficiency of our department goes down. We need to spend our time analyzing our departments actions and resources. In redirecting, realigning and reviewing the best use of our budgets, our personnel and capital investments and how we can make the best use of these resources for the benefit of the hospital. The overall organization and operation of our department should be our ongoing primary concern.

f) Do not lose sight of the customer.

One of the most important things we do is to service our customers. The medical staff and other department employees must believe that you are a successful hospital engineer. You must spend time meeting with these people and addressing their needs. If you do not you can be sure they will be talking to your hospital management about your service to them. It is much better for you to have a good cooperative working relationship with the other hospital staff rather than have them going to your hospital management complaining about things you are not doing.

g) Manage projects correctly

Construction or large maintenance projects involve considerable dollars and have high visibility. This provides us with an opportunity to exhibit our talents as engineers. However, it is also an opportunity for us to look very bad. There is often extreme pressure to perform under adverse conditions with disruptions to normal services and inconveniences to the staff. If we do not communicate well or coordinate well with the other affected departments we could be in for a considerable amount of criticism from hospital management.

h) Do not mismanage your staff

Not properly managing your staff can create problems for hospital management which they do not need. They have a considerable investment in salaries and equipment and they want to insure this investment is being used wisely. You need to be very aware of what your staff is doing. Make sure it is appropriate. Communicate with your staff and continuously monitor the morale and productivity. If your people are happy and doing a good job then it reflects to your hospital management that things in your department are under control and you are doing a good job.

To summarize, there is a very good probability that hospital engineers will fail if they do not pay attention to their visibility, join the management team, fail to recognize and correct problems. Misuse resources, isolate themselves, forget about their customers, mismanage projects or their staff.

Submitted by,  
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Donald Garrison
WHY NEHES?
NEHES is a professional organization of Hospital Engineers whose goals are to promote better patient care through mutual exchange of ideas and experiences, professional development by use of continuing educational programs, and effectiveness and efficiency through use of the latest technologies.

NEHES encompasses the six-state region of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont.

Through the many years of existence of what we now call the Hospital Engineer, patients and staff members have always relied heavily on this individual. Today, the scope of duties for the Hospital Engineer include facilities and plant management & operation, construction, security, clinical engineering, telecommunication, maintenance for just about everything, and lastly and most important, safety. Most often, the Hospital Engineer is the man behind the scene. Through membership and active participation in professional organizations, this man behind the scene can emerge and grow in his field.

PROFESSIONAL ADVANTAGES - Educational Opportunities
Spring and fall, NEHES conducts professional level seminars covering topics of current interest to the Hospital Engineer. Subjects range from specialty technical, material, e.g., fire safety evaluation, construction management, to general type management skills. e.g., preventive maintenance programs, minicomputer applications. These seminars are conducted by New England college faculty members or leaders in the field from the private sector and are arranged so that the spring session coincides with the New England Hospital Assembly meeting in Boston.

The fall program rotates through each of the six member states of the organization. Certificates and CEUs generally accompany these continuing educational programs.

In addition to the above, membership in your state chapter, which is optional, will provide more of the same educational opportunities, usually on a smaller and more local basis.

INTRADISCIPLINARY AWARENESS
The constantly expanding scope of hospital engineering, through technical and regulatory changes, makes it mandatory for Plant Operations to interact with all hospital departments to that each facet of hospital engineering can cooperate effectively and efficiently.

SERVICES - Seminars
NEHES provides opportunities for members to communicate and exchange ideas to keep abreast of operational disciplines through its local state chapters, meetings, semi-annual seminars, newsletters, and committee activities.

The benefits of our society lies in the sharing and exchange of valuable resources such as: information, skills and experience. Board members can plan and provide the forums for this interchange of ideas but it is most effective when the members take part. To get the most from your dues dollars read the publications of the society, attend seminars, submit items to the newsletter for others to share, communicate with board members to express your own views.

PUBLICATIONS
Four times a year our newsletter is published and distributed to the membership. Items of interest from the committees and the news from their states is printed in addition to editorials and full length articles on pertinent engineering topics from our active members. Information sharing is a prime asset of the Newsletter and many member articles are submitted and printed regularly.

AFFILIATION
Members of the NEHES organization through their committee appointments, provide an active liaison relationship to the American Society of Hospital Engineers, National Fire Protection Association, New England Healthcare Assembly, Joint Commission on Accreditation of Healthcare Organizations, and other groups on a less formal basis.

ELIGIBILITY
Membership in the Society is open to individuals who are actively employed in the field of Hospital Engineering. This field embraces multiple disciplines that include the art and science of efficiently planning, managing, operating and maintaining the physical plants, facilities and equipment for health care.

MEMBERSHIP
There are three classes of membership in NEHES. In addition to active members, associate membership is for those who leave New England but remain in Hospital Engineering and wish to continue their association with the Society. Honorary membership is reserved for members retiring from Hospital Engineering after having participated in the Society for at least five years.

HOW TO APPLY
Complete and mail the application below to:
Joe Mona, Plant Engineering Spaulding Rehab Hospital 125 Nashua St. Boston, MA 02114
A membership application will be sent to you and, if desired, you will be contacted by a chapter membership in your area. After the chapter has approved your application, you will receive your membership certificate, pin and folder of general information.

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