PRESIDENT'S MESSAGE

As we begin this decade, we all await in anticipation what the next ten years will bring to our industry and to ourselves. Since 1980, we have observed a solid emergence of the hospital engineers role in health care delivery. A role that has become a trusted element within our respective organizations and promises to remain in that capacity for some time to come.

From my perspective, the 1990s will further mature the change our field experienced in the eighties. Health care facilities management has evolved into a discipline where sound management skills are a vital prerequisite. The rapid advancement in technology and building systems has created a need for individuals who are able to effectively and successfully manage a large percentage of an organizations fiscal and human resources.

"Health care facilities management has evolved into a discipline where sound management skills are a vital prerequisite."

As ASHE President, Ted Holland, described in January's issue of Health Facilities Management, Members have assumed many new responsibilities in such broad facilities management areas as safety and construction in addition to their traditional responsibilities in plant operations and clinical engineering. I find it interesting to note the significant amount of time I spend dealing with regulations and technologies that were not present 10 years ago. We find ourselves wearing the hats of environmental and design engineers as well as technical consultants to capital purchases and policy writers and enforcers.

The New England Hospital Engineers Society is a resource to help members grow in our dynamic field. Through educational seminars and society materials, NEHES members can be exposed to the most current strategies needed to be effective in the 1990s. Most importantly, the society gives us easy and comfortable access to a diverse membership all of whom deal with the same changing environment you and I experience every day. Use NEHES to share ideas and solutions and help support our activities by attending our seminars. It will better prepare you for the decade ahead.

JACK GOSELIN
PRESIDENT, NEHES

"...we must not lose sight of the basic responsibility of overseeing the reliable operation and safety of the environment in our institutions for which we are ultimately accountable."
IMPROVING QUALITY ASSURANCE

Quality assurance (QA) in hospitals has its roots in clinical departments, and initially non-clinical departments did not implement QA programs. In recent years, however, quality assurance in non-clinical departments has become very common. The reason QA has become so widely accepted, is probably because it is widely recognized as a useful tool for improving various aspects of department performance, patient care and cost containment.

Since QA is a tool, it should be used as such for maximum payback. One relatively common error is that of having one person, usually clerical staff, design the monitors and criteria, tabulating the data, and generating QA reports. The problem with this approach is that the person who performs the work is not at all tied into the QA process until the very end, and his valuable input is completely left out of the process.

A more efficient way of conducting a QA program is to get the department employees involved in the process. They should recommend monitors and criteria. They should participate or conduct the data collection and tabulation, and be heavily involved in the discussions about the outcome of the monitors.

One of the main objectives of a QA program is to identify problem areas and correct these. Therefore, the employees should be encouraged to participate in determining ways to correct or improve deficiencies identified by the QA monitors. The reason this method has a better chance of success is because the employees have a better insight into their daily responsibilities, and when a problem exists, they usually know not only what causes it, but also how to solve it. The second reason the employees should be charged with correcting problems identified by the QA program, is because they will want to see their suggestions succeed, and that will give them added incentive and self-satisfaction.

The QA process is not complete until the results of the changes are measured for improvement. For this part of the program it is usually recommended to use the same criteria to measure the monitor, in order to be able to compare the results to the previous monitor. Again, keeping the employees involved in this part of the process is important, so that they can see the benefits of QA.

The message to remember is that QA is a tool, and involving the employees in the QA process makes this tool more efficient.

Ovid Bordeianu
Newport Hospital
Newport, RI.

NEHES FALL SEMINAR (1990)

Reminder

Please reserve October 16 thru 19 for you and your spouse to attend the NEHES Fall Seminar to be held at the Mystic Hilton, in Mystic, Connecticut.

The theme for this event will be Construction Management and Hospital Engineers contribution to expansion and renovation programs. Come and share your knowledge with fellow members and treat your wife/girlfriend to a well deserved Shopping Spree.

The Mystic Hilton is a new facility and is the chosen site of the 1990 Governor's Conference.

Mark your Calendars NOW!!!

October 16, 17, 18 & 19

This newsletter is published and distributed by the Technical Services Program at the Univ. of Vermont
The Importance of Telecommunications Brought Out in Recent Incidents

The reliance of all industries and businesses including healthcare on the telephone system has greatly increased in the past several years. FAX machines, modem communications, electronic mail and other new innovations have stressed the phone system. The recent telecommunications failure in the AT&T phone system created the potential for life threatening problems. In particular, patients with pacemakers who rely on transtelephonic evaluation of cardiac distress can be put at risk. Cardiac Data Corp. provides such services for 25,000 individuals nationwide. Patients with problems could not reach the 800 number associated with incoming calls during this outage. Although there were no serious results, delays in analysis of problems could be life threatening.

In a second situation, telephone communications were not working completely in a recent California hospital fire resulting in recommendations for the fire department for alternative communications via radio. No one was hurt in this incident in which 105 people were evacuated from Downy Community Hospital. The fire was caused by a welders spark igniting materials in an air handling shaft. Other incidents have been reported where the healthcare system relies on phone communications for emergent services. It points out the importance of backup communications. When becoming involved with vendors who offer services with a critical telecommunications component, verify that alternative methods for communications are available should the phone system go down. In fire, disaster planning and other potential emergencies alternative communications are critical.

OSHA: Employers Responsibilities and Jurisdiction

The March 1990 issue of Health Facilities Management, 3(3):13-21 is devoted to hospital safety. In this issue, the Occupational Safety and Health Administration (OSHA) proposal titled, Occupational Exposure to Blood-borne Pathogens, is discussed. As part of this article, a concise description of employer responsibilities and rights under OSHA (for all regulations) is presented. Also a summary of OSHA jurisdiction is highlighted. Many states such as Vermont are governed by a state agency responsible for occupational health and safety. Insure that you are aware of your rights and responsibilities along with how occupational health and safety is administered at your site.

ASHE Survey Shows Responsibilities and Salaries Have Expanded for Members

In the January and February 1990 Health Facilities Management magazine, Ted Holland, ASHE President, discusses a survey of responsibilities and salaries over the period of 1985-1989. The trend towards more responsibilities in the areas of telecommunications, security, risk management, laundry, waste management and facility planning has continued since the last survey done in 1985. The survey also provided salary information with responders compensation increasing in direct proportion to the bed size. Overall, facilities management is a growth field.

Changes in 1990 National Electric Code (NEC)

The 1990 NEC has been released by the National Fire Protection Agency (NFPA). Article 517 within chapter 5 is intended specifically for health care facilities. This section has been completely reorganized with the previous organization by occupancy type replaced with a technical topic format. The pertinent subtopics include: General Information, Wiring Design and Protection, Essential Electrical Systems, Inhalation Anesthetizing Locations, X-ray installations, Communication Systems, and Isolated Power Systems.

NFPA 70-1990 calls for hospital grade receptacles at each patient bed location in general care areas beginning on January 1, 1991. This requirement is intended to apply only to new construction, renovation or whenever receptacles are replaced. It should also be noted NFPA 70-1990 is only applicable when accepted by state, local and other governing authorities. Lastly, this requirement could be rescinded prior to the compliance date.

Grounding and bonding of fixed, conductive surfaces that are likely to become energized in the patient vicinity in critical care areas has been eliminated. Many questions have been directed toward TSP in the past regarding this grounding issue. They should be eliminated by this code change.
MAJOR FINAL EPA RULES EXPECTED IN 1990

Land Disposal Restrictions for the Third-Third of Scheduled Wastes

Treatment standards for the final-third of the scheduled wastes were proposed on Nov. 22, 1989. This proposal covers the largest number of wastes (approx. 350) and the largest volume of wastes, including wastes that are hazardous by the characteristic criteria as opposed to being specifically listed. The proposal also addresses the treatment of leachate from hazardous waste landfills. The statutory deadline for promulgation is May 8, 1990.

Burning of Hazardous Waste in Boilers and Industrial Furnaces

This regulation (proposed Oct. 26, 1989) will establish standards for controlling emissions of organic compounds, metals, and HCI from boilers and industrial furnaces that burn hazardous waste for any purpose. Currently, these units burning wastes for energy or material recovery are exempt from RCRA air emission controls. The proposal will also address the issues of how to manage the residuals from these units. (e.g., ash) and what practices still qualify as true recycling. (Specifically, the Agency is proposing to broaden the definition of indigenous wastes; devices processing such wastes are exempt.) The Agency plans to finalize this ruling concurrently with that proposed for hazardous waste incinerators -- probably in early 1991.

Identification of Wastes by TCLP and Listing of Additional Organic Toxicants

The current test procedure for the toxicity characteristic (i.e., the EP toxicity test) will be replaced by the toxicity characteristic leaching procedure (TCLP). Also, the toxicity characteristic will be expanded to include approximately 31 additional organic toxicants. The draft final rule has finished red-border review. It is soon to be sent to OMB for its review, which is supposed to be completed within 30 days. In any case, promulgation is not expected until Spring 1990.

Meanwhile, NSWMA (in conjunction with API and CMA) has recently submitted to the Agency demonstrating how matrix interferences in some wastes can prevent measuring toxic constituents at levels as low as those proposed for the regulatory thresholds. The Agency has indicated that it will meet with NSWMA/ICWM to discuss some ameliorating provisions that could be added to the final rule (or at least to the preamble thereof).

Benzene emissions from RCRA Hazardous Wastes & Wastes Operations (part of a Clean Air Act Sec. 112 NESHAP Standard)

On February 7, 1989, the District Court of the District of Columbia ordered EPA to propose decisions on weather to regulate benzene emissions from the following industrial sources of benzene: chemical manufacturing process vents; chemical manufacturing and petroleum refinery waste disposal; benzene handling; benzene solvent use; and gas marketing. The Agency proposed NESHAP standards (National Emission Standards for Hazardous Air Pollutants) for these categories on September 14, 1989. A final rule is expected before the court-ordered deadline of February 27, 1990.

MAJOR PROPOSED RULES UNDER RCRA EXPECTED IN 1990

Emission Controls for Hazardous Waste Incinerators

This rule will propose additional controls on emissions of metals and residual organic compounds from hazardous waste incinerators.

After lengthy arguments with EPA over appropriate risk standards and cost estimates, the OMB has recently released the proposal. The EPA plans to publish the proposal in the Federal Register by the end of Jan 1990. There will be a 60 day comment period. The Agency wants to promulgate a final rule for incinerators at the same time as it does for industrial boilers and furnaces (see below).

No Migration Variance for Restricted Hazardous Waste Land Disposal

The Agency plans to propose an interpretation of the statutory requirements for making a no-migration demonstration. A successful demonstration would allow the land disposal of untreated hazardous waste that has been restricted from land disposal under 40 CFR 268. The regulation will define such terms as no-migration, reasonable degree of certainty, hazardous constituent, and various pathways by which waste can migrate into the environmental media of concern.

The proposal is expected to go to OMB for its review in the first part of 1990. Thereafter, the Agency hopes to publish the proposal by March. The Agency reportedly does not expect any controversy over the rule with OMB.

Some interim final guidelines will accompany the official proposal. Any changes to the proposal before final promulgation will be incorporated into the guidelines.
Corrective Action for Solid Waste Management Units (SWMUs) at Hazardous Waste Management Facilities: New (40 CFR 264) Subpart S

This rule will amend the procedural and technical requirements for performing corrective action when significant releases occur from regulated hazardous waste units to ground water. The effects of this rule will depend on the modifications that are made based on the solid waste management units corrective action rule (see previous page).

According to EPA, this rule making is on hold until the SWMU rule is final or until a substantial number of comments regarding it is received.

Location Standards for Hazardous Waste Facilities

The EPA plans to propose location criteria for hazardous waste treatment, storage and disposal facilities. One of the more contentious issues will be that of what criteria are proposed for closing existing units in sensitive locations.

The proposal is under review at the OMB and should be officially proposed in Jan. 1990. A final rule is not expected until 1991.

Organic Air Emission Standards for Hazardous Waste TSDFs

Standards are being promulgated in three phases. The Phase I accelerated rules were proposed in 1987 and are related to controls for equipment leaks and process vents. The Phase II proposal for comprehensive rules will address tanks, container loading, dumpsters, waste fixation and those surface impoundments emissions from other land-based units will be minimized through implementation of the land ban treatment program. The Phase III constituent-specific controls will be proposed on an as-necessary basis once the Agency has evaluated the effectiveness of its accelerated and comprehensive rules.

The Phase I final rule is currently under OMB review and should be ready for publication in March, 1990. The Phase II proposal is also at OMB. It should also be cleared for publication in March, though its date could be pushed back. In any event a final rule for the comprehensive Phase II standards is act expected until around June, 1991.

The Agency has modeled the effectiveness of controls in its Phase I rule and Phase II proposal. The models have predicted a 3-4% reduction in ambient VOC concentrations for non-attainment areas.

Congressional staffers writing the new Clean Air Bill want to include a provision assuring that these RCRA standards will be promulgated soon, and that they will indeed achieve 3-4% reductions in ambient concentrations. However, due to technical problems with documenting the TSDFs share in reducing ambient levels, the ICWM has said it would prefer a requirement for 80-90% BAT reductions in uncontrolled emissions for individual facilities.

Effluent Guidelines for Hazardous Waste Treatment Facilities


Phase II will cover: 1) hazardous waste incinerators with wet scrubbers, and 2) leachate discharges from both hazardous and solid waste landfills. The timeline for the Phase II guidelines is not yet established.

Mandatory Inspections of Hazardous Waste Management Facilities

This action will establish requirements for mandatory inspections of TSDFs, including the manner and frequency of inspections, record keeping, and reporting.

Land Disposal Restrictions for Soil and Debris Containing Hazardous Wastes

The agency is investigating the need to set separate treatment standards for soil and debris containing hazardous wastes. If necessary, the Agency will further sub-categorize the waste streams to provide separate treatment standards applicable to such wastes.

Permitting Experimental Facilities Conducting Hazardous Waste Research

This proposal will establish special permitting procedures for experimental facilities conducting research and development on the storage, treatment, or disposal of hazardous waste. The regulations would allow experimental facilities considerable flexibility in operating according to an approved research plan, without requiring frequent permit modifications as details of the research changed.

RCRA Subtitle C Financial Test Criteria (Revision)

This amendment will revise the financial test criteria that must be satisfied by owners and operators employing the test to demonstrate RCRA financial responsibility requirements. The anticipated revisions will adjust test criteria so as to increase availability of this assurance mechanism to financially viable and stable firms and increase sensitivity to bankruptcy prediction.

Clean Harbors, Inc.
Natick, MA
CAREER CHANGE

Some of us change jobs because we dislike something about the current working environment or that the financial return is just not enough for our requirements. That wasn’t what happened to me.

I had an outstanding job, realistic compensation and a fine working environment. What I was not aware of until being asked to apply for another job, was that there was something missing, challenge. I was beginning to realize that I had completed a significant part of my job requirements by keeping the facility in excellent condition and helped to train the staff to do their work better. In fact, I realized that my assistant was capable of doing my work.

For me, it came in a surprise call from a fellow engineer whom I know through our peer group, who was looking for help. The fact that he contacted me, reminded me of the importance of our NEHES organization. We never realize the value of the associations we make until the time we need help or in this case, when help is volunteered before you realize it is needed.

One of the points is, that each of us does more for himself and his institution when he is trying to make the most of his capabilities. In other words we never know what our capabilities are unless we keep learning new things all the time and accept more difficult problems. Also, along with the challenge one accepts comes the flow of adrenaline, which I maintain helps keep us from aging so fast. Of course one has to be aware of the excess flow which comes when you run into too many problems or a few really tough ones. You have to sense your own health system to know that your body is tensing up and you need to apply the well understood relaxation responses. Those of you who have gone over the line there and have had the resultant troubles with your heart can tell us of the importance of learning to relax often, especially when you are about to get really angry at someone or with the situation at hand.

Some of you know our grandfather hospital engineer, Gerry Gardner. Ralph Henry would probably refer to him as our Godfather because he has had so much involvement in our peer group associations - ASHE, NEHES and the first small group- and oldest, The Boston Engineers Club. Well, look to Gerry as an example of keeping involved and trying to challenge ones mind. I submit him as an example of pushing ones self to try to meet ones capabilities. Gerry is 83 - in his 40th year of hospital engineering and is still active in his work. It is that challenge which brings intense satisfaction to you, and as a by product brings growth to your staff and your hospital. I recommend you try it.

David Hathaway

Note: I just read a very interesting and worthwhile book on leadership, LEADERSHIP IS AN ART, by Max DePree, CEO of Herman Miller Furniture Company. Copyright 1989. Its a book you’ll want to give to your boss as well as your subordinate supervisors and keep one for yourself. It costs $17, but I found it in our local library.

Extension Cords the Subject of Recent Fire Journal Article

In the Electrical Safety column of the Fire Journal, 84(2):63-64 March 1990, extension cords and fire safety are discussed. Topics include preventing overloading and short circuits, proper use of cords and educating the public. Common sense rules are presented for use of extension cords.

Publications of Interest


The 27 Annual Conference of the American Society for Hospital Engineering (ASHE) - "Health Facilities '90" will be held from June 18-22, 1990, at the Riviera Casino Hotel in Las Vegas, NV. Members should have received program information and registration forms and are urged to review the program content and consider attending. The Region Meetings will be held on June 19th from 5-6pm. If you need any additional information, or would like to receive the registration packet, contact John Crowley, Region I Director at (508) 934-8300.

This is an election year for Region I, and the nominating committee has placed the following names in nomination for Director, Region I: John J. Crowley, Nancy E. Aldrich and Ovid Bordianu. Members will be receiving their ballots in the mail shortly and are encouraged to vote for their choice to represent Region I on the Board of ASHE.

At the ASHE Board meeting held in February, it was voted to apply for membership in the Internaional Certification Commission, and to appoint the clinical engineering representative of the American Society for Hospital Engineering board to represent the society on the ICC board. Contrary to popular opinion, the ICC is not a part of the Association for the Advancement of Medical Instrumentation, but does conduct the certification program for Clinical Engineers and Biomedical Equipment Technicians.

The society's National Conference on Health Facilities Planning, Design and Construction (NCHFPDC) will be held in conjunction with the AHA's annual convention, July 31 - August 2, 1990.

John J. Crowley
Region I Director
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NEHES Videotapes Index

1. Code 101
2. Evacuation of Medical Facilities (17 min.)
3. Fire: Countdown to Disaster (2) (17 min.)
4. Hazardous Materials & Hospital Liability (Set of 2 tapes)
5. Hospital Emergency Department Response to Radiation Accidents (25 min.)
6. Implementing a Hospital Hazardous Materials Program (28 min.)
7. NFPA Fire Safety 1988
8. Oil Spill - Hebrew Rehab 4/28/87
9. Pass It On (Reuse of Refrigerator Cyl.)
10. Pre-Hospital Response to Radiation Accidents (25 min)
11. Return of the Lost Profits - HVAC Retrofitting
12. Safe Handling of Medical Gases (7) (19 min)
13. Steam Trap Operation & Maintenance

GROSSMAN'S SERIES:
Baths, Cabinets, Ceramic Tile, Decks, Drywall, Electrical, Exterior Painting, Fences, Finished Carpentry, Interior Wall-papering, Kitchens, Plumbing, & Roofing

MEDFILM SERIES:
27. Clinical Laboratory Safety (12 min.)
28. Defibrillators (11 min.)
29. Electrosurgery (11 min.)
30. Electrosurgical Safety (9 min.)
31. External Ventricular Pacemakers (13 min.)
32. Hazardous Materials Safety (11 min.)
33. Laser Safety (11 min.)
34. Needle Stick (8 min.)
35. Nursing Electrical Safety (11 min.)
36. O.R. Electrical Safety (10 min.)
37 Shock Proof (10 min.)

GENERAL INTEREST:
38. Wiremold Perimeter Raceway (10 min.)
39. Building a Data/Computer Facility (7 min.)
40. JCAHO - Emergency Preparedness (30 min)
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