NEW ENGLAND
HOSPITAL ENGINEERS SOCIETY
NEWSLETTER

SECOND QUARTER APRIL 1989

PRESIDENT’S MESSAGE

For those of you who are members of the New England Hospital Engineers’ Society, I went to personally thank you for your support of the Society. If you are also one of the members who regularly attends the Society’s annual seminars, a special thank you is in order.

I don’t have to tell any of you that the health care industry is experiencing financial hard times such as we have not seen before. How many among us have not felt the strain of a year’s worth of savings and how many have lost a job or two. We all realize that the effects of the recession were felt deeply by hospitals in Massachusetts alone will be insolvent. They won’t be able to meet their payroll. In this month’s issue of Hospital magazine, one professional resource vendor boldly prints that in the next five years, fifty percent of the hospitals in the United States risk the possibility of closing - not a very rosy picture for our industry.

I personally believe, however, that the people we serve will not settle for second rate health care. They will eventually put enough pressure on the federal and state political systems to rectify this condition. For some, unfortunately, this will come too late.

We, as health care professionals, must do everything we can to hold costs down. As managers of the physical plant, we control anywhere from two to seven percent of the health care facilities’ budgets. One way to accomplish cost containment is to stay current with the ever-changing management and technical systems we oversee. This is where your Society can help you and you can help the Society. By being an active member, you not only keep the Society strong and alive, but you also bring with you a wealth of knowledge which can be exchanged at our gatherings. I am happy to have learned a great deal from just the conversations I have with fellow members, not to mention what I get from our educational programs.

Our Society’s educational programs cannot be equaled by any other organization or institution. This is mainly due to the fact that we have minimal overhead and are not trying to make a profit. Furthermore, a major portion of the expenses incurred at our Fall Seminar is absorbed by the vendors who set up booths at the trade show.

Our recent Spring Seminar in Boston on March 21 was a perfect example of the quality programs our Society is putting on. The program had three of the most notable experts in their field and included a sit-down luncheon for the mere cost of forty dollars. Frederick W. Malaby, CIIH, Industrial Hygienist, represented OSHA. Tom Jaeger, PE and Chairman, Health Care Section of NFPA and Donald Squires and Ms. Vaughn represented DEO. Once again, our hats go off to Joe Mora and Bob Bueer for an outstanding Spring Seminar.

We’re also looking forward to seeing you at our Fall Seminar, October 18th and 19th, at the Samoset Resort in Rockport, Maine. Bob Lord and his committee are putting together an excellent program featuring none other than Ode Kiel, Director, Plant Technology and Safety Management along with other faculty member of the Joint Commission. They have an educational program designed specifically for the New England Hospital Engineers’ Society.

We need your assistance and support at these Seminars and look forward to seeing you there. Thank you.

Sincerely,
Edward Boyer, President

CT REPORT

The Connecticut Hospital Engineer’s Society has been very active this last quarter. Its major concerns are:
1. To give programs which are of educational value during the General Meeting and
2. To increase its membership, not only in numbers, but also in participation at the General Meetings.

At our last two General Meetings, we had programs:
1. Alcohol and Drug Abuse in the workplace, given by the Director of Employee Assistance Programs at Meriden-Wallingford Hospital. We learned that the amount of substance abuse in American industry is surprisingly large and we as managers have to learn how to recognize and deal with these problems in our work environment.
2. The other program was on Computers for Management given by Computerland of East Hartford, Connecticut. We were given a comprehensive overview of the different software packages and their applications, such as Preventive Maintenance. The new buzz words are Predictive Maintenance, Energy Management, Work Orders, etc. One must keep in mind that any maintenance management program is only as good as the quality of the data base it uses.

Guenter Ohler,
Connecticut Representative

MA REPORT

Even with the financial difficulties, our hospital care facilities in Massachusetts are facing, our hospital engineer groups are working together advantageously for the benefit of our hospitals. Included in these hospital engineer groups are Boston, Middlesex, South Shore and Western. They meet on a regular basis to keep each other current with new procedures and also to facilitate members with technical problems that can occur. These meetings are an excellent source of reference for all involved.

I enjoy meeting with members and receiving meeting minutes from the different groups. This enables me to correlate a report for the NEHES board of your activities on a monthly basis.

Keep up the good work and thank you for your input and cooperation.

Charles Feeney
Massachusetts Representative

AMERICAN SOCIETY
FOR HOSPITAL ENGINEERING
REGION I

As your newly elected representative from Region I, my thanks to all who voted to make this possible. Please remember that I am your representative, I look forward to hearing from you with your questions and concerns.

The Society is sad to announce the untimely death of Mr. Donald Sauerman, FASHE, President Elect for ASHE. Don was employed at the Harrisburg Hospital in Harrisburg, PA as the Director of Plant Operations. Our sympathy to his wife Katherine and her family.

By now you have begun receiving “Health Facilities Management”, the ASHE magazine. If you are not getting this publication but would like to, please let me know. ASHE is very interested in your reactions and comments which may be sent directly to ASHE or myself.

Time is rapidly approaching for the 26th Annual Conference and Technical Exhibition, June 5th to 8th, 1989, in New Orleans. (Both David Elliot and Nancy Aldrich, well respected and widely known local members of ASHE will be among the lecturers). Once again, call if you need information or have questions, but be sure to look over the program. Facilities Management, Design and Construction, Safety Management, and Clinical Engineering are featured.

From talking with various members of the Society there is one benefit which many of us overlook, which can prove invaluable in solving problems, that is the Specialized Technical Assistance offered at no additional charge, to ASHE members. Professionals are ready to assist you with issues concerning; Facilities Engineering, Clinical Engineering, Codes & Standards, Design and Construction, Disaster Planning, Electrical Safety, Energy Management, Hazardous Waste, Infection Control and many, many more areas. This service can be accessed by calling 1-800-621-6712. Why not call ASHE the next time you need some information or assistance.

John J. Crowley
ASHE Representative
Region I

NEHES FALL SEMINAR

Come to the NEHES Fall Seminar October 17, 18, and 19, 1989.

This year the Maine Hospital Engineers will be hosting the seminar at the beautiful Samoset Resort in Rockland, Maine - a three hour drive from Boston located on the scenic rocky coast of Maine.

The Joint Commission will provide a seminar on "Plant Technology and Safety Management." This will be a custom education program for the New England Hospital Engineers.

We have our annual Trade Show on Thursday, October 19; you can see firsthand the latest technical advances and talk to engineers about some of the mechanical problems that haunt all of us. Plan to have lots of fun.

Wednesday evening plan to have a western night. We are encouraging everyone to dress informal using country clothes, maybe a western hat. We will have a good feed and do some square dancing. The humble farmer will be there to keep us laughing. Thursday evening we will have a formal night where we recognize achievements and present awards. The spouses will have a great program also, so bring your wife or girlfriend but do not bring both.

For those who like golf, the golf course will be open, and the indoor racket ball court and a swimming pool will also be available.

We look forward to seeing you there.

Robert Lord, Program Chairman NEHES
CAPITAL REPLACEMENT - SOONER OR LATER?

Of the many challenges facing the hospital facilities engineer, replacement or upgrading of major plant systems continues to surface as a major component of accountability as a plant ages. The service life of its various mechanical, electrical and structural systems reaches a point where reliability is questionable and costs associated with effective maintenance become prohibitive. This eventually, coupled with capital budgeting and priority, makes this type of asset management very critical.

The institution at which I am employed recently celebrated its 15th birthday. Our age, young by comparison, is a milestone in terms of life-cyle planning. Electrical distribution, steam generation and refrigeration systems are all rapidly approaching 20 years of non-stop operation with only minor upgrades and overhauls performed to date.

Bearing in mind our administrative policy of "no surprises", I am currently formulating a 5-10 year capital replacement plan. It is my hope that this outline will interface annually with our capital budget with minimal fiscal hardship for the institution. Much of the justification takes into account issues of safety and reliability, technical support and parts availability and system history and utilization. Additionally, cost benefits of rebuilt replacement, technical advancement and operational compatibility all play a role in this evaluation and subsequent planning process.

Parts and service obsolescence is a key factor as we are often warned by service vendors that a "trouble free" device has no available source of components.

Service life is not always based on hours of operations but on age. In the case of an emergency transfer switch failure, it was determined dried and cracked insulation on an internal control wire caused a short circuit, overheating a transformer that eventually failed during a power failure. I would have been hard pressed to justify $20,000 to replace a switch that has cycled only 300 times because it is 14 years old and parts are at a premium.

It appears there is no set formula for replacement of major plant assets and each organization deals with this challenge in different ways. Some institutions place a large "contingency" fund as part of their capital budget and draw from it if and when major replacement is necessary during that fiscal year. On the other extreme, certain organizations follow a set renewal plan regardless of the operating history of the system or equipment in question. On occasion, this strategy ends up for service life prematurely.

With the health care budget scrutiny of today, there are many uncertainties we face in budget development. Major capital replacement is one of these - with one certainty; the hospital engineer will shoulder those decisions...... sooner or later!

Jack Gosselin
North Country Hospital

LATEST SCAM

Yesterday I had a Dr. Miller call me from Springfield, MA. He said my administrator (by name) had suggested he talk with me. He said they were old friends. His father had died and he was trying to settle his estate which was a company supplying the schools of Springfield. He had several items which he thought could be used in our hospital. One which he would donate were many industrial extension cords and some boxes of electrical tape (the come on). Then he had 10 doz. rolls of duct tape and 12 doz rolls of lin. masking tape, which he wanted to get his cost back and that would only cost $7.50 and $1.90 a roll respectively. (a total cost of $1445). I said I would call him back and he said he could not easily be reached and he would call me the next day. Maybe he suspected I guessed a scam when I asked how long he had known our administrator. Anyway the administrator has been on vacation for a week so I figured this guy has to be a phony!!

Hathaway

RECOMMENDED READING

Ed Feldman, Fall '88 Seminar speaker said that you should read one "instructional" book for every two leisure reading books. I have a good one for this first category. It is Dr. Charles Garfield's "Peak Performers The New Heroes of American Business," written in 1986. He has been studying peak performers for the last 20 years and is a fellow of the American Psychological Association. The book is filled with challenging thoughts such as the following: "In a peak performer we see the kind of person every one of us has been at his or her best. The peak performer has identified or at least is drawn toward certain values which underlie action. He or she consistently:

* Values achievements and finds his primary motivation through mission.
* Values contribution, and thus seeks results in real time and assists in the development of others.
* Values self-development, and pursues self-management through self mastery.
* Values creativity, and produces innovation through risk taking.
* Values synergy, and looks for points of alignment among organizational, team and personal objectives.
* Values quality, and pays conscious attention to feedback and course correction.
* Values opportunity, and meets the challenge of change."

David Hathaway

EDUCATIONS COMMITTEE

NEHE'S VIDEO TAPES INDEX

1. Code 101
2. Evacuation of Medical Facilities
3. Fire: Countdown to Disaster (2)
4. Hazardous Materials & Hospital Liability (Set of 2 Tapes)
5. Hospital Emergency Department Response to Radiation Accidents
6. Implementing a Hospital Hazardous Materials Program
7. NFPA Fire Safety 1988
8. Oil Spill - Hebrew Rehab 4/27/87
9. Pass It On (Reuse of Refrigeration Cylinders)
10. Pre-Hospital Response to Radiation Accidents
11. Return of the Lost Profits - HVAC Retrofitting
12. Safe Handling of Medical Gases (7)
13. Steam Trap Operation & Maintenance

GROSSMAN'S SERIES:

14. Baths
15. Cabinets
16. Ceramic Tile
17. Docks
18. Drywall
19. Electrical
20. Exterior Painting
21. Fences
22. Finished Carpentry
23. Interior Wallpapering
24. Kitchens
25. Plumbing
26. Roofing

MEDEILM SERIES:

27. Clinical Laboratory Safety
28. Defibrillators
29. Electrosurgery
30. Electrosurgical Safety
31. External Ventricular Pacemakers
32. Hazardous Materials Safety
33. Laser Safety
34. Needle Stick
35. Nursing Electrical Safety
36. O.R. Electrical Safety
37. Shock-Proof

GENERAL INTEREST

38. Wiremod Perimeter Raceway - Wiremod
39. Building a Data/Computer Facility

To borrow a tape, contact Mary Lou Crowley at 508-458-1411

RESEARCH COMMITTEE

This is a new job for me but I have observed the activities of quite a few previous members who have tried to do their best on this difficult committee. Some have been very innovative, others wait for the direction of the board. Some have made up elaborate surveys, and then waited patiently for the members to fill in the survey and mail it back to them. At $125 a questionnaire one wants to make sure we are really looking for answers requiring responding to a lot of questions.

Naturally, I will respond to the guidance of the board on the matters which we would like to have some research done, but I hope to come up with some of my own. I would be interested in the board's comment, or their interest in some of the following questions:

1. Is the use of emergency generators for load shedding, or assistance to power companies practical?
2. What is the useful life expectancy for components of the HVAC system?
3. How do you set up a training program for licensed tradesmen?

I would expect to make inquiries of the manufacturers rather than of the hospital engineer. Naturally I would expect that this committee and its members should do.

David Hathaway
HOSPITAL WASTE

A recent article in Hospitals stated that three million (3,000,000) tons of medical waste are generated each year in hospitals alone and that is only part of the total in the United States. In the United Kingdom, they produce 29 million tons of municipal, commercial and industrial waste each year. What do you do with Hospital Waste? We can do the following:

1. Hospitals could reduce their use of disposable material.
2. Recycle it.
3. Bury it.
4. Burn it.

We know we have a problem and we are in a quandary as to how to solve it. Let us discuss the potential problems and solutions, if any:

1. The Hospitals' article said that we should:
   a. Examine our purchasing practices.
   b. Realize that about 70 to 80% of the medical and surgical supplies are disposable and a certain amount of it is infectious.
   c. Know that it costs more to dispose it than to purchase it.
   d. Re-evaluate our priorities when buying medical supplies.

   This idea attempts to reduce the disposable waste, but it is only part of the solution.

2. Recycling
   We have been recycling certain products like paper, bottles and cans for many years, but again it is only one part of the whole solution. How much of the infectious waste can you recycle?

3. Bury the waste
   This is the process which is used most today, giving the collector the responsibility of disposing of the waste. This method is very expensive, and as the "fill" area reaches its capacity, where do we go?

4. Burn the waste
   Even when we reach the maximum potential of items 1, 2 and 3, what do we have left? The only solution is to then burn the material and reduce the residue to its minimum amount by means of an incinerator.

   In my opinion, every establishment that produces burnable waste should have an incinerator. It's a strong statement, but a well designed incinerator is not like a typical boiler which burns fuel and spews impurities out of a chimney. The public does not like to see a chimney or stack with something coming out of it, because they do not know what it is and what affect it has upon them and the environment.

   Today's incinerator is a thoroughly engineered unit with complete computer control for every stage of its operation, with better ash burnout, higher efficiency, and less maintenance. It can be fully automatic and operate in such a manner that nothing visible comes out of the stack. It can provide thermal energy from the waste which can be utilized for heating water and/or making steam.

   There are many manufacturers of incinerators and it is recommended that those who are interested should obtain help prior to making their selection, especially since few engineers are acquainted with present day incinerators.

The following items are recommended for your consideration:

1. Check with the authorities that the incinerator chosen has their approval.
2. Obtain help from consulting engineers who have a proven knowledge of incinerators and have them survey your requirements. They should prepare a drawing and specifications of the proposed incinerator. The information should be sent to at least six (6) incinerator manufacturers recommended by the consultant to obtain a bid price. The consultant and owner should review the proposals and choose at least four (4) companies. Each of these should be invited to attend a conference with the consultant and the owner to resolve any questions regarding design and operation. It is also recommended that the owner visit at least two of the qualified companies to evaluate their respective operation.

   The subject of incinerators is the most controversial and care should be taken in all respects.

   Vincent F. Gardner, P.E.
   Mass General Hospital

SUGGESTED READING

A book which has some very guidance on employee relationship, performance evaluation, disciplining and training is a book titled, "Decentralizing Health Care Management, A Manual for Department Heads and Supervisors" by Rene Laliberty. He is a VP of Human Resources at Mid-Maine Med Center at Waterville, Me. We all have these subjects thrown at us in many forms and it doesn't hurt to scan thru new presentations to see what you may have forgotten. I read the book to have certain chapters that I thought would be worth copying. And it was that interesting to me I should mention it so you could check out your library. It happened that a Lawyer friend had written the chapter on employee labor relations and I asked our library to buy the book which I now can honestly recommend for your reading.

David Hathaway

SEMINAR COST / VENDOR SUPPORT

We would like to remind the members that the vendors who participate in the fall seminar are helping to make the cost as low as possible for the NEHES member. However, we may lose this support of members do not make the "rounds" and speak to the salesmen even if you are not sure they can help you. The point is, maybe they may have an idea that you can use, even if you don't use their product. There is no "free lunch", so try to be attentive and seminar coordinators will try to encourage the best and most useful vendors to attend. One the requests made by vendors is to reduce their participation to only one day. We are going to try this but it will only work with your involvement.

David Hathaway

NEHES cannot endorse the vendors or their products.

JOB INFORMATION MAY BE OBTAINED FROM PRESIDENT ED BOYER AT 508-679-7025

The NEWSLETTER is dedicated to the NEHES objective "to promote the mutual exchange of technical assistance, ideas and experience."

Please submit articles for publication prior to the following deadlines:

June 16, 1989
September 1, 1989
December 16, 1989

The subject of incinerators is the most controversial and care should be taken in all respects.
COMPUTERIZING YOUR DEPARTMENT

There are many reasons why one should consider computerizing the Plant and Biomedical Engineering Departments, but that is beyond the scope of this paper. Once the decision to computerize has been made, the software selection becomes one of the most important factors which will ensure success or failure of the computerized program. The hardware should be selected to fit the software.

Before selecting the software, one should take the time to evaluate the scope and general procedures of the department. This should include a review of the methods currently in place for issuing work, for closing work orders, or authorizing work orders, as well as what kind of information is written on the work order when it is issued and when the work is complete. A review of the preventative maintenance program, practices, and deficiencies should also take place prior to software evaluation.

Once the department scope and procedures have been reviewed, it would be advisable to make a list of all the features your computerized system should have.

At this point the software selection can start and you have two major options. One is to purchase a commercial computerized program designed specifically for your type of application. The other choice is to purchase a data base software package and custom design your own program with either in-house resources or with the help of an outside consultant.

A commercial applications package offers several attractive features. Presumably someone has already done all the thinking for you, in terms of what data you need to enter, what kind of reports you should generate, or even the report format. These packages are relatively simple to use, and the training period can be short. The companies usually offer hours of training and good documentation as part of the package. You also probably get support if you should run into problems at a later date. Some of the drawbacks of applications packages are lack of flexibility, inability to expand the program if the software company does not do this for you, and cost. Also, you are usually limited to obtaining help only from the company, because chances are no-one else is familiar with your system. If you opt to purchase an applications package, be alerted that these vary widely in quality and price. Make sure all the features you want are offered, that there is room for expansion, and that the documentation is clear. You should be able to obtain a demonstration disc for evaluation prior to purchasing a package.

A second alternative is to purchase a data base program and custom design it to fit your own specifications. The advantage to this latter alternative is that you can develop a system which captures the data you feel is important, generates reports which are meaningful to you and is most likely expandable as your department and hospital changes. For example, if you design your own system, you can tie your program into the Hospital-wide quality assurance program, while a commercial package may not allow you this flexibility. The disadvantages of developing your own system, however, should not be overlooked.

It will take time to become familiar with a data base program in order to custom-design your own computerized program—four weeks at the very best. The actual design of the system can take another four to twelve weeks depending on how elaborate the program is. Another possible disadvantage would be lack of support from the software manufacturer. Although manufacturers know their software, they do not know your specific application. These are the factors you should consider.

Once the data has been entered, you will start seeing the results of your work. You will be able to generate meaningful reports such as maintenance schedules, equipment replacement reports, budget variance reports, etc. As your department and hospital change, so will your reports.

Once you have decided to computerize, the task which lies ahead of you is by no means trivial. You should consider the pros and cons before committing yourself to a system. The homework you do prior to purchasing the system should enable you to make a good presentation to your administrator in order to obtain approval, and this effort will pay off in the long run.

One final note: a computerized system will not do any of your department's work. It will organize and keep track of the daily work, the productivity, and the quality of your work, but it will not decrease your workload.

Ovid G. Bordeianu
Newport Hospital, RI

KUDOS TO NEHES

For those of you who haven't seen it, Health Facilities Management is the new monthly publication of American Society of Hospital Engineering. The magazine is sent free to ASHE members and has interesting articles covering a wide range of Plant Engineering type subjects.

The January and February issues have included articles about computer use as a Facilities Management tool. Of particular interest in these two issues are excerpts from the NEHES survey on Plant Department operation conducted in 1988. At their request, a copy of both the 1987 and 1988 surveys were sent to their editor a few months back for review. The publication of our findings serves to demonstrate credibility for our organization and also the information we obtained. Thanks again for everyone's help for a job very well done.

For those of you who are not completely familiar with ASHE and the benefits of membership, I suggest you call our ASHE liaison board member, John Crowley 508-458-1411. In addition to being an active member of long standing in NEHES, John was recently elected to be the ASHE Region 1 Representative.

Jack Berger
J.B. Thomas Hospital

EQUIPMENT FAILURE

We have several BURTON examination lights, some of which are portable and some are mounted in the E.R. ceiling. Burton is in Van Nuys, CA. one of their portable lights failed recently, causing the heavier light assembly to fall on a patient. Fortunately there was no serious injury. The part which failed is a small zinc die casting which holds the end of the supporting spring at its anchoring point at the other end of the light. The company letter to this hospital said, The failure occurred in a Burton part no. 1007619. This part is commonly known as a spring cam and is zinc die casting. The cam on this light shows some porosity at the break. It is determined that this porosity caused a sudden failure of this cam. When the cam arm fails in this manner the light head and arm falls, limited only by the internal wiring. Because of an update of this product line in June 1987, we no longer make an arm utilizing this cam. Of the approximately 10,000 units made, sold and in use in the field, only 0.4% have shown problems. A small "hidden defect" level is common in die castings and our experience is in line with this.

David Hathaway
Lawrence Memorial Hospital

AIR LOCK AVAILABLE FOR MOBILE CAT SCAN

The Lawrence Memorial Hospital of Medford has an air lock made by AIR LOCKE DOCK SEAL supplied by Hijack, Inc. of LaGrange, IL. The item is only a year and a half old and has a bottom section. The inside opening is 12'-8" wide and 12'-5" high, and the bag opens outward three feet and has a short "roof" extension to rest on the top of a mobile CAT SCAN vehicle. This is surplus since we are converting our door and pad for a mobile Lithotripter van, after having installed a fixed CAT SCAN.

David Hathaway
(617) 396-9250
# NEW HEALTH CARE
## INSTITUTIONAL (I-2) USES
### PROTECTION FEATURES COMPARISON

## PROTECTION FEATURES

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<td>A. Smoke Barriers</td>
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<tr>
<td>1. One Per Floor</td>
<td>yes*</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>2. Two Compartments Per Floor (Min.)</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
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<tr>
<td>3. Maximum Size</td>
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<td></td>
</tr>
<tr>
<td>a. Area</td>
<td>22,500</td>
<td>none*</td>
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<tr>
<td>b. Dimensions</td>
<td>150 ft.</td>
<td>300 ft. (150 ft. travel)</td>
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<td>yes</td>
<td>yes</td>
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<td>5. Unsprinklered</td>
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<td>yes</td>
<td>yes</td>
<td>yes</td>
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<td>6. One Hour FRR to Deck</td>
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<td>yes</td>
<td>yes</td>
<td>yes</td>
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<tr>
<td>7. Doors - 20 minute</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
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</tr>
<tr>
<td>a. Self Closing</td>
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<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>b. Latch</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
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<td>8. Smoke Actuated Fire Damper</td>
<td>yes</td>
<td>yes (mostly)</td>
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<td>yes</td>
</tr>
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<td>9. Minimum Size</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
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<td>10. Minimum One Exit</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
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<td>B. Occupant Load</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1. Sleeping Area</td>
<td>80</td>
<td>120*</td>
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<td>2. Inpatient Treatment</td>
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<td>240</td>
<td>240</td>
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<td>3. Outpatient Areas</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<tr>
<td>C. Door Locks</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1. Patient Rooms - Lockable Inside</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>2. Free Egress From Room</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>3. Unlockable by Staff From Outside</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>4. Mental Health - Special</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>5. Special Locking Permitted</td>
<td>no</td>
<td>yes*</td>
<td>yes (exterior only)</td>
<td>yes*</td>
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<tr>
<td>D. Interior Finish</td>
<td></td>
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<tr>
<td>1. Corridors</td>
<td>II</td>
<td>I</td>
<td>I or II to 4'*</td>
<td>I or II to 4'*</td>
</tr>
<tr>
<td>a. Sprinklered</td>
<td>III</td>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>2. Exits</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>a. Sprinklered</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>3. Rooms (Max. 4 Persons)</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>a. Sprinklered</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>E. Manual Fire Alarm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Required</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>2. Electrically Supervised</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>3. Activated by Sprinklers</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>F. Alarm to Fire Department</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Manual Fire Alarm</td>
<td>no</td>
<td>yes*</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>2. Valve Supervision</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>3. Smoke Detection</td>
<td>no</td>
<td>yes*</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>G. Smoke Detectors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Hospitals</td>
<td>yes w/o sp. yes w/o sp.</td>
<td>yes except</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>a. Corridors</td>
<td>yes w/o sp.</td>
<td>yes except</td>
<td>yes except</td>
<td>yes except</td>
</tr>
<tr>
<td>b. Patient Rooms</td>
<td>yes w/o sp.</td>
<td>yes except</td>
<td>yes except</td>
<td>yes except</td>
</tr>
<tr>
<td>c. Others</td>
<td>yes w/o sp.</td>
<td>yes except</td>
<td>yes except</td>
<td>yes except</td>
</tr>
<tr>
<td>2. Nursing Homes</td>
<td>yes w/o sp. yes alt. to a*'yes except'</td>
<td>yes alt. to a*'yes except'</td>
<td>yes alt. to a*'yes except'</td>
<td>yes alt. to a*'yes except'</td>
</tr>
<tr>
<td>a. Corridors</td>
<td>yes w/o sp. yes alt. to a*'yes except'</td>
<td>yes alt. to a*'yes except'</td>
<td>yes alt. to a*'yes except'</td>
<td>yes alt. to a*'yes except'</td>
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<tr>
<td>b. Patient Rooms</td>
<td>yes w/o sp. yes alt. to a*'yes except'</td>
<td>yes alt. to a*'yes except'</td>
<td>yes alt. to a*'yes except'</td>
<td>yes alt. to a*'yes except'</td>
</tr>
<tr>
<td>c. Others</td>
<td>yes w/o sp. yes alt. to a*'yes except'</td>
<td>yes alt. to a*'yes except'</td>
<td>yes alt. to a*'yes except'</td>
<td>yes alt. to a*'yes except'</td>
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<tr>
<td>3. Local Detectors</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
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<tr>
<td>4. System</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
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<tr>
<td>5. Connect with Alarm</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
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<tr>
<td>H. Supervision</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Alarm System</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>2. Sprinkler Valves</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
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</tbody>
</table>
I. Floor Finish
   1. Exits
   2. Corridors
   3. Rooms

J. Corridor Walls
   1. Sprinklered Building
      a. One Hour
      b. Solid Wall
         c. Termination
            1. To Rated Ceiling
            2. To Deck
            d. Patient Room Doors
               1. Rated
               2. Closer
   2. Unsprinklered Building
      a. One Hour
      b. Termination
         1. To Rated Ceiling
         2. To Deck
         c. Patient Room Doors
            1. Rated
            2. Unrated
            3. Self Closing
            4. Auto Closing

K. Atriums Permitted

L. Mandatory Sprinklers Over 75 Feet

M. Upholstered Furniture (NFPA 260B)

N. FSES

O. Sliding Doors Permitted in Means of Egress

P. Units of Exit Width

Q. Hazardous Areas
   1. BNBC - Basic National Building Code (BOCA)
   2. LSC - Life Safety Code (NFPA)

*Change From Previous Edition
**Major Changes for Health Care Occupancies Occurred in 1985 Supplication

MULTIPLE DEATH FIRES IN HOSPITALS

<table>
<thead>
<tr>
<th>Year</th>
<th>Number Of Multi-Death Fires</th>
<th>Number of Fatalities in Multiple Death Fires</th>
<th>Average Number of Deaths Per Year For Five Years in Multiple-Death Fires</th>
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<tbody>
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<td>1971</td>
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<td>0</td>
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</tr>
<tr>
<td>1972</td>
<td>0</td>
<td>0</td>
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</tr>
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<td>1973</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>1974</td>
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<td>1975</td>
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<tr>
<td>1988</td>
<td>0</td>
<td>0</td>
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</table>

Average number of single fire deaths per year: 6

Tom Jaeger

NFPA LIAISON REPORT

There are two important meetings coming up in 1989. The 1988 Annual Meeting will be held on May 15-18 in Washington, D.C. The following standards are up for review:

- NFPA 20: Centrifugal Fire Pumps
- NFPA 71: Central Station Service Signaling Systems
- NFPA 75: Electronic Computer and Data Processing Equipment
- NFPA 95A: Air Conditioning and Ventilation Systems
- NFPA 90B: Warm Air Heating and Air Conditioning Systems
- NFPA 110A: Stored Energy System
- NFPA 414: Roof-Top Helipad Construction and Protection
- NFPA 70: National Electrical Code

1989 Fall Meeting - November 13-16, Seattle, WA

NFPA 10: Portable Extinguishers
NFPA 37: Stationary Combustion Engines & Gas Turbines
NFPA 50: Bulk Oxygen Systems at Consumer Sites
NFPA 93: Fire Hazards in Oxygen Enriched Environments
NFPA 80: Fire Doors & Windows
NFPA 82: Incinerators, Waste & Linen Handling Systems & Equipment
NFPA 92B: Airplane Smoke Control
NFPA 99: Health Care Facilities
NFPA 99B: Hypobaric Facilities
NFPA 704: Identification System for Fire Hazards of Material

If you have a special interest in any of these standards, you should obtain a copy of the TCR or TC from NFPA in addition. The 1991 edition of NFPA 101 Life Safety Code is now in the revisional process. An industry meeting is scheduled for May 8, 1989. The remaining meetings are as follows:

Summer Fall 1989:
NFPA 101 SC's and TC's will meet to address public comments.
January 20 to April 10, 1990:
Technical Committee Reports are open for public review.
November 1990:
NFPA 101 is in final draft for public comment.

If you would like any additional information, please call me at (203) 528-7141.

David O. Elliott
CONTRACT SERVICES - BUYER BEWARE

At one time or another every hospital administrator is himself in the awkward position of suddenly having to replace a key Department Head. Often times the hospital has a difficult time filling the void when a viable candidate does not appear readily available. It is usually in a situation such as this that the hospital turns to a contract service company.

There are many such companies around and I am aware of instances in which the arrangement has worked out well and then there are those that left the hospital in worse shape than before. The amazing fact is that both were with the same company. What every hospital should remain aware of when interviewing sales teams for these companies is that above all else, they are profit maximizing organizations and their first responsibility is to maximize that margin. The functions of the service organization is to provide a service and insure dependency. In short, buyer beware.

The following are a few general suggestions from those that have cancelled a service contract and found a vacuum after the company has left:

1) Be sure the initial contract insures all equipment records and history, policies and procedures, personnel records, and inventories are to be left with the hospital when the contract is terminated.

2) Insure the contract states all such records are the property of the hospital.

3) The contract should state that the company is responsible for those records and will be liable for them and will be subject to legal recourse if they "mysteriously disappear." (I am aware of this happening at one hospital).

4) Insure that the service company, when subcontracting work such as asbestos removal or purchasing supplies, provides competitive bids from local vendors. Often times the service company has contracts with national corporations and it will benefit the service company but the savings is lost to the hospital. The purchasing department should have as much control as possible with regard to selecting vendors and suppliers.

5) Read the fine print to insure that all aspects of the department to be managed is covered. There have been instances when the most basic responsibilities of a department must suddenly be delegated elsewhere because it was not included in the contract.

6) Insure the contract states the hospital or any outside agent of the hospital has the right to perform a thorough inspection of equipment and records on demand. It is recommended by some hospitals that a JCAHO type of inspection be performed six months into the contract and one month before the conclusion of the contract. The costs of these inspections are negotiable and may be shared.

7) Begin the contract duration at one year with the option for annual renewal there after.

Before signing on the dotted line the institution should do its homework. This involves not only checking reference hospital Administrators but also with the employees working for the manager. Lastly, the empirical data made available in various statistical reports should be reviewed in detail. This information can be obtained not from the contract service company, but independently by the Chief Financial Officer.

For example hospitals totally satisfied with the service are receiving but are usually the same institutions that know exactly what they were buying beforehand.

Joseph W. Kaczmarek
Central Vermont Medical Center

LESSON LEARNED

Following the rupture of a 1 1/2 in. steam line at the cart wash in the Central Sterile Supply, we learned some worthwhile lessons: when security determines only a sprinkler has activated and there definitely is no fire, he should shut off the sprinkler, security and heating plant personnel should be frequently trained to know the major valves to isolate those systems which fail, ie. steam, sprinkler, hot water and cold water. We had the information in emergency procedures but the wording is not as good as a picture which is referred to frequently. One has to ask themselves, "What if?" and have an easy means to answer that question. In this instance even the fire department wasn't thinking because they didn't shut off the sprinkler system when it was obvious that there was a steam leak and no fire.

David Hathaway
(817) 396-9250

HEAVY ATTENDANCE / 93 SPRING SEMINAR

The three topics, Hazard communication (Fred Malaby, OSHA) Code Changes (Tom Jaeger, NFPA) and Infectious Waste Incineration (Ardis Vaughn & Don Squires) were well covered and there were active questions from the members. There were 101 registered, Joe Mona (Anna Jaques Hosp, MA) as co-ordinator chaired the seminar, Bob Bueter (Baystate Med. Center, MA) was the other coordinator. Some key points: Get your hazard communication in writing! OSHA wants any chemical that is hazardous be controlled. A worker can see anytime/may not be limited to state Right-to-Know List! OSHA has no list! Make sure labels have: trade name, mgrr address and type of hazard! Make sure sub-contractors respond to OSHA requests, at your site. There is no need to keep MSDS for items no longer used, but you must keep a list of the names of those used.

If you can ban smoking, you'll cut the major cause of hospital fires. You are 40 times safer in a hospital than in your home as far as fire is concerned. Hospitals are now nuclear installations! JCAHO is using the 1986 Life Safety Code. Smoke zones now 7" high x width x 300 feet if you have sprinklers. Same problems in future: What locations, who decides? Hospital grade receptacles to cover more than patient areas; Redundant grounding (plastic vs steel); Isolated power on non-explosive anesthesia locations. Can lock exit doors in sprinklered areas if released by fire alarm and time device. Jaeger acknowledged that PCB, Asbestos and Halon all developed for NFA now hazards not anticipated. Probable best speaker with more details - too much for newsletter. Worth hearing!

From Mass. DECE we learned that they are understaffed by 35% and paperwork will take forever to process! (writer's evaluation)

Look like emphasis to minimal number of path incarners! Now particular limited to .02 grams/day cut off corrected for CO2, if this changes it wouldn't apply to anyone with an application now in process! The speakers had limited info, but were asked several questions by the members, which was the real benefit of being there.

David Hathaway

FOR YOUR SURPLUS MEDICAL EQUIPMENT

Now there is a place to send your working, but surplus material (medical equipment including crabs and beds.) One of our NEHES engineers, Tom Magliocchetti, Director of Engineering at Mount Auburn Hospital, Cambridge, MA is on the Board of Directors of American Medical Resources Foundation, a non-profit organization to arrange donations of new or used or reconditioned medical equipment for hospitals and clinics serving the disadvantaged in Latin America and other developing nations and in the U.S.

The American Medical Resources Foundation will:

• Arrange donations of new, used or reconditioned medical equipment to hospitals and clinics serving the poor in Latin America, other third world countries and in the U.S.

• Provide qualified personnel to evaluate the candidate recipient hospitals and clinics and to survey medical equipment to be donated to establish its operability and maintenance supportability.

• Provide medical equipment maintenance expertise through training programs given in-country at the recipient hospitals and clinics by qualified volunteers.

• Provide seminars at the management level dealing with the planning, requirements, procurement and maintenance of medical equipment.

• Serve as a clearing house for information concerning requests for equipment and services.

You can make arrangements for the pick up of any donations by calling Mr. Kay Barney, President of AMRF in Lexington, MA, at (617) 862-8773. The mailing address is:

American Medical Resources Foundation
P.O. Box 343
Lexington, MA 02173

I have taken advantage of this opportunity to get rid of an older EKG machine which would not be worth selling but is still working!

David Hathaway

KIPS Anyone

Developed by a team of JCAHO professionals and reviewed extensively by a multidisciplinary group of biomedical, engineering, administrative, safety and other health care professionals, the material has been given the name "KIPS". The KIPS survey guide contains the key items, probes and scoring guidelines used in surveying the Plant, Technology and Safety Management standards for the hospital accreditation program. The booklet provides an insight into the newly revised PTSN standards and makes it clear to understand the basic intent of the standards.

The PTSN standards provide for several tools that support an organization wide approach to PTSN and emphasize the staff managerial responsibility. The KIPS survey guide provides surveyors with standard specific, written guidelines for evaluating compliance with the PTSN standards.

Overall, the KIPS system provides for the integration of PTSN functions into the organizations overall QA function. QA standards require that PTSN be treated as an organization wide process and that the data and information collected from this process be integrated into the appropriate QA activities.

The PTSN (Plant Technology and Safety Management Series) KIPS survey guide and 1989 became available from JCAHO in December 1990 and can be ordered from them for $30.00.

I received my copy a few weeks ago and immediately did a survey of my own facility. Several areas that we had not been aware of were identified as needing more emphasis to be in compliance.

Jack Berger, J.B. Thomas Hospital

MEMBERSHIP COMMITTEE

The Membership Committee is presently attempting to contact all past members in order to determine why they are no longer members. In doing this we hope they will re-consider their decision. Additionally, we hope to identify areas we need to improve in order to recruit new members, and retain existing members. If you have any comments or suggestions, please contact me.

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