PRESIDENT'S MESSAGE
Dick Popham

Each of you are aware that N.E.H.E.S. provides excellent, low cost Spring and Fall Seminars each year for all of its members. What you may not know is that through its Board members, N.E.H.E.S. provides a host of other information services for you and the institution you represent.

Are you in need of films to train personnel at your hospital? If so, our Chairperson for Education, John Crowley would like to hear from you. He is developing a video/film library to cover a wide range of subjects and would be happy to purchase the materials which you require.

Peter Fovargue, our N.F.P.A. Liaison, George Hawley, our N.E.H.A. Liaison, and Vincent Gardner, our A.S.H.E. representative are all available to answer any questions you may have regarding the particular organization they are associated with.

Rod Cameron, our Research Chairperson, is updating our equipment list through a survey of all our members. When you are faced with equipment problems or acquisitions, this list will enable you to contact a colleague who has worked with a similar piece of equipment in their institution. By completing this survey you can assist us (and yourself) in this regard.

If you have information you would like to share with fellow members, please send a typewritten copy of it to Barney Bolton, our Newsletter Editor, for publication. If it is information which needs to be distributed to our members in a more timely fashion, please mail it to Jack Berger, our Chairperson for Professional Career Development, and he will include it in our new News Bulletin.

Our President-Elect, Theran Manning, is working toward establishing a liaison with J.C.A.H. in order to give more accurate and helpful information to our members. I believe we will all benefit from such an arrangement.

If any of you have questions pertaining to the qualifications’ profile for the typical Hospital Engineer’s position, or more specifically, would like to know the qualifications for actual positions which are currently open, please contact me and I will be more than happy to help you. Watch for Jack Berger’s presentation of the successful Hospital Engineer’s Profile in the near future.

These are only some of the many services N.E.H.E.S. provides its members. If you need any help or information, don’t hesitate to call your N.E.H.E.S. state representative or myself. Sharing your particular needs and problems can help us all. If you have any suggestions on how we can better serve our members or help them in their career development, please let us know. We would be happy to arrange for you to attend our Board meeting and present your ideas personally, should you so desire.

N.E.H.E.S. ENGINEER CITED FOR ENERGY CONSERVATION

Some energy-saving detective work has enabled a Massachusetts hospital to reduce its annual oil consumption by over 300 thousand gallons. Robert F. Campbell, Director of Facilities Services at Faulkner Hospital was able to achieve the reduction without the installation of an EMS or any load limiting device.

“When I came on board, our oil consumption was just under 800 thousand gallons annually,” Mr. Campbell indicated. After doing some research, it was discovered that the temperature in the chilled water system could be hiked from 42 to 50 degrees, and that the discharge temperature in the air handlers could be raised from 55 to 60 degrees without compromising the comfort of the employees. “This move alone resulted in significant savings,” Campbell said.

He and his team also removed an inefficient device which was found to activate the heating system, no matter what the outside temperature, under conditions of high humidity in the air handlers.

A shift from mechanical and absorption chilling to straight mechanical chilling, along with regular tune-ups to the boiler and other components, completed the modifications.

“Just by implementing these few changes, our oil consumption last year was reduced to 450 thousand gallons,” explained Campbell. In fact, Faulkner is so energy-efficient that independent consultants have indicated to Campbell that the installation of any EMS would involve a much longer than average payback period.

The facility also has a diesel cogeneration plant which enables it to operate inde-}

pendently of its utility for an indefinite period of time. Interestingly enough, however, Campbell noted that it is cheaper for Faulkner to buy its utility’s power than to cogenerate. “Off-peak power can be purchased at about three cents per kw, while cogenerating results in a cost of just over six cents per kw,” he stated. Last year the cogeneration plant provided approximately 12 percent of the institution’s 11,065,000 kw usage.

Mr. Campbell described Faulkner’s conservation efforts as part of a case study during the recent COGENERATION: MAKING THE RIGHT DECISIONS conference in Cambridge, MA.

(From HEALTH FACILITIES ENERGY REPORT Volume 7, No. 4.)

At an October 27-29 meeting, the National Fire Protection Association (NFPA) 101 Safety to Life Technical Committee voted to accept a public proposal mandating that smoke detectors be installed in all patient rooms in new construction. This was, however, a straw vote; an official letter ballot will follow. The committee’s action reversed the unanimous recommendation by the Subcommittee on Health Care Occupancies to reject the same public proposal based upon numerous technical discussions over the last 20 years. Currently, the Life Safety Code only requires smoke detectors in corridors of newly constructed nursing homes, at cross-corridor barriers, and in ductwork penetrating smokestop partitions. Other uses of smoke detectors are contained within the health care chapters of NFPA 101 but are listed only as trade-offs to base requirements.

The action of the main technical committee of NFPA 101 to mandate smoke detectors in patient rooms shows a definite shift in current, or at least perceived, code philosophy. It appears as if the Life Safety Code is moving away from the prevention of multiple facilities to protecting the singular loss of life.

Thomas Jager of Gage, Babcock and Associates, and now 1st Vice Chairman of the HCS, next discussed the impact of sprinkler
system requirements on health care facilities. There have been recent advances in technology, as well as changes in standards, for such systems.

Mr. Jaeger began by clearing up some misconceptions that still prevail about sprinkler systems: there have been no recorded drownings, no floating bassinets, and no electrocutions from sprinkler systems activating. Also, all sprinkler heads in a building DO NOT activate in a fire; only those whose activating device (e.g., fusible link) has tripped. Some statistics mentioned included: about 65% of nursing homes and 15% of hospitals are "fully" sprinklered. As to deaths and sprinkler systems, no multiple fire deaths have occurred in sprinklered buildings except when an explosion occurred. There have been very few failures of sprinkler heads. And the cost of sprinkler systems has remained relatively the same for the past 8 years because of hydraulic calculated systems and new labor-saving technology.

He then reviewed some of the new developments in sprinkler systems: new piping allowances (e.g., plastic); criteria by testing laboratories and manufacturer that must now be considered along with NFPA 13, Standard for Sprinkler Systems; and types of sprinkler heads (e.g., Quick Response, residential, "institutional," "on-off," "extended coverage"). He cautioned that users should be very clear as to the correct application of each of these types of sprinkler heads.

As to impact of sprinkler systems on health care facilities, new standards require sprinkler systems for new buildings over 75 feet high, but use of sprinklers allow more flexibility in design, and trade-offs which will reduce the cost of buildings (e.g., fewer stairways, more open areas, reduced fire-rating of corridor walls). Designers however need be aware of model building codes (MBC): while the most current editions of all MBC permit trade-offs for sprinkler systems, only 2 (BOCA, SSBC) allow sprinkler/unsprinkler options.

FAST RESPONSE STOPS OIL SPILL CONTAMINATION

Quick thinking men at the Hebrew Rehabilitation Center prevented a potential disaster early Monday morning after a ruptured tanker truck spilled 7,000 gallons of number 6 oil into the parking lot and a nearby brook. The brook, although not a source of drinking water, runs through the 10-acre grounds of the rehabilitation-center directly into the Arnold Arboretum; one of Boston's Best known nature preserves.

The mishap occurred when the driver of a truck owned by Hellen Transport Company, a North Uxbridge firm, was attempting to make a delivery. As the driver backed into position, he accidentally side-swept a dumpster, gouging a one-foot wide hole in the partially filled tank.

As the oil began to pour out of the hole and onto the ground, the maintenance department quickly sprang into action, marshalling the Center's available resources to minimize the damage.

By the time the Boston Fire Department arrived on the scene we had the situation pretty much under control. With the help of a front-end loader, we used bags of Speedy Dry and approximately 10 tons of sand to staunch the flow of oil into the Center's nearby parking lot.

The "river of oil" that poured into Bussor Brook was another problem. We regulated the Center's available supply of thermal blankets and used them to block the spread of oil downstream. The thin, lightly woven blankets acted as filters, collecting the oil from the surface of the water and preventing contamination of the brook and the Arboretum. An official from the state Department of Environmental Quality Engineering (DEQE) was on the scene shortly to investigate the cause of the spill and to oversee the clean-up.

As a team from Clean Harbor Inc., a private contracting firm, began the messy task of cleaning up, Ingrid Johnson from DEQE's Emergency Response Unit surveyed the environmental damage.

When the main entrance to the lot became blocked by emergency vehicles, we removed a portion of the Center's perimeter fence to allow an alternative entrance.

The following is a list of some of the costs incurred as a result of the oil spill:

| Item                                                                 | Cost  |
|                                                                     | $     |
| 1) HRCA manpower                                                   | 68.00 |
| 2) Boston Police Detail                                             | 50.73 |
| 3) Gas                                                             | 75.93 |
| 4) Lunch and supper                                                 | 706.25|
| 5) Speedy Dry                                                      | 355.00|
| 6) Blankets - Laundry                                               | 625.00|
| 7) Clothing and shoe replacements (staff)                          | 1,235.00|
| 8) Michigan loader - 19 hours (at $65.00)                          | 150.00|
| 9) New side door made (dropped in oil)                             | 400.00|
| 10) 30 tons of rock for temporary entrance/exit                    | 100.00|
| 11) Misc. tape, strapping, rods, rags, batteries                    |       |
|                                                                     | 8,216.88|
| 12) New lawn and sprinkler repair                                  | 5,750.00|
| 13) Seal driveway and repair curb                                  | 7,200.00|
| 14) 8 pairs of boots (rubber)                                      | 240.00|
| 15) 10 tons of sand                                                 | 250.00|
| 16) Rock wall - brook                                               | 100.00|
| 17) Garage floor                                                    | 157.17|
| 18) Replace bumper in garage                                        |       |
| 19) 4 barricades                                                    |       |

The other costs were Clean Harbors ($60,000), the repairs to the oil tanker and the cost of fuel.

This type of experience is certainly quite undesirable.

(There is a video-tape on this available if anyone is interested.)

George Hawley
Director of Engineering
at Hebrew Rehab Center

OBITUARY

Jim Gleason, 21st President of N.E.H.E.C., and Assistant Director of Engineering at Quincy City Hospital, passed away recently from cancer. We extend our sympathy to his wife, Paula, who is living at 3 Gibbs Road, Natick, Mass.
A good engineer is not necessarily one who knows everything about his/her field, but where to look to find the answer. In the field of hospital engineering, the "Where to Look" is vast. There are regulations, codes, guidelines, policies, textbooks, standards, etc. How does one deal with this situation? A good memory is helpful, but it isn't the best solution.

A technique that I have been using which is simple, reliable, and fast is described in the following paragraph.

When I receive a new technical document, such as listed above, I read it or check it over thoroughly, as soon as I can. In the process, and this is the important part, I make notes of all the items of interest to me, listing the topic, page, paragraph, or whatever is appropriate to later find this item. When I have finished the reading, I organize my notes in an orderly fashion into a summarized index. This "compendium", is then inserted into my notebook containing other indexes and forms a handy reference to my library.

From time to time, my interests change. I may again review certain publications in my library and update and expand the associated compendium. Also, when publications are updated, as with NFPA Standards, it is very easy to check it over and revise my reference index.

The uniqueness of this technique is that my index will probably be different from anyone else's. That is because our interests may not be the same and what I consider important to me will not be the same as what you choose. The technique is simple enough to get into and grows faster than you can imagine. If you think it might help you, give it a try — and let me know how you like it. A sample of mine is shown here just to show you how easy it is.

-Jack Berger

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