NEW ENGLAND
HOSPITAL ENGINEERS SOCIETY
Newsletter

SEPTEMBER 1977

CHANGES TO NATIONAL ELECTRIC CODE

Activities during the 1977 meeting in Washington, D.C., May 15-19, 1977, on behalf of the American hospitals by the combined efforts of the American Hospital Association and the Health Care Section of NFPA substantially assisted to clarify and alter several areas of concern in the proposed 1978 National Electric Code (NEC-70-1978, Article 517).

The membership of NFPA attending the Washington meeting voted to accept the health care community's recommendations to:

1. Negate the necessity for enclosing low voltage signalling wires in conduits.
2. Create two categories of care areas for patients: a. General Care area and b. Critical care area, thereby eliminating the previous contusion brought about by having three areas.
3. Allow for compliance of the equipotential bonding requirement by performance test instead of specifically requiring the use of AWG #10 copper wire bond between exposed metal surfaces.
4. Negate the requirement for "Hospital Grade Receptacles" by the deletion of Article 517-12.
5. Delete the diagrams 517-42 (1) and (2) and 517-60 (1) and (2) from the body of the text and incorporate the same information in the appendix or as footnotes where it does not become enforceable material.
6. Exempt therapeutic pools from the requirements of Article 517-92 (b) (1), thereby negating the necessity to restructure the electrical service about a Hubbard tank and other non-submergeable pools.

By approval vote of the NFPA Standards Board the above changes will be written into the 1978 edition of NEC-70 "National Electric Code".

The upcoming 56A and 76B along with the other documents to be reviewed in Atlanta during the week of November 14-17 are worthy of your attention and support.

The proposals to relax the stringent requirements for conductive floors and line isolation monitor circuits in 56A are

(Continued page 2)

BIG TREAT for Sebasco guests is the weekly lobster cook-out, with local lobsters and clams served as nature meant them to be served — with the scent of salt air and conifers in the breeze. Everyone gets a steamed lobster, all the clams he can handle, corn on the cob, melted butter, and all the fixin's. It's a banquet fit for a king — a weekly "happening" at Sebasco. (See page 2)

A.S.H.E RECOGNITION


Certificates were awarded to the first group of Senior members, under the new "levels of membership" program. Of this initial group of 32 were N.E.H.E.S. members, all of whom were present to receive their certificates. Our compliments to N.E.H.E.S. Past-Presidents Al Bender, Jerry Gardner and Bill White, to N.E.H.E.S. Treasurer Don Kohler, to Don Bail, former State of Maine Representative and to Walter Johnson, Director of Maintenance at the Carney Hospital in Boston.

STANDARD 56C — LABORATORIES IN HEALTH INSTITUTIONS DUE FOR REVISION

The sectional committee on hospital laboratories recently held an initial meeting in Boston relating to the revision of this standard. Final acceptance of any proposed changes would not be forthcoming until fall, 1978 at the earliest. "However, it would be desirable to make suggestions, comments, or criticisms during the summer of 1977 in order that it may be processed in a normal way, consistent with NFPA procedures," so states Don Ball, NEHES Representative, to this committee.

"I do not think there are any surprises in store as a result of this revision," he concludes.

Communicate with Don Ball at Maine Medical Center, Portland, Maine if you have input to this standard. Two points that hospitals should be reminded of that are obvious in the present standard are:

1. A lab safety officer should be appointed.
2. Most investigations or credential people are interested in equipment maintenance records, both from the standpoint of calibration and safety.

The Middlemac Engineers met in May at Continental Metal Products in Woburn. Mr. Harry Siegal, president and owner, gave a very interesting tour on the manufacturing of dietary kitchens and drug units. These all stainless steel units under close inspection by the group appeared to be first-class quality products. CMP hosted the lunch and a condensed business meeting preceded the tour.
"WELCOME ABOARD"

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PRESIDENT'S MESSAGE

"Energy Conservation" is a theme that has been vital to some hospital engineers for many, many years and possibly their lifetime. Others became acutely aware of "Energy Conservation" and its impact for the first time during the 1973 fuel crisis.

It now appears that with the recent announcements of President Carter and probable legislative actions regarding energy and fuel, all Hospital Engineers may be embarking on a whole new era of "Energy Conservation". It is not inconceivable that hospitals may face "Energy Conservation by Law" circumstances similar to the "Life Safety by Law" circumstances that challenged the resources of many hospitals in recent years.

I therefore suggest that we, individually, and as a society must now, more than ever, learn and share all available information and all proven energy conserving techniques. As individuals we must then apply that knowledge to our own areas of plant responsibility and become prepared in detail to offer realistic long-range capital improvements or corrective recommendations with priorities to our administrators. Since you may already be applying many of the basic, "easy" energy saving techniques, I suggest that the next era of energy conservation will be infinitely more complex, more costly to achieve, and more of a challenge for the hospital engineer.

James M. Lawson
President

NEC CHANGES, Continued

Definitely to the hospital's economic benefit. 76B, in its present form is clearly addressed to the problems of patient associated electronically operated equipment, but has need for refinements and stature clarification.

The formation of a HEW Region I NFPA Health Care Section Advisory Panel is proceeding under the sponsorship of NEHES and is directed by Bill Sargent of Newton-Wellesley Hospital. Many members of NEHES have volunteered for specific activities.

The success of the NFPA Health Care Section lies in the effort and cooperation that interested individuals express.

Charles Spalding
New England Deaconess Hospital

One of your NEHES members, Rick Arnold of Shawnessy Hospital, Salem, has been involved with the replica of the "Spirit of St. Louis" in its tour of the United States. The aircraft paid a visit to Hanscomb Field, Bedford on Sat., August 19 enroute through the original 48 states as a 50th Anniversary flight commemorating Col. Chas. A. Lindberg's flight following his flight to Paris. The replica airplane was built by and is flown by members of the Experimental Aircraft Association of which Rick is a member. Rick is a private pilot as are other members of this group, and has aspirations towards building his own plane.

PRESS RELEASE — NEW ENGLAND HOSPITAL ENGINEERS NEWS LETTER

Well folks, just a note to let you all know that we got through the Winter of '77 up here in the north '40 with only one layer of longies. Can't understand what all the fuss was about in the rest of the country — didn't see anything unusi up here in Maine.

Our energy conservation program here at East Addison Medical Center was a big success. We installed Joule stoves in our seven bed patient tower (that's the old light house we bought from the Coast Guard for $1.00), and had our two medic care physical therapy patients chopping alder bushes out along the urgency entrance (we don't get no emergencies) to keep the tower warm.

We hooked up the hypothermia blanket in the E.C.U. — that's the Earnest Care Unit (Earnest has been in there all winter since he hurt his back) to the drain on the kitchen sink. You would be surprised at how much hot water Bessy uses when she washes bean pots. On Saturday night we don't even have to give old Earnest a second blanket.

They tell us that the price of oil has gone as high as a hound setting on a creosoted cockroach. Well, don't affect us much now that we got electric lights. But if it gets much worse, I'll have to convert the kerosene dialysis machine to electricity.

Ossie Bordon, he's our new Administrator, said that the JCAH would be coming around next month. Ossie from the city, he came down from Big gor, so I didn't want to embarass him by asking what the JCAH was. He kept calling them the joint commission so I reasoned it to be associated with Doc Beal, he's our orthopedic man. I suppose it's another bunch of those federal people wanting to look at the plumbing. I should have everything thawed out by the time they get here.

We're all looking forward to the Fall Seminar at Sebasco Estates. We're going to be coming down in Percy Hanson's lobster boat 'cause all the roads got broken up pretty bad this spring.

See you all there.

Homer Sidell
First Engineer
East Addison Medical Center
East Addison, Maine 04404

The Vermont Hospital Engineering Society met with their wives June 3rd at the Roostertail Restaurant in South Burlington to honor retiring members. Dexter P. Bowen, Conrad R. Desautels, Milton A. Schweitzer, and Joan L. Vergin.

The Rhode Island Engineers in March formed an energy conservation committee. The purpose of the committee is to obtain energy saving ideas from various sources so that they can be passed along to Hospital Engineers. Mr. Joseph Hanlon is the point of contact. Other State Representatives who are interested may contact Mr. Hanlon at 401-456-3391.
IF YOU'RE DRIVING... Direct routes from New York and Boston to the Maine Turnpike. Take Maine Turnpike exit 6A to U.S. 295 thru Portland and U.S. Routes 1 and 95 to Bath. Bear right on Route 208, then Route 217 to Sebasco Estates. If you're a speedometer watcher, Sebasco is 46 miles from Portland, only 12 miles from Bath.

IF YOU FLY... Delta, Air New England and Bar Harbor Airlines bring you to Portland.

IF YOU TAKE A BUS... Daily service from New York and Boston to Portland... connecting trips from Portland to Bath.

Limousine service available at Portland Jetport by appointment.

IF YOU COME BY WATER or bring your own boat... Sebasco has modern mooring service. Use Charts #314—#315.
SUPPORT THE HEALTH CARE SECTION
Paul Taylor, Boston Hospital for Women, was one of our NEHES members who attended the NFPA this spring in Washington, D.C. He reports that there were about 500 members of the Health Care Section in attendance. The efforts of these hospital representatives points out the value of cooperating and organizing a united defense against unrealistic codes. All their proposals were adopted. What is now required is for as many NEHES members who can afford a little time to get behind the Health Care Section and join the Section, attend the voting sessions, and participate in the research necessary to gather facts showing the value of a code requirement — or why a specific code item should be deleted.

ENERGY MANAGEMENT CONFERENCE
Several NEHES members attended the regional conference this spring at Hartford, Conn., on the subject, "How to Manage Energy in Health Institutions." It was a challenging venture, yet opportune. The same April week, President Carter confronted the country with the same energy crisis hospital engineers and administrators heard discussed by some talented scientists and engineers. One was M. King Hubbert who convincingly demonstrated the fact that the world's total energy resources were being rapidly consumed by our high technology society.

It didn't take very long after that conference to bring the subject of energy to my administrator. He saw the electric bill for the period ending 15 May double the previous month. A recently occupant addition to the hospital explained part of the increase, but not all of the increase. Then a Board member had read that hospitals were wasting energy and wanted to know what our hospital was doing to cut down energy consumption.

Remembering conference speakers said of the total energy savings possible, 30% could be accomplished by in house control adjustments — we took a close look at light levels, shutting down air conditioning, cooling to a higher temperature, and heating to a lower temperature. Unfortunately, accepting these conditions will require changing the general expectations of the American people who use air conditioned cars for a two-mile trip to get a quart of milk.

Concentrating on the highest use of energy one should start with the HVAC systems which probably take 45%-75% of the total energy. (Lighting 7%-18%, laundry 5%, kitchen 4%-8%, and sterilization 2%).

We were advised to keep good records to demonstrate that conservation efforts were made and had good results. It was believed that when necessary the government may be so restrictive in distributing very limited resources that a hospital which could demonstrate absolute minimum needs would be rewarded.

For those with utility costs exceeding $25,000/mo. it may be worthwhile to consider control by mini-computer using micro-processing components. To have an engineer review your facility may cost between $3,000 and $7,500. He would recommend the best system for you and have an unbiased approach. Any new proposal should be justified on the basis of simple payback (in years) equaling first cost divided by yearly retained savings from the proposal. Then the reciprocal of this would be the apparent return on rate of investment.

One of the most dynamic speakers at the conference was Fritz Dressler, University City Science Center, Philadelphia, Pa. He strongly recommended that hospital administrators demand from their engineers graphical records showing comparisons of consumption with the heating and cooling degree-days, as well as charting 1,000 lbs. of steam consumed per month. Another comparison would be a monthly record of total BTUs/S.F./degree day.

Dressler pointed out that increases in utility rates would be so great in the future that the engineering dept. may become a revenue source rather than a cost function. He cited in Penn. the experience between 1972-1975 was an increase of 200% in electricity, 250% in steam and 300% in oil.

To obtain a monthly report on heating and cooling degree days send $2.50 to the National Climatic Center, Federal Building, Asheville, North Carolina 28801.

Other energy information might be obtained in this area from the Federal Energy Administration Region I office, Analex Building, Room 700, 150 Causeway Street, Boston, Ma. 02114, Tel. (617) 223-3701.

WINDJAMMERS WHICH CRUISE the Maine coast each summer are often seen hereabouts, sometimes in our own harbor. This one is VICTORY CHIMES, largest of Maine's sailing ship cruise fleet. Sebasco guests arriving by their own boat will find ample anchorage and docking facilities. Our harbormaster is on duty daily, to help.

THE MIDDLEMAC ENGINEERS
President — Bob Barris
Vice-President — John Crowley
Secretary/Treasurer — Dave Hathaway
The picture below is the 1977 Spring seminar. Brief as it was, it brought out ideas and, more importantly, brought you into contact with other hospital engineers who may have, or soon will, help you solve an urgent problem. Don't forget to register for the 1977 Fall conference at Sebasco Estates, Maine, so you can follow up the activities of your associates.

RESEARCH QUESTIONNAIRE
Fellow member: I'm sure we've all had occasion to ask ourselves these questions:
Where can I get some information about service equipment? Who else uses it?
This system (company) looks pretty good, but what is its (their) record in the field? Are there hidden costs? What about parts and maintenance?
The list of questions like the above is almost endless.
In an effort to provide some help and give you someplace to turn for answers, the New England Hospital Engineers Society is putting together a reference book on Plant Systems and equipment. The idea came from Mr. Joseph E. Northrup of Bridgeport Hospital, Conn. and was successfully used by the Conn. Hospital Engineers Society.

Here's how it will work:
1. Fill in the survey on page 4. Please print or type. We made it easy to copy the page.
2. Return the survey to John Crowley at the address below.
3. Completed surveys will be indexed by state and hospital.
4. Each member who returns a copy will receive a reference book containing all completed surveys.
5. Reference books will be distributed at the fall seminar in Sebasco, Maine, to those attending. The remaining will be distributed via some other means, to be determined (mail, State Rep., etc.) for those unable to attend.

Return completed survey to:
Mr. John Crowley, Admin. Engr.
St. John's Hospital
L Hospital Drive
Lowell, Mass. 01852
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