

August 1989

Alberta Branch Executive Meets With PHAAB

by: Dan Richen

On May 29, members of the Executive of the Alberta Branch had the opportunity to meet with the Public Health Advisory and Appeal Board (PHAAB). The purpose of the meeting was to present our position regarding Environmental Health issues of interest to PHAAB.

A major topic of discussion was intensive livestock operations, and the report produced by a steering committee of Alberta Agriculture. The Alberta Branch presented a position paper to PHAAB in response to the report. The following is a summary of the concerns expressed by the Alberta Branch in regards to the report:

- (1) The use of the "Minimum Distance Separation" formula for siting intensive livestock operations provides a practical and flexible alternative to the arbitrary distances established in present legislation. However, a minimum separation distance must be maintained.
- (2) The report does not provide an objective view of the conflict between intensive operations and adjacent residences. The report demonstrates a strong bias towards intensive livestock operations in its recommendations and the proposed bylaw.
- (3) The legislative revisions recommended in the report, and the province-wide implementation of a municipal bylaw, are ill-conceived. Significant revision of the Public Health Act and regulations are recommended - in order for the Act and regulations to conform to the bylaw. Further, implementation and application of the bylaw at the municipal level would be inconsistent.
- (4) The use of "Generally Acceptable Practices", proposed in the report, does not provide for adequate protection of the public health and safety. Although agriculture is a fundamental industry in Alberta,

to exempt agricultural activities from requirements protecting the health and safety of the public is unacceptable.

- (5) The recommendations and by-law proposed in the report do not establish minimum operational standards against which intensive livestock facilities can be measured. although siting criteria can reduce the possibility of problems arising, operational practices have the greatest impact on the production of odours and potential nuisance conditions.

The Alberta Branch of the Canadian Institute of Public Health Inspectors makes the following recommendations with respect to the issue of intensive livestock operations:

- (1) A provincial task force should be established to address the issues of the development and operation of intensive livestock facilities. Membership should be equal from provincial departments directly involved in assisting or monitoring such facilities (Agriculture, Environment, Health, etc.), and from livestock associations and the public.
- (2) Public hearings should be held to address the issue of the development and operation of intensive livestock facilities. The hearings should be held at a variety of locations throughout the province to allow for the widest possible public input.
- (3) The task force should de-

velop a policy paper based on the information collected for submission to provincial caucus, and any regulation developed from the report should be discussed in the legislature.

This was a most informative and productive meeting. As well as intensive livestock, other topics discussed included prepackaged convenience foods, the legislation review process, manpower and funding at both the health unit and department level, and professional development and continuing education amongst Public Health Inspectors.

This was the first opportunity for members of the Branch Executive to meet with the Public Health Advisory and Appeal Board - outside the the appeal process. It is hoped that similar meetings can be arranged in the future, providing another avenue for the Alberta Branch to have its views heard.

Copies of the papers presented to the Public Health Advisory and Appeal Board on intensive livestock operations and prepackaged convenience foods can be obtained from your Zone Councillor.

ROGERS' LAW:

*As soon as the stewardess serves
the coffee, the airliner
encounters turbulence.*

DAVIS' EXPLANATION OF ROGERS' LAW:

*Serving coffee on an aircraft
causes turbulence.*

PRESIDENT'S REPORT

We are now into the dog days of summer, when things are supposed to slow down. Of course this isn't true for PHIs - with summer being the most active season. It is also not valid when applied to Institute and Branch activities.

I have just received the "final" version of the report on the Future Role of Public Health Inspectors. It makes for voluminous reading, and is of some value as to depicting the diverse roles and functions of a Public Health Inspector. Anyone interested in reading the report can contact me, as this is our only copy (additional copies can be obtained for \$50), it will only be loaned for short periods.

Continuing on the National scene, the 1989 Conference - "Building Healthy Environments" takes place in Toronto, September 10-15. The theme and proposed agenda appear to be particularly interesting and relevant, and you are encouraged to attend.

The Alberta Branch survey is nearing completion, and will be available for the Annual General Meeting this Fall. I wish to thank all those who responded to the questionnaire. The results are quite interesting and will provide an excellent tool for planning the Branch's activities in the future.

Of special interest is the Biomedical Waste Management Conference, scheduled for November 4th. The sessions will boast a top notch list of speakers, addressing a very pertinent issue.

The conference will be opened to non-PHIs (lab techs, clinic and hospital workers, as well as private companies working with biomedical waste).

And then there are the PHAAB Public Meetings addressing the issue of the development and operation of intensive livestock operations. The Branch Executive had an opportunity to meet with PHAAB in May to present our view. However, if a Public Meeting is slated for your area, you are encouraged to attend.

I would like to say so long to Ron Dovell, who has been granted educational leave from North Eastern Alberta Health Unit to attend Ryerson. Ron has been an active member of the Branch, and a regular contributor to the newsletter.

Enjoy the summer, especially if you're lucky enough to have holidays.

OAKS' SECOND PRINCIPLE OF LAWMAKING:

Bad law is more likely to be supplemented than repealed.

Biomedical Waste Management Conference

Biomedical wastes have become a topic of some concern amongst the public and health professionals. This is exemplified by the fact that Alberta Health has formed a committee to study issues relating to biomedical waste management.

As front-line personnel, Public Health Inspectors are becoming increasingly involved in the area of biomedical waste management. Unfortunately, many PHIs have only a limited knowledge of the subject. It is therefore essential that Public Health Inspectors improve their expertise in this area, and determine our present and potential function.

To this end, the Alberta Branch of the Canadian Institute of Public Health Inspectors will be sponsoring a conference on Biomedical Waste Management. The seminar will take place at the North Hill Inn in Red Deer, November 1-3, 1989.

A variety of speakers have been invited to make presentations on the topics outlined in the agenda. This includes representatives from provincial departments (Alberta Health, Alberta Occupational Health and Safety, Alberta Transport, etc.), hospitals and laboratories, local health units and private industry. It is hoped that this cross-section of speakers will provide those in attendance with a broad understanding of the issues in biomedical waste management.

One of the intentions of the Alberta Branch is to publish the proceedings of this conference containing transcripts of the presentations and reference material on biomedical waste management. This would serve as a continuing source of important information to those in attendance.

It is hoped that as many Public Health Inspectors as possible will be able to attend. The proposed registration fee for the conference is \$25.00 for members of the Canadian Institute of Public Health Inspectors, and \$50.00 for non-members. Registration forms will be sent out in mid-September. If you require any further information, please contact Dan Richen.

DREW'S LAW OF HIGHWAY BIOLOGY:

*The first bug to hit a clean
windshield lands directly in front of
your eyes.*

Is There A Need for Hospital Inspections?

by: Jacqueline L. Schnider

Two years ago if you would have asked me if I felt there was a need for Public Health Inspector involvement and inspections of hospitals I would have said yes, but wondered how often it was actually happening. Today if you were to ask me the same question my answer would be a more emphatic response.

Since becoming a certified Public Health Inspector I have tried to inspect my area hospitals at least once a year. When I inspect my hospitals I go beyond the usual areas of kitchen and hydrotherapy pools. There are areas of a hospital beyond these more traditional areas that need regular, and frequent inspection by the Public Health Inspector, not just when requested at accreditation time. I will try and outline some areas I check when I do my inspections.

Food-Service Areas

In the kitchen and cafeteria we need to be concerned with all areas, as we are with any food premise. Areas we should be especially careful to check are holding temperatures, both hot and cold. We also need to be concerned about worker illness. The patients are already debilitated, and therefore they are more susceptible to attack by food borne illness.

Utility Rooms and Supply Areas

"Clean" and "Soiled" Utility Rooms and central supply areas

are places to check for infection control practices. Storage should be more than adequate in these areas. If the hospital is not large enough to have separate clean and soiled utility rooms an effort should be made to have the clean items on one side of the room and soiled items on the other. In the central supply area, equipment, glassware, instruments, thermometers should be checked for how they are sterilized. What checks are taking place to ensure sterilization is actually occurring? How are sterilized items kept sterile until they are needed? What are the handling practices for oral and rectal thermometers?

Laboratory

In the laboratory handling practices of chemicals, specimens and disposal should be checked. Cleaning and maintenance of the distiller should be investigated (see article on hospital distillation units).

Auxiliary Areas

There is also a need to inspect auxiliary areas of the hospital.

In Grande Prairie our hospital laundry serves a regional area. Laundry is shipped out from Grande Prairie and received in from several area hospitals.

The need to be aware of how this is done and what checks are in place at both ends. In a single hospital we need to ask how

laundry is:

- a) collected.
- b) handled when the patient is infectious.
- c) cleaned and checked for lack of microorganisms

General

General areas the Public Health Inspector should check are:

- 1) Isolation of patients.
- 2) Re-use of disposable items.
- 3) Decontamination procedures.
- 4) Cleanup of chemicals. Big Country Health Unit has had two cases of mercury bulbs breaking on blood pressure units in their hospital. They weren't adequately informed of these incidents and consequently improper disposal occurred. How many more of these incidents could be taking place province-wide without Public Health Inspectors being informed?
- 5) Does the hospital have an emergency water supply? In Grande Prairie we had a backup of sodium dichromate from the hot water heating system to the potable water supply. The health unit was not notified until two days later. Hospital staff need to be informed that it is a necessity to notify the health unit about anything affecting the water supply.
- 6) Last, but not least, the Public Health Inspector should try to have input on the infection control committee.

Calgary Health Services Local Board has recently approved their Biomedical Wastes Policy. Perhaps all health units should get a copy of this policy and use it when inspecting any medical facility.

I challenge all Public Health Inspectors to take a closer look at their area hospitals. They contain a lot of areas we need to be involved in.

Hospital Distillation Units

by: Terry Smith

The lab contacted the Health Unit with concerns over particles and scum formation in their distilled water.

The municipal system was reviewed and sampled with satisfactory results. However, the samples taken from the finished product of the distillation unit gave confluent growth and standard plate counts of over 3000 CFU/ML. At this time two other hospitals contacted us with similar complaints and concerns - word was getting around.

A study of these units was implemented, operational parameters were reviewed and samples taken from the filler tap to finish product over a few months.

A) Bacteriologically

- tap water consistently had no standard plate count
- condenser line standard plate count varied from less than 10 to 750 CFU/ML

- reservoir standard plate count varied from 210 to 750 CFU/ML
- finished product had confluent growths and standard plate counts over 3000 CFU/ML

B) Operational

- finished product not routinely tested
- manufacturer's cleaning recommendations are for ideal water supply conditions
- maintenance personnel did not understand operation of unit or manufacturer's cleaning methods/recommendations
- alterations had been made to units (i.e. lengths of transfer parts) and replacement parts were not to manufacturer's specifications
- storage reservoir pitted
- filling hose laying in sink between uses
- rice put in reservoir bowl to facilitate drying after cleaning
- intake screen never removed and cleaned
- scaling inside of distillation tower

The manufacturer's recommendations on frequency of cleaning is not often enough for non-ideal water supplies. The cleaning schedule was doubled, close monitoring during spring run-off and the following implemented.

- ensure maintenance personnel are familiar with the units operation and manufacturer's cleaning methods
- replacement parts be of stainless steel or glass in accordance with manufacturer's specs
- entire unit be routinely inspected for scale build-ups and pitting
- intake screen routinely cleaned
- unit be routinely bacteriologically tested
- shorten filler hose so that it does not lay in sink between uses

I still question the usage of plastic filler hoses. Bacteria testing reveals counts are down to around 10 CFU/ML.

Testing and review will be ongoing.

COOPER'S METALAW:

A proliferation of new laws creates a proliferation of new loopholes.

Steam Humidification With Treated Boiler Water In An Energy Efficient Building

by: Lew Skjonsby

Editor's Note: This article is a condensed version. For more information or a copy of the report, please contact Lew Skjonsby at the Athabasca Health Unit.

On April 7, 1988 the director of maintenance for a hospital contacted the health unit with concerns about skin rash in one worker and generalized symptoms of watery eyes, stuffiness, upper respiratory irritation and lethargy in other workers.

On November 29, 1988 the nursing staff reported three more cases of allergic type reactions involving sneezing, nasal congestion, and lethargy. One also developed a skin rash.

An inspection and follow-up were done, concentrating in the area where the nurses worked. It revealed:

- 1) Day shift nurses complaining of similar symptoms which begin occurring about 6 to 8 hours into their shifts (shifts are 12 hours)
- 2) A supply air vent was blowing directly onto the nursing station
- 3) A fine white dust accumulating

over a period of time on the nurses' station.

- 4) The humidification manifold was located within a roof top enclosure.
- 5) Smoking is prohibited, except in a separately ventilated cafeteria room downstairs.
- 6) There was an apparent relationship between the worst period of complaints in April and November and the building's mechanical problems.

It was then hypothesized that the problem might be with the use of chemically treated boiler water for humidification. The neutralizing amine in use was cyclohexylamine at a feed rate producing a 2 to 3 ppm level in the boiler water. (Cyclohexylamine is used to bind carbon dioxide, carbonic acid and other boiler products into non-reactive salts.

Research done on Cyclohexylamine has found that it is a mild methemoglobin forming substance, a skin irritant, that can cause allergic reaction and sensitization. There is no apparent level for inhalation exposure and skin irritation exposure is based on possible carcinogenic, mutagenic and teratogenic effects from continuous exposures. TLV level

is at 10 ppm and OEL level (15 min) at 20ppm.

Further research on the mechanical system revealed:

1) A maximum of 30% fresh make-up air is available with appropriate ambient air temperatures. Little or no make-up air is available between November and April due to an inability to heat fresh air adequately.

2) When outdoor ambient temperatures are in the 20 - 22 C range, boiler water heating systems lie dormant, increasing the concentration of carbon dioxide and oxygen corrosion products. As the system demands heat into the evening, these increased contaminant levels can be transferred to respired air by steam humidification.

3) Neutralizing amine dosage is determined by pH measurement for control of carbon dioxide and its products. An inaccuracy of 0.1 in the pH determination can cause a carbon dioxide error of approximately 25%.

CONCLUSION:

At this time the use of cyclohexylamine in the humidity boiler has been discontinued by our request.

The following highlights are of our concerns and recommendations:

i) The exclusion of boiler water as the source of steam for humidification is recommended.

ii) Cyclohexylamine and other possible neutralizing amines

(morpholine, diethylamind-ethanol, octadecylamine) should not be used in a manner that can produce an inhalation exposure. This is especially important when dosage measurement is subject to error.

iii) A change to distilled water humidification with a heat exchanger should be considered.

As problems persisted, and only one possible source was identified, we took the responsibility to require a change of the humidification method.

We feel our position is entirely viable. A pure source for humidification is needed within a hospital.

GRELB'S REMINDER:

Eighty percent of all people consider themselves to be above average drivers.

LAW OF TELEPHONE DYNAMICS:

The phone call you have been waiting for will come the minute you're out the door.

PHI NOTEBOOK

AROUND THE PROVINCE

Public Health Inspectors in Red Deer are involved in a regional landfill debate. The proposed site is located five kilometers away from Pine Lake in clay soil. Residents in the area are concerned about the landfill affecting the lake and are planning to appeal it.

Drumheller Health Unit has been busy with cases of Salmonella spreading from cattle to milk and humans on a Hutterite colony.

Baron-Eureka-Warner Health Unit adopted a Safe Drinking Water pamphlet on cross connections published by the City of Lethbridge. This pamphlet will be sent out in the water bill mail-out by local municipalities.

Chinook Health Unit had ordered the cleanup of a hide of a hide fleshing plant earlier this summer. Department of Environment ended up paying the over \$16,000.00 bill.

Big Country found an unrefrigerated delivery truck transporting processed meat products. Internal temperature of the meats were 60 - 67 degrees Fahrenheit!!

Congratulations to the Northern Zone who achieved 100% membership in the Institute this Spring. Special thanks to the PHI who made this possible. (Can the other zones make a similar boast?)

Just when the Northern Zone had 100% membership in the Institute two of our members decided to move on. We hope their replacements are keen Institute members.

Best wishes to Ron Dovell who is moving further east than North Eastern to complete his degree at Ryerson. We hope that the west can one day beckon you back.

Another North Eastern PHI is joining the staff at Sturgeon. Best of luck in your new posting Dan.

Congratulations to the PHIs who are getting married or who got married this summer. Guy Osachoff, of Fort McMurray, marries Carol Fugulin August 25th. Carl Lemke, of Chinook, married Jane Herman July 1st.

A welcome to Alberta goes to the following PHIs:

- * Max Johnson who is joining Calgary Health Services after completing his degree at S.F.U.
- * Mark Vanhoutteghem who will be working out of the Canmore office of Mountview Health Unit. Mark was formerly in Winnipeg.
- * Pat Potter has joined Barons-Eureka-Warner after an absence from the field. He was with Medicine Hat Health Unit from