

MEMOIRS
Of an Environmental Health Specialist

by
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MEMOIRS

In recalling my own work experience, I find that it might be a source of encouragement for others to become interested in a like profession. It is with that hope in mind that takes me into this project. There will be instances that recall takes me back to sometime in the past to enhance a situation of the moment. Maybe, these past reflections will help explain a persistent direction to find solutions to events as they occur.

In early 1948 I was fortunate in landing a job with the State of Maine, Department of Public Health, Environmental Health Division. The Director at the time was Elmer W. Campbell, Dr. of P.H. My immediate supervisor was Mr. Robert Harmon. Both of these men were long time environmentalists, with excellent educational and experience background in the public health philosophy of protecting the populace from injury and disease, thru persistence with an ever watchful eye for anything and everything promoting such events.

My first days on the job were spent in the classroom, learning the programs presently underway at that time in the endeavor by the State of Maine to protect its citizens from maladies that could endanger them. After several weeks becoming indoctrinated, along with the prospective summer employees, I learned my first position would be in the laboratory. My duties would be cleaning, sanitizing and making ready for reuse, water sample bottles which were routinely sent around the state to collect drinking water supply samples. It was interesting to note that these samples were taken on different days of the week and different times of day. It was explained that this method would give a more representative profile of the public water supply, whether it be a large city, small community, and individual well, spring, or other water source used by a restaurant, inn or other public use facility.

During my free time, Mr. Harmon would be continuously talking about one environmental subject or other, giving me the benefit of his education and experience. Sometimes, these talks would be about someone getting sick from eating in a food establishments; a recent illness caused by a contaminated water supply; an accident caused by some preventable situation. Always, he would go into great depths explaining why these problems happened and how they could have been avoided. He even included ways to implement an on going program by his beloved Environmental Health Division.

It was during these sessions that I learned that implementation of programs was not always possible due to budget restraints. But, maybe there were other ways...He always ended his commentary with "Never Trust a Harmon"!

During this early spring season in Maine many events were gearing up for the oncoming summer and fall seasons. School children would be on vacation for the summer, therefore, becoming available for work programs. Many would be going into the family seasonal fast food roadside business. Some working the family potato farms or other industry where they came in contact with the public in one way or another. Not only could they be the possible cause of the spread of disease, they could become sick or injure themselves.

Then there were the tourists, the hunters and fishermen who visited the state in droves. Add to the list of potential environmental and public health problems the following events: Horse racing and county fairs being held all over the state plus other community affairs. The list never seemed to end! These events and many others augmented the existing operations in which people made their livelihood, made for an ever expanding environmental concern for those given the responsibility of preventing the spread of diseases and causes of injury.

Soon I found I was being given home work to study to be prepared for the next day's situation to be solved. Sometimes it would be a sketch layout of a home lot in a rural area that had submitted a water sample which turned out to be contaminated with bacteria of one form or other. The sketch would show the location of the road, driveway, home, well, outbuildings and location of the privy, sink drain or other method of waste disposal (liquid or solid). Sometimes, it would be a report of illness developed by a family physician with a typhoid case; or maybe some chapters to review from a book on biology, chemistry or math. Life took on an ever learning experience which consumed my days as well as into the evenings. I cannot remember ever being late for work the next day, no matter what the weather. And in Maine there are down pouring rainy days, icy road days or snow days in winter. That the only way to travel is immediately after the snow plow goes by your house.

One morning Mr. Harmon came into the lab where I was working and handed me the teaching program for classes in proper food handling techniques, sanitary methods for washing, handling and storing eating and drinking utensils. He told me to hurry up with the water bottles I was preparing, as well as preparing the kits to be used for testing the horses at the next horse race, because he wanted me to learn this program as soon as possible. My work day did not end until late afternoon and I recall I took the study material home and spent well into the evening preparing for the inevitable questions Mr. Harmon would have for me the next day. Not only were there questions, but several film and slide sets I had to review before that day ended. There were always extra learning experiences with each new day. Not only were there new subjects, there were reviews and extenuations of those subjects given to me on previous occasions. Mr. Harmon's theory was introduce a subject and continually build on each subject until theory was burned into memory and the response to a particular situation would become an educated and possible solution.

One day after I had been there several months, Mr. Harmon brought in a young lady and introduces her as Jeanette and asked me to train her to do the job I had been doing. A few days later I was instructed to pack a bag because we would be on the road for the next few weeks, and home only on weekends-maybe. Within a week, Jeanette was proficient in washing the bottles, inserting the proper amount of sodium thiosulphate crystals in each bottle, and preparing them for shipment to locations around the state. She also learned the procedure for preparing the horse saliva test kits. During this period I would receive material in my in-basket from Mr. Harmon, but did not ever see him in the office. I often wondered if he came in to work in the evening or very early in the morning, leaving before I would get to work.

The first of May when I arrived for work Mr. Harmon met me at my office. He asked me if I had my bag packed and was ready to hit the road. I told him I would have to go home to get it, but, yes, it was ready. He said, " Well, then I will follow you home to pick up your suitcase, park

your car, and we will be on our way". It was not until after we were on the road that Mr. Harmon told me he had set up food handler training sessions throughout the State of Maine and that we would be gone from the office for several weeks. I can not remember how many towns we visited, but we would set up for classes in one town after another. Sometimes traveling at night to our next location. After about three days of setting up the cameras, projectors, screens, making sure there was study material, test, etc. I found that Mr. Harmon seemed to disappear at the end of the afternoon class and I was left to either set up for the evening class or pack up for the trip to the next town.

One evening when we went to dinner Mr. Harmon seemed to be ill and before the evening class started he informed me that he hoped I had learned the routine because I was to be teaching the class that evening. What a shock! But I came from a long line of teachers so I took on the challenge while Mr. Harmon stayed in our room at the lodging house (now called bed and breakfasts). That evening was one of the largest classes that we had had since we started on the road. Many of the questions that was asked, I found I could easily answer-thanks to all that studying. Those questions that I did not have answers for I wrote down, with name, address and telephone numbers and got back to them after I had a chance to question Mr. Harmon the next day. Mr. Harmon was in tip top shape the next day! His admonition "Never Trust a Harmon" was now very apparent to me. It was surprising how all those different subjects-bacteriology, chemistry, math, sociology, history, The State of Maine Regulations for Food Establishments, Water Supplies, Individual Sewer Disposal Systems, etc., etc. seemed to come together to form a professional outlook to safe living and working conditions.

For a young person in their early twenties, to be exposed to someone like Mr. Harmon, and his subtle system of teaching environmental health, it was a sheer delight to study and learn because you could immediately use everything you had just learned. That learning tended to stay with me through out my entire career and it is my hope that some of his teachings have rubbed off on others with whom I have come in contact.

Mr. Harmon came to get me on another occasion and wanted me to attend a class he was going to teach. We went to an area outside the lab where I worked. He had set up a work bench and was about to teach the correct method of connecting metal plumbing. This session was to learn how to "chalk" a joint between two pieces of cast iron pipe. One end of the pipe has an enlargement, called a bell. The object was to fit another piece of pipe that had a regular straight end into the bell, and make a seal that would be water tight.

The equipment used included a propane gas tank, a metal stand, burner, a metal cup with a long handle, an asbestos rope about 1" in diameter and some 14" to 20" long, hemp string, lead, chisel and a mallet. The procedure was to put the two pieces of pipe together on a level plane, stuff the hemp into the bell opening and around the inserted pipe, tamp the hemp in as tight as possible using the chisel and mallet, then heat the lead to a molten state in the pot over the burner. While the lead was heating, the asbestos rope was carefully placed around the pipe just outside, but snug against the bell, except about an inch opening at the top of the pipe. The opening at the top of the pipe was for pouring the molten lead into the area of the bell between the tamped hemp and the asbestos rope. This procedure had to be done very carefully, but quickly enough that the molten lead would not cool to the point it could not be poured. If done

properly, this procedure would make a joint that would not leak when installed in a building for the waste water disposal to the sewer system.

It took quite a few tries before this procedure was finally perfected. Practice, practice, practice, learn from each try, and success is the final satisfying technique. Never again did I have a leaky joint.

I was to discover that I was to go on a testing trip and observe people taking their tests for the certification as plumbers. My job was the testing of those people while they "chalked the joints". The State of Maine, Environmental Health Division was the agency designated as the testing agency for future State licensed plumbers. This activity became quite interesting for a young person in their early twenties to be the person doing the testing of other people who were sometimes two to three times my age. It also became in interesting when those prospective plumbers were unable to produce a joint that would not leak. It then became my job to teach them the proper method to use in order to get a leak proof joint.

Another plumbing activity encouraged by this State Agency was the installation of pressure relief valves on hot water heaters. The Watts Regulator Co. was doing research in the State of Maine to prove the use of their regulators would prevent the explosions of hot water heaters. Yes, back then hot water heaters were dangerous and did in fact explode at times causing much damage. To prove just how dangerous exploding hot water heaters could be, the Watts personnel put on a demonstration by exploding tanks just using the continuous heating of a tank full of water. Of course, the observers were hundreds of feet away from the explosion site as you could never tell if the tank itself would take off like a bullet, or simply crack and let the hot water and steam escape. Many times the tanks would shoot into the air many feet. Since the advent of pressure regulators it is now a required and standard practice to install regulators on all hot water heaters.

Again, when I became a District Sanitary Inspector and it was my responsibility to enforce the installation of regulators on hot water heaters by the plumbers, it sometimes became a battle of the wits with a few of the "old timers". There was never a problem in commercial establishments due to the licensing requirement and the fact that a license could be held up until any possible public health hazard was corrected. The problem was getting the regulators installed on hot water heaters in private homes. In-as-much-as all this research was getting lots of publicity in the newspapers and on radio, it only took a few more tank explosions before the public demanded the safety of pressure regulators.

The following year, when the classes were conducted for the summer employees took their indoctrination training as Sanitary Inspectors, Mr. Harmon held a space for me in the class. Most of the people coming to work for the summer were teachers, superintendents, and others who had their science degrees, and just wanted extra work during their summer vacations. A few were University students who needed the work experience to complete their degrees. They were all great people to get to know and work with in the field because of their enthusiasm and interest in the welfare of people. Each had to develop their own method of dealing with the situations which occurred. It was interesting to watch and listen to them as they would take a sometimes trying situation-maybe a restaurant owners well had developed a bacteriological problem which could

be dangerous to his customers-and take the reluctant owner thru the learning process to an acceptable solution to the problem, and, have a satisfied owner to boot.

About this time the State was accepting applications for new employees. The applicants were from some of the summer employees, college graduates who were looking for a more satisfying work situation, and me. My educational background was a high school graduate diploma in business.

I didn't think I would stand a chance of passing the test as it covered all areas of environmental health. Mr. Hannon encouraged me to try anyway. It would be no disgrace to fail the test and by taking the test I would discover my weaknesses and it might encourage me to continue my education. To my surprise I did pass and was told my score was far in excess of some of the other applicants. I doubt, to this day that my passing the exam came as a surprise to Mr. Hannon, as I believe he had hand fed me all the answers to the exam during the time he was training me. By passing the exam I was placed on the eligibility list for promotion from lab assistant to Sanitary Inspector. Soon after this period, a tragedy occurred: one of the Sanitary Inspectors passed away. This left that District without an environmentalist to assist the public health programs in that area.

As aside for a moment, during my childhood I recall an aunt, who was one of the school teachers in our family, attending the annual conferences of the New England Public Health Association. Arriving home from these sojourns, she was always anxious to tell us all the interesting new things she had learned to help keep her students healthy. One thing she stressed was always wash your hands after going to the bathroom. She would explain to her students the reasons why and to help stop the spread of germs that could cause others to become sick. Always wash the hands before eating, etc., etc.

After much deliberation, I am sure, Dr. Campbell, I was informed that if I would like the position of Sanitary Inspector in Aroostook County, Maine, it was mine. I am also sure that my mentor, Mr. Harmon, had a lot to do with Dr. Campbell's decision. I immediately had a conference with Mr. Harmon, to get his reaction. He merely said he thought I had sufficient knowledge to handle the position, but being young I had to develop my own rapport with the public whom I would come in contact and the maturity necessary to settle disputes with people much older than I. In other words, I had to sell myself first, and he challenged to the opportunity. By the next morning, after agonizing all night, I informed Dr. Campbell I would appreciate the opportunity and would do the position to the best of my ability.

Mr. Hannon was all packed to travel from Augusta to Caribou. I was to go with him that very day to meet the Health Officer, staff and to get acquainted with the vastness of the District. We also were to survey the district to determine its environmental health condition. That included reviewing all records in the District Office and to travel around the County checking in with each city and town manage to learn of the problems they were having in their areas.

By this time I had become the driver anytime Mr. Harmon took me along on his trips. This trip took all day, due to the distance and road conditions. I noticed that Mr. Harmon seemed to be

ailing and he tried to sleep a lot. I had come to have great admiration for this man and was truly worried that at his advanced age there was a definitely a problem.

The Health Officer of the Northern District was none other than Dr. Charles Thomas, a Harvard University graduate, and a student of Dr. Roseneau who was considered the "Father of Public Health". Dr. Thomas was a family physician and had practiced in Aroostook County from his Caribou office since his internship. He was extremely well thought of in the medical profession, by his patients, and his staff at the State office.

The programs in environmental health already developed and in operation included: restaurant sanitary inspections, inspections of lodging houses, rooming houses and hotels, inspections of water supplies and a water testing program annually of those facilities licensed by the State, inspection of hunting and fishing resorts and other assorted responsibilities such as complaints.

During the two years I was in that district, Dr. Thomas introduced me to typhoid fever patients as that disease was still prevalent and had not been totally arrested. Also, T.B. cases were followed up by Dr. Thomas and the P.H. Nurses.

It was during a typhoid fever outbreak that I was introduced to the shenanigans of one "Typhoid Mary". She was a legendary, and typical, I might add, carrier of the organism. She was instructed not to do any work in any public eating establishment. However, that was about the only work she was qualified to do, so low and behold, we would find her showing up at a logging camp cooking or working with people. Being a carrier, no jail would incarcerate her, as they did not have any way to isolate her and her presence would only complicate the problem of other inmates becoming ill with typhoid fever. So, it was only thru persuasion that she was kept under control until her death.

One area of concentrated typhoid cases was Ashland, Maine, a small town in central Aroostook County. Upon arriving at the town I discovered it was situated on a hillside slope from the highway to the Presque Isle River at the foot of town. Each home had its own well for water supply and either an approved ISDS (Individual Sewer Disposal System) or cesspool (the usual case). A cesspool consisted of emptying both sink and toilet waste into a hole in the ground, sometimes lined but usually not lined and covered with railroad ties to prevent people and animals from falling into the excavation. The hole was approximately 6'x6' by 10' deep. Many toilet facilities in the town were of the privy type, with the contents coming in direct contact with the ground. The owners would clean them yearly, usually spreading the contents in the vegetable gardens.

The weather in that area had four definite seasons. Of course, there was snow in the winter. Lots of snow. During the spring thaw the water from melting snows would run downhill overflowing cesspools and the contaminated water would then find its way into the shallow, hand dug water wells further down the hill. It became very apparent to me why people became ill with typhoid fever. A survey of past patients revealed a definite pattern from which a prediction as to who would next be the victims of typhoid fevers. From this information Dr. Thomas made a request of the Town Manager to call a special town meeting. The meeting was well attended. In

fact standing room only. Between Dr. Thomas and I, we laid out the program we had developed and a solution to stop the disease. The stats were presented outlining the cause of the disease and Dr. Thomas informed the town's folk that the only way one could contact typhoid fever was to eat or drink the urine or feces from a typhoid carrier! We did not inform them who we thought, from past stats, who would be the next victims. We outlined some immediate safety measures such as boiling all drinking water from now on; make immediate arrangements to develop and install a town water supply, develop and pipe this supply to all homes in the town area. I am happy to say our recommendations were followed, the Water District was formed, a water plant, with chlorination system installed was built and a distribution system installed through out the town.

In contact with officials many years later, after I had left the area to attend college, I was kept informed of the progress of the water supply, treatment plant construction and pipe line installation, and the fact that no more townspeople contacted typhoid fever once the water system became operational.

Another interesting water problem arose when inspecting the hunting and fishing resorts. During the inspection of the premises, it was discovered that most of the facilities kitchen sink water was just piped out of the building to the closest revenue or stream. Of course, all these systems terminated in the lakes and rivers! In the late 1940's and early 1950's many of the drinking water bacteriological problems were treated using a mechanical drip system to add chlorinated solutions to the water supply. However, I can not recall any such system on any of the resort water supplies when I first visited the sites. Water was from hand dug wells, usually covered with a slab of flat rock with a two foot diameter hole cut into the center and a wood cabinet with cover over the hole in the rock. Water was brought up by dropping a twelve quart pail on a rope down into the well water. The pail was filled with water then hoisted up out of the well, and carried to the kitchen and deposited in the water cooler. Some wells were shallow enough so the pail was lowered into the well on a 10' pole with a hoop attached to the end to hold the pail. There was a common dipper for obtaining water for drinking, but each person had their own drinking cup or glass.

Having just gone thru all the training, including protecting drinking water supplies, these situations gave me a great opportunity to help protect the public health and individual health of the people in these situations.

As I suspected, many of the bacteriological tests of the water supplies were reported to contain in excess of the accepted levels. During my review of the sanitary conditions with the owners and/or operators of these facilities, I found that at times many of their customers became ill. By enlightening the operators of the possible methods that could be taken to protect the water supply from contamination, and eliminate customer illness, they became interested and receptive to any improvements that they could afford. In the meantime they went on the chlorine mechanical drip method.

As soon as time allowed, printed material showing the proper construction of wells was obtained, along with pipeline construction, construction of head houses used when water was to be piped by gravity flow from its source to the establishment, plumbing designs and directions

for sanitizing the entire system prior to putting it into use. All the above material was provided by the State of Maine, Department of Public Health, and Environmental Health Division. During my research for better methods of chlorinating water supplies I came across a small pump that was developed for use in providing the proper injection of sanitizing liquids in swimming pools. These pumps could be used in a continuous feed mode or intermittent as needed. They seemed ideal for these resort water supplies and could give continuous and reliable service against any possibility of future bacteriological problems that could cause illnesses. After receiving the printed material from the manufacturer and checking on the reliability of the product, as well as the service provided by the manufacturer, I included this literature in the packet to the resort owners/managers. Some of them immediately reconstructed their water supplies to meet present day standards. The results were that there were no more water born illnesses. When word got around about the success of the few, then all the resorts followed suit and within two years most resorts had completed their renovations.

During the trips to the hunting and fishing resorts I discovered numerous wood cutting and logging operations, employing many employees. Of course, these operations were miles from any towns and cities, and the workers were housed and fed in the cabin type dormitories. This same building had a kitchen and dining. Inspections at these facilities revealed many possible problems and gave the sanitarian much to suggest or require as to improvements, food handling practices, protection of water supplies and solid and liquid waste disposal.

Then there were the routine inspections which had to be conducted. It was a tremendous job, never seeming to have an end and which of course, it didn't -have an end that is. There were many enjoyable moments during all the work. Mostly the pleasure was in seeing all the improvements that were made and how much better places looked. But even more pleasurable was the satisfaction expressed by the workers as well as the owners after the upgrading was completed. I recall one establishment, a restaurant and lodging place that did a renovation and was looking for a name that would be distinctive and give people something to remember them by the name implications. The establishment was about half way between populated areas that were nearly 100 miles apart. It was also a good deer hunting area in the fall and fishing streams and lakes abounded for fishing during the rest of the year. One of the fish indigenous to the area was called a "togue". This was a prized fish when caught as it was a cross between a trout and a land locked salmon. So, what other good name than to call this unique place "THE DEERTOQUE". The owners liked the name and immediately had a sign painted and placed on the front of the building. If you drive through Haynesville, Maine today you might still see the same sign.

On many of my trips covering a large territory, nearly 1/4 of the size of the State of Maine, Dr. Thomas would ride with me and do his Public Health work. He was a very interesting person and became another of my public health teachers and mentors. While we were traveling between towns he would pick a subject and go to great depths to explain, along with a story relating to the subject, a scientific principle. The more he talked the more I became interested in learning as much as I could. I wondered about getting a higher education, but at the time I was not financially prepared to do anything about it. So, I took in his every work and enjoyed his spending time with me.

One day, during one of our working trips, Dr. Thomas told me of a call he had from the parents of one of the children who had been his patients while he was a practicing family doctor. Seems this child had a rash which didn't fit into any skin problem he had seen. Upon our return from that trip, I visited the school which the child attended and learned quite a few other children had what seemed to be the same type of rash. Interviewing each child separately, one common item kept popping up, they had all been playing in a part of the stream which ran thru town and had been dug out for a swimming hole. My next stop was at the swimming hole where I took samples of the water for testing by the state laboratory. The bacteriological test came back "TNTC" or To Numerous To Count. The chemical tests came back high in chemicals used to fertilize the potato fields in the area. The rashes experienced by the children were from an allergic reaction to the high fertilizer chemical content of the water. When the swimming hole was posted "No Swimming": the children's rashes cleared up. Of course, there was a lot of calls from parents to our office asking how dare we dose their swimming hole, but in a couple of weeks and after their children's rash cleared up the parents called back to thank us for finding out the problem!

It was about this time the town of Fort Fairfield wanted a swimming area and the town council was encouraged to build a swimming pool to present day standards. These standards included an enclosed recirculating system of pumps, filters and chlorination system for bacteriological control. The completed project was one of the town's pride and joy as it was the best facility in the state at the time.

Aroostook County, Maine, still had two military airfields operating after World War II. Presque Isle Air Base was a fighter plane training base and Limestone Air Force Base was a large bomber base. Limestone Base was later renamed Loring Air Force Base. These bases were inspected for sanitary conditions of the food facilities by the State Sanitary Inspector-in this case, that person was me. One day when on an official visit to Presque Isle Air Force Base, I had the opportunity to speak with the base commander. I suggested he send his Base Veterinarian to the Navel Academy at the Great Lakes Training Station for him to take the Environmental Health Course. This particular facility was named because it had a very good reputation and because the Air Force did not have an Environmental Health Course taught in one of their training facilities. The suggestion was well taken and within six months the military had their own Environmentalist. Actually, the suggestion was self-serving on my part. I felt that with the multitude of work that I had within the District if the military had their own qualified person it would relieve me of the responsibility of the two military bases.

The weather in Northern Maine was extremely cold in winter. The snow storms came quite often and being a rather dry climate the snow would blow into great drifts, forcing the road department to use a snow blower to clear the roads. In the spring the warming days caused the melting snow to create overflowing streams and rivers, washing out the roads. So, you had to be very careful when driving, especially at night. Summers were very nice; warm days and cool evenings. Then in the fall it was already cold. Some people used to say we had a very good summer July 4th!

In Aroostook County, or The County as some people called it, during the early fall is what they call potato harvest time. All the high school age children start to school in August so they can have time off for harvest season.

You might think with just one Sanitarian in the District, how could people expect any service. Well, in my case, I set up an itinerary, so that when any of the Public Health Nurses, the Health Officer, a visiting State Engineer or others from the division would need to have me with them on some job, they could plan their trips to coincide with my schedule. Also, contractors needing inspections could schedule their work to coincide with my visits to the area. This does not mean that establishments needing routine inspections were on a schedule, as that would defeat the object of restaurant, bar and lodging house inspections. This type inspection was conducted in between my scheduled trips.

The following year the state sent a Dental Hygienist to the District to work in the schools within the area. She was very talented, energetic and very beautiful I might add. It wasn't long before I let her know she had captured my heart. Needless to say, I was fortunate enough to make her my bride that following August.

During a meeting in August with Dr. Campbell, I let him know that I would like to have the State send me to the U.S.P.H.S. Environmental Health Course, given at the University of Mass. My request was granted and in January 1951 I moved to Amherst, Mass with my family.

The course was very concentrated. Sometimes we were up and at class by 5 AM, and didn't stop until 10 PM at night. The course covered bacteriology and how it related to food, water, people and even animals. Same with chemistry. Of course, we had enough math to do the day to day problems that Sanitarians encountered, especially in preparation and reading plans. We had dairy plant construction, dairy plant operation and inspections, milk sampling, milking equipment technology, Babcock testing for butter fat in milk, water testing, sampling and the lab work associated with the bacteria and chemical content of water, Food technology and food processing equipment, air pollution, restaurant construction as well as all other food processing and warehouse associated facilities equipment and construction, construction and operation of swimming pools, child care facilities, public water supplies, public as well as individual sewer disposal facilities, individual well construction and many other subjects. We also made inspections of all these facilities, as well as hospitals and schools.

One of the interesting phenomena we encountered while inspecting dairy farms was that if there was soft music playing at the time of inspection, the cows did not mind the intrusion of unfamiliar people and would let down their milk in usual fashion. When no music played the dairyman was very apt to have less milk than usual at the end of the milking session.

The students going thru these courses came from all walks of life. Most consisted of working sanitarians, being brought up to date on the latest technologies available to the public health professional. At the end of the course we were all enthusiastic to get back to our areas to put these new technologies to work for the betterment of our communities.

Upon returning to my district position, I found the work had really piled up during my absence and my work days were filled with returning calls from the people who had called in for information, leaving their return telephone numbers.

One such call was from a dairy plant operator for a review of his plans to build a new plant. This was an immediate opportunity to put my newly acquired knowledge to work. My review included not only the present regulations but information on the latest in dairy plant technologies. My review was well taken by the plant operator and he was pleased with the new information I was able to offer.

One of the accomplishments achieved from the USPHS course was the opportunity to apply for membership in the National Association of Sanitarians. This was the professional association for the ecologists and environmentalists. My past independent study program and the taking of the exam given by the State of Maine prior to my appointment as Sanitary Inspector qualified me to not only become a member but to be registered as a Registered Sanitarian. Having this recognition I could use the letters R.S. after my name. This I have done, with pride, I might add, since 1952.

Thirsting for more formal education, my wife agreed that I should pursue the possibility of a formal college education. Of course, my mentor Dr. Thomas agreed! He also wanted me to apply at his Alma Mater-Harvard. As there were several colleges and universities in the Boston area, my wife and I agreed I should look into the courses of study they offered and apply to more than one, just in case I did not get accepted at Harvard.

When the time came for us to take a trip to Boston for this endeavor, Dr. Thomas offered to meet us there and put in his recommendation for me to enter Harvard. We all met in Boston as agreed. After finishing up all the paper work at several institutions, we were all excited about my future possibilities. Dr. Thomas suggested we go to one of his favorite eating places-The Parker House Hotel-for dinner. The Parker House had a very exclusive dining room and we were impressed by the atmosphere, quality of food, but in particular the service. Dr. Thomas informed us that the Parker House had a very well known food handlers training course for their personnel. By observing the waiters and waitresses at work one could tell that they were trained only at the Parker House. Their demeanor while serving their customers as well as all other aspects of being a food handler was very noticeable and above all appreciated.

The information, and our observations during dinner at the Parker House, regarding the self-assurance of the waiters, was again observed many years later by my wife and I as we were having dinner one night at the Silver Slipper in Las Vegas. In fact, we called the Food & Beverage Director over to our table and pointed out one of his waiters who was doing a magnificent job, congratulated him for being fortunate enough to have hired such an individual, and told him where the waiter had received his training. Our observation proved to be correct.

One day I received a call from one of the instructors, Mr. Irving Schlafman, who was one of the instructors at the USPHS Course I had taken. We had become quite good friends during our time at the University of Mass. and our paths seemed to cross frequently. He asked me if I had seen the latest issue of the Journal of Environmental Health. I had not yet received my copy and asked why he made the inquiry. He said there was a photo of he and I on the front cover. It had been taken the day our class went to observe the installation of an individual sewage disposal system and to do soil percolation tests. I am happy to say, we are still friends. We correspond regularly and visit as often as possible, some forty five years later.

Letters of acceptance were received from both of the two Universities we were considering for me to attend. Harvard was very expensive as was the lodging available in that area. Tufts was in a more residential area and the rents were more in our ball park. After some discussion we made the decision for me to attend Tufts. Upon arriving in the Boston area we found a nice house (with five fireplaces incidentally) that we both liked for rent in Medford. Also, the house was near Tufts. My wife didn't have any problem finding a position as Dental Hygienist and for the next several years were spent working and studying.

During the first summer's vacation, I went back to Maine and worked as a Summer Sanitarian for the Health Department. It was hard being away from my family during the week. By now our family included a daughter and we could still get together on weekends, either in Medford or in Portland where I was staying with my wife's family. One of the benefits was that I enjoyed the work.

Upon returning to school in the fall, I received a call requesting me to take a part time job as laboratory technician for the city of Newton, Mass. I could choose my own hours which was an incentive for me to consider the position. That way the job could be integrated into my school program. I just didn't know if I could do both the school work and the lab responsibility I didn't respond right away. Several days went by and I got a couple of calls from friends who knew of the job opening and thought I should take it. I did call and made an appointment for the interview. A car was included for my job responsibilities. After some planning on how to do both school and the job, we decided that I should take the job.

The work consisted of performing all the bacteria tests necessary on all the milk samples and water samples from all sources supplying the City of Newton. Also, there were swimming pool water samples to be tested for both chemical and bacteria. E. coli was one of the important bacteria tests that were routinely done. Soon after starting this job, a local membrane filter manufacturing company was desirous of having an official laboratory do comparison studies for bacteriological counts and E. coli. content. It sounded like a very interesting research program as the bacti tests using the agar method took approximately 5 days to perform, whereas by the membrane filter technique the same results could be done in 24 hours, or less. Apparently an agreement between the company and the City of Newton was consummated, and I started the implementation of the comparison program. The company provided the filter equipment, filters and broth materials as well as the instructions on how to do the tests. Also, I was requested to do butter fat tests on the milk samples using the Babcock Butter fat test method.

These lab tests I was performing on a daily basis put to use the subjects I had learned while attending the USPHS Environmental course and the science I had taken at Tufts. What a great opportunity!

A lot of the membrane filter tests proved faulty, but by making changes, and by trial and error, we discovered that the tests finally could be comparable and reliable. In fact, within a year or so, the membrane filter method of testing for bacteria in water samples became an accepted alternate water testing method and was published as such in the USPHS Manual for Water Testing. That manual was the one used by all official water testing laboratories in the country.

As I had taken the USPHS course, the City of Newton, Environmental Health Director, Mr. Harlan Kingsbury, assigned me to visit the dairy farms through out the area as well as in New Hampshire and Maine. The object was to do dairy farm inspections and to collect milk samples. I also had to collect samples of the water used by those farms. One of the interesting things I was to discover was that the information I had learned about soft music in dairy barns at the USPHS course really worked. Most dairymen liked to have a radio in the barn to get weather reports, etc. and when I told them that soft music would calm the cows while I, a stranger to them, was in the barn. They found that this was true and that the cows continued to let down their milk. I then became a friend and the herdsmen no longer objected to my being in the barn to make inspections.

It was an exciting time to be in the environmental health occupation. Lots of new research that corrected potential health and safety problems of the past, as well as continuing research on more evading subjects. Implementing the new corrective action programs proved to be very self-satisfying when positive results became apparent.

As you can tell, this period in my learning and experience career in environmental health was an exciting and satisfying time in my life.

Life as a whole always has trials and tribulations and our life certainly had those. Young married couples experience a few problems along the way, be it financial, health or other personal road blocks. But, thru persistence and some luck, they can manage to stay afloat, so to speak.

One of our personal disasters was the fact that both Mr. Harmon and Dr. Thomas passed away. The deaths of my two mentors left a deep void in my personal friendships. Another problem we encountered was the fact that my wife became ill and needed an operation. Her operation was serious and it petrified me. It proved successful and she eventually fully recovered. Then the death of a close relative redirected our lives by forcing a move across the country.

Just before we moved from Boston, hurricane Hazel hit the east coast and caused much damage to the land area of coastal New England. All Public Health Sanitarians were frozen to their jobs until the emergencies ended. My job was one of a team inspecting food establishments and tagging food stuff found contaminated and to see to the final disposal and destruction.

Contact was made with several west coast area Health Departments. After a review of our options, we decided we had two choices-Alaska or Nevada. A conference was held with my wife's doctor and he told us that the dampness and cold of Alaska was not in the best interest of her health. That left Nevada. Even though we had never heard of Las Vegas we had heard of Reno. The decision was made to move to Las Vegas. The Dr. agreed because of the hot, dry climate. Then again, The Clark County Health Division covered some rural area and the population in the early 1950's was more the size communities we were accustomed to in the New England area. Finally, in telephone conversation with Dr. David D. Carr, the Health Officer for the Clark County Health Division, we were informed that the State of Nevada was also advertising for a Dental Hygienist. My wife was a graduate in dental hygiene from Forsythe Dental School and a practicing hygienist.

We put our property up for sale and fortunately it did not take long before a prospect bought it.

Next came the long trip across country, towing a trailer full of our belongings. Our 3 year old daughter was thrilled with the thought of us being with her all day driving. However, we found that she soon tired of the sights and needed us to play with her. We devised various games: looking for different colored license plates on the cars that passed; trying to identify different makes of cars; counting the cows, horses or sheep that we saw in the pastures we passed, etc.

We arrived in California in late October 1954. My wife and daughter stayed in California while I drove to Las Vegas to get settled in an apartment and start the new job. To me, the weather was very warm for this time of year. Coming from the northeast and being used to the fall weather cooling off enough to enjoy the comfort of a warm jacket in October, I marveled at running around in the daytime in shirtsleeves. In fact, when talking to my wife on the telephone I mentioned to her that she should be enjoying the warm sunny weather we have out here in the west. She informed me that it may be warm where I was but she was just north of San Francisco and it was rainy, cold and damp and she wasn't enjoying entertaining our daughter in the house all day. Well, it didn't take long before we were all together in Las Vegas.